

Tanker market sails into 2022 headwinds



*The 2005 JMU Ariake Shibuilding built 299998 t DWT **MELENIA** spotted anchored off Singapore*

The swift reintroduction of international travel bans to stem the spread of the Omicron variant of COVID-19 has derailed the already faltering turnaround in rates and earnings for the global tanker market.

In November it looked like a cold winter and rising international air travel in the New Year would lead a long-anticipated recovery. Now, a new coronavirus variant that first emerged in South Africa in the final weeks of 2021 injects fresh doubt. Eleven of the world's largest listed tanker companies reported collective losses exceeding \$400m over the July-through-September period, after spot rates averaged the lowest in nearly three decades. Total losses for the first nine months of 2021 surpassed \$1bn.

The global pandemic shrank demand for oil and refined products – especially transport fuels – curbing crude production and building inventories that reduced seaborne export flows. Spot rates for most of the tanker fleet have been at or below operating expenses for most of the past 15 months.

Earnings for the global fleet of some 15,000 tankers over 10,000 dwt that ship crude, refined products and chemicals gained over November, returning many shipowners briefly into the black during one of the seasonally strongest periods of the year. Rises halted on the Omicron news. Oil prices plunged 20 percent in one day on fears the latest COVID-19 variant will weaken demand, and by extension, volumes of crude and refined products for shipment.

The silver lining to lower crude costs is that it may trigger further buying from China, benefiting larger tankers. In the last half of 2021, the world's largest importer slashed shipments and relied on stocks as prices reached seven-year highs. July- through-September crude imports into China were 13.8% down on the prior-year period, Joint Organisation Data Initiative data show.

The Delta variant was already responsible for sluggish global jet fuel demand which lagged the recovery seen in other transport fuels, which together comprise some 62% of oil consumption. The International Energy Agency downgraded its forecasts for jet fuel and kerosene prior in its November monthly report and noted demand will still be 20% below pre- coronavirus levels by the end of 2022.

The Omicron variant will shave some of the 3.5m bpd of demand growth that the IEA had originally forecast. Even unchanged, the total 99.6m bpd figure is still some 300,000 bpd below pre-pandemic levels. The oil price trajectory, the pace at which OPEC return further crude production to the market, refinery margins and Iran's nuclear talks will also weigh on crude and refined volumes available for shipment.

The fleet-to-orderbook ratio might be at a record low and scrapping of older tankers is accelerating, but new deliveries of tankers will weigh on rates. Some 340 crude, product, and chemical tankers above 10,000 dwt are scheduled to be added to the existing fleet of 14,485 tankers, according to data compiled by the consulting division of Lloyd's List Intelligence. About a third of 2022 deliveries are crude tankers of 60,000 dwt or above. This suggests that while the fleet-to-orderbook is low, the supply of larger tankers is going to rise at the same time as crude demand expands, at least offsetting some of the anticipated gains.



*The **BTU ATLANTIC** receiving bunkers off Gibraltar*

EEXI impacts

An estimated 75% of the global tanker fleet will need to sail at slower speeds or apply another form of carbon dioxide emissions abatement to meet global regulations and metrics that begin in 2023, according to analysis from London shipbroker, Simpson Spence & Young.



*The Japan flagged 2011 MHI Nagasaki built 305206 t DWT **OMEGA TRADER***

The IMO agreed these new targets in June 2021. The technical measures contained in an Energy Efficiency Index for Existing Ships, known as EEXI. The EEXI is based on but is different to a similar newbuilding design index that was introduced in 2013 and calculates carbon emissions based on service speed, design speed and deadweight tonnage.

Non-compliance will most likely see shipowners sailing at a slower speed to lower emissions, known as 'engine power limitations' or EPL. The 25% of tankers that don't comply will need to be assessed by class societies, the shipbroker said in its mid-year review published in August, creating a "substantial logistical challenge".

EEXI compliance is recorded on the vessel's air pollution certification (IAPP) and needs to be in place from the first survey overember 2022.

Source: Lloyd's Register

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La marine hollandaise sous l'Ancien Régime et les officiers, ses héros

par Roberto Barazzutti

Communication dans le cadre de la délégation Ile-de-France de la SFHM.

Dans une communication présentée en 2003 dans le séminaire de Patrick Villiers à l'université du Littoral, les modalités de la création et de la délimitation de l'espace et des frontières des Provinces-Unies avaient été soulignées. Pour ce pays, petit par la taille, l'environnement maritime constitue un aspect géographique, social et environnemental capital. Cette relation avec la mer atteint une ferveur nulle part vue ailleurs et qui n'a pas disparu comme l'ont attesté le succès des manifestations commémorant les 400 ans de la naissance de Michiel Adriaen de Ruyter.

Cette relation particulière avec la mer se retrouve dès l'origine dans l'importance des liens qui se sont établis entre le pays et sa marine dès le XVIIe siècle et le véritable culte qui s'est créé envers ses officiers, et a conduit à la construction du héros maritime.

LES MISSIONS ET L'EVOLUTION DE LA FLOTTE OU COMMENT LA GUERRE SUR MER A DONNE NAISSANCE A UNE PUISSANCE MARITIME

Plusieurs périodes sont à distinguer entre 1568 et 1713, chacune correspondant à une définition précise et importante des missions de la marine de guerre hollandaise.

Du début de la révolte en 1568 à l'instauration de la paix en 1609, la mission première de la marine hollandaise est de conquérir puis protéger un territoire qui n'est pas encore défini. La marine constitue en effet une composante essentielle dans le soulèvement des Provinces-Unies. Ce sont les « Gueux des Mers » (Sea Beggars ou Geuzen), ces troupes hétéroclites, composées de marins et de nobles hollandais, mais aussi de Français, d'Anglais et d'Allemands, qui interceptent les navires ennemis et neutres venant des côtes espagnoles où baltes, dans la Manche et la mer du Nord. Toutefois, leur expulsion des ports anglais en 1572 par la reine Elisabeth marque un tournant pour la révolte. Les Gueux des Mers se voient contraints de trouver une nouvelle base et ils jettent leur dévolu sur le petit port de Den Brielle au confluent de l'Escaut et de la Meuse. Sa capture donne le signal du soulèvement et quelque temps après, le port de Flessingue, mieux adapté, ouvre ses portes aux Gueux. Fin 1573, ceux-ci contrôlent les estuaires de l'Escaut, de la Meuse et du Rhin et, entre 1574 et 1578, Philippe II perd les deux derniers ports loyalistes : Middelbourg et Amsterdam. L'Espagne pour un temps ne dispose plus de ports dans cette région. Guillaume d'Orange profite de cette situation pour réorganiser les Gueux des Mers qui formeront le noyau de la marine militaire.

La reconquête menée par le duc de Parme à la fin des années 1570 et au début des années 1580 a une double incidence sur la guerre sur mer. La capture en 1583 de Dunkerque et de Nieuport, puis en 1585 de la ville d'Anvers, change la donne. L'Espagne dispose de nouveaux ports (Ostende sera repris aux Hollandais en 1603) qui lui permettent d'établir une présence maritime importante. Elle installe une flotte royale à Dunkerque (Armada des Flandres) et favorise l'activité corsaire de cette ville et des environs, qui atteindra un niveau jamais connu. Dès lors, Dunkerque constitue une menace sérieuse pour l'économie hollandaise en plein essor, non seulement pour la pêche (entre 1585 et 1607, pas moins de 258 navires de pêche zélandais sont ramenés à Dunkerque) et le commerce, mais aussi pour l'industrie.

Face à la menace maritime hispano-flamande, les Néerlandais sont conduits à modifier leur stratégie. En dehors du phénomène des Gueux entre 1572 et 1585, la majorité des missions de la marine hollandaise concernait le soutien des troupes terrestres (en 1574 soutien aux défenseurs de la ville de Leiden et en 1576 lors de l'attaque de Zierickzee) et la destruction des flottes espagnoles en 1573 dans le Zuyderzee. Ces missions étaient menées dans un espace limité aux côtes et aux fleuves. Après les années 1585-1588, ce type de mission, sans disparaître totalement, n'est plus primordial et ce sont les missions de protection des pêcheries qui deviennent essentielles. La seconde réponse à la menace dunkerquoise sera l'accroissement de la surveillance des côtes flamandes des bouches de l'Escaut à Dunkerque. Entre 1587 et 1594, plusieurs escadres requérant de grands moyens tentent de bloquer ou d'attaquer Dunkerque sans grand succès. Fin 1587, 57 navires surveillent les côtes flamandes et 26 l'estuaire de l'Escaut ; en 1588 ce sont au total plus de 215 navires dont les deux tiers sont devant Anvers. Par ailleurs, entre 1599 et 1604, les galères de Spinola basées à Sluis constituent une menace sérieuse car elles peuvent servir pour débarquer des troupes sur n'importe quelle île de Zélande⁵⁹. L'inefficacité de ce blocus conduit alors au développement d'escadres indépendantes qui vont tenter d'intercepter les corsaires sur les principales lignes ou zones commerciales. Enfin, les Etats-Généraux promeuvent la course notamment zélandaise dans une optique de « contre-course ». Toutes ces opérations restaient toutefois confinées à la mer du Nord et la Manche. Mais la lutte va prendre de l'ampleur avec l'idée de porter le feu chez l'ennemi. L'essentiel des forces servant à protéger le pays, les Hollandais n'envoient que quelques navires se joindre aux flottes anglaises pour participer en 1596 et 1597 aux raids sur Cadix et les Açores. En 1599, de nouveau, les Açores sont pillées ainsi que les côtes africaines mais en cette occasion la totalité de la flotte, soit 27 navires avec 8 000 hommes, est hollandaise. En 1605 et en 1606, d'autres escadres seront envoyées sur les côtes espagnoles et en 1607 se déroulera la célèbre bataille au large de Gibraltar, porte de la Méditerranée, qui

se termine par une victoire hollandaise. Cependant, la lassitude et la fatigue des protagonistes les amènent à signer la paix en 1609.

Après 1609, les missions de la marine militaire sont orientées vers la protection des lignes commerciales et la conquête d'un empire colonial. La période 1609-1621 constitue, selon Jonathan Irvine Israël, un cycle économique particulier dans lequel les Hollandais tirent les bénéfices de la paix pour renforcer leurs positions dans les eaux européennes, notamment en Méditerranée. Devenant des acteurs majeurs, ils deviennent aussi des cibles pour la piraterie. De nombreuses patrouilles sont menées jusqu'en Espagne tout au long de la décennie 1610, ainsi que l'escorte des flottes baleinières (1612-1615) menacées par les vellétés anglaises et scandinaves. La lutte contre les Barbaresques amène également la Marine hollandaise à participer en 1614 à la prise de La Marmora au Maroc, et aussi en 1617 au bombardement d'Alger, suivi de la destruction dans le détroit de Gibraltar de plusieurs navires en liaison avec les Espagnols. La reprise de la guerre avec l'Espagne en 1621 va interrompre cette collaboration. La menace dunkerquoise ressurgit. Rien qu'entre 1629 et 1637 plus de 1 880 navires sont capturés par les corsaires dunkerquois ou les navires de l'Armada de Flandres, sans compter des centaines de navires coulés ou brûlés. Un exemple parmi tant d'autres : en octobre 1625 au large de l'Écosse entre 140 et 185 navires harenguiers seront détruits !

Les forces navales hollandaises vont se concentrer sur cette menace. Cela explique qu'en dehors des opérations coloniales, les Hollandais n'armeront que quelques flottes en 1625-1627 pour attaquer les côtes espagnoles, à Cadix notamment. Ceci n'empêche pas l'existence de grandes batailles navales comme celle, dite des Downs/Dunes en 1639, qui est une lourde défaite espagnole, quasi identique à celle de 1588. Mais les Provinces-Unies pratiquent aussi la politique de la canonnière. Suite à la décision prise par le roi de Danemark d'augmenter les taxes lors des passages du Sund en 1644 et 1645, les marines hollandaises interviennent en permettant aux flottes marchandes de franchir ces détroits sans payer de droits, et aussi en entamant un blocus de ces passages. La période de 1600 à 1650 est appelée par certains « The first global war at sea » 60. Les compagnies commerciales servent de relais de la puissance navale et politique des Provinces-Unies. Elles représentent des acteurs essentiels dans la constitution de l'empire colonial hollandais qui survivra jusqu'en 1975. L'institution de deux compagnies commerciales, la VOC (Compagnie des Indes Orientales hollandaises) en 1602 et la WIC (Compagnie Indes Occidentales hollandaises) en 1621, conjugue des intérêts privés et publics. Ainsi dès 1603, la VOC qui a en charge l'espace Indien envoie des flottes qui ont pour objectif, non seulement de commercer, mais aussi de contrôler l'ensemble du commerce dans cet espace par la capture des comptoirs portugais et la perturbation du commerce portugais. Les événements suivants illustrent cette politique agressive : en 1605 capture des Moluques, des îles Ternate, Amboine et Tidore ; blocus du détroit de Malacca en 1606-1608 et de Manille en 1620-1622 ; en 1624, capture de Formose qui restera hollandaise jusqu'en 1662, de Malacca en 1641 et de Ceylan en 1637-1659 ; raids contre les comptoirs africains portugais en 1625 sans compter par ailleurs les opérations visant à éloigner et à interdire l'implantation de comptoirs anglais en français dans les années 1619-1623.

La WIC agit quant à elle, dans l'espace atlantique. Dès ses origines, l'un des piliers constitutifs de cette compagnie est la guerre de course, considérée comme le prolongement du commerce. La première flotte armée en 1623 aura pour but d'attaquer les comptoirs portugais au Brésil et en Afrique. D'autres actions suivront, plus fructueuses, notamment celles menées par Pieter Adriaensz Ita ou Piet Hein qui capture des galions chargés d'or et d'argent dans la baie de Matanzas sur l'île de Cuba en 1628. Cette expédition renfloue les caisses de la WIC et va permettre la reprise de son expansion vers le Brésil et l'Afrique. Le Brésil deviendra hollandais de 1630 à 1654, tandis que les comptoirs africains d'Elmina et de Loanda seront pris en 1637 et en 1641. Ils fourniront la main d'œuvre nécessaire pour les plantations des colonies antillaises hollandaises et européennes.

La période de 1652 à 1713 voit la marine de guerre engagée dans des actions plus violentes et fréquentes qu'auparavant. C'est la défense de la patrie contre d'autres nations maritimes

(l'Angleterre en 1652-1654, 1665-1667 et 1672-1674 ; la France en 1672-1678, 1688-1697 et 1701- 1713) et également le souci d'assurer la protection des intérêts nationaux et commerciaux. Cette période verra se dérouler de nombreux combats au large des Pays-Bas dans la mer du Nord et la Manche, ainsi que dans d'autres théâtres d'opérations secondaires comme la Méditerranée, la mer des Antilles ou le golfe de Guinée. En temps de paix, c'est la lutte contre les Barbaresques et l'intervention dans la Baltique qui prédominent. Cette période de plus de soixante années de conflits intenses n'est pas sans incidence dans la création, l'engouement et le développement du « Héros Marin ». Mais pas de n'importe quel héros maritime, c'est celle de l'officier maritime.

ORGANISATION ET STRUCTURE DE LA MARINE HOLLANDAISE

La République néerlandaise est une confédération de sept provinces souveraines qui partagent des finances communes, une armée, une marine et une politique étrangère. Elles délèguent leurs pouvoirs aux États-Généraux de La Haye. Après quelques dissensions initiales provoquée par une tentative de centralisation plus grande, la décision est prise le 13 août 1597 de créer cinq amirautés séparées, une décision provisoire qui restera en vigueur jusqu'en... 1795 ! Ces cinq amirautés sont établies dans les provinces de Zeeland (Middelbourg), de Hollande (amirauté de la Meuse la première et plus ancienne à Rotterdam et celle d'Amsterdam), West-Friesland het Noorderkwartier (Hoorn) et Frise (Dokkum). Pour éviter toute jalousie entre les villes de Hoorn et d'Enkhuizen, les États-Généraux décident en 1593 de fixer le siège de l'amirauté dans ces deux villes avec une alternance trimestrielle. Cette organisation navale déconcentrée qui résulte des rivalités entre les provinces et entre les principales villes de Hollande, n'est pas sans incidence sur la coordination de la flotte.

Chaque amirauté est composée de neuf à douze conseillers nommés par les États-Généraux sur proposition des États provinciaux. Une des particularités réside dans le fait que ces conseillers peuvent provenir de villes de la même province ou extérieures. Par exemple, pour l'amirauté de West-Friesland en het Noorderkwartier, les onze conseillers proviennent des villes de Hoorn, Enkhuizen, Amsterdam, Alkmaar, Monnickendam, Medemblick et des provinces de Zeeland, Frise, Utrecht, Gelderland et Overijssel.

Les amirautés ne sont pas égales entre elles. Celle de Hollande est la plus riche, celle de la Frise la plus pauvre. Chaque amirauté dépendait pour ses revenus des taxes et assises indirectes prélevées dans sa province ainsi que dans l'espace fluvio-terrestre qui en dépendait (taxes et revenus sur les flux commerciaux ; les navires et les charrettes). Les ressources sont en corrélation avec la croissance économique de la province. L'administration se trouve de ce fait sous le contrôle de quelques centaines de régents et de nobles. Ces derniers vont d'ailleurs pendant longtemps offrir le service de leurs navires et ce n'est qu'après 1654 que la marine hollandaise va devenir permanente, disposant de ses propres bateaux. Les liens entre Mars et Mercure vont se relâcher davantage encore du fait du mouvement d'aristocratisation des classes dirigeantes. La « nouvelle marine », celle de 1654-1713, va faire une part plus belle aux administrateurs ; elle va devenir une affaire de professionnels. Il en est ainsi pour les officiers.

HEROÏSATION ET CULTES DES OFFICIERS : LA CONSTRUCTION DES « ZEEHELDEN » AU XVII^e SIECLE

La population hollandaise participe activement aux événements maritimes. C'est une manifestation d'un patriotisme, d'un nationalisme naissant. Elle suit ces événements grâce à la presse (notamment le Mercure hollandais), mais aussi du fait de la proximité de ses côtes de certaines batailles : par exemple en 1673 Schooneveldt. Les Hollandais participent au retour des expéditions, que celles-ci soient victorieuses ou non. Le 8 septembre 1628, Piet Hein capture les galions espagnols dans la baie de Matanzas à Cuba. Il ne sera de retour aux Pays-Bas qu'en janvier 1629, mais la nouvelle était déjà parvenue le 15 novembre 1628. Dès le 17 novembre 1628, un journal publiait un récit élogieux de cette action. Lors du retour, Piet Hein et son vice amiral Hendrik Cornelisz Lonck sont fêtés

dignement par les Etats-Généraux. Ils sont invités à des banquets donnés en leur honneur par des municipalités et de nombreux pamphlets sont publiés. En août 1665, après son périple qui l'a emmené de la Méditerranée vers l'Afrique et les Antilles, de Ruyter revient victorieux à Delfzijl. C'est un retour triomphant par le butin qu'il rapporte, d'autant que les pertes ont été faibles. Cette victoire redonne du baume au cœur et couvre la défaite de Lowestoft. Plusieurs milliers de Hollandais se dirigent vers le port pour saluer ce personnage et le féliciter pour son action. Par contre, la même population pouvait réagir parfois violemment à la suite d'une mauvaise nouvelle. Les habitants de Den Brielle accusèrent Johan Evertzen d'être la cause de la défaite de Lowestoft. Elle faillit le lyncher lorsqu'il débarqua. N'oublions pas que le grand pensionnaire Johan de Witt fut assassiné puis massacré avec son frère lors du début de la troisième guerre anglo-hollandaise face aux défaites subies sur terre et sur mer⁶¹.

La population s'identifie aux héros qui sont populaires par leur action et leur origine. Ils sont le symbole de la réussite sociale. Très peu ont des origines nobles excepté Wassenaer van Obdam, van Gent et Kortenaer. D'origine plutôt modeste ou bourgeoise, ils atteignent par leur mérite, leur volonté et leur état service les plus hauts grades. Mais qu'est ce qu'un héros ?

Comme dans l'œuvre d'Homère, il n'y a pas de héros sans bataille et de bataille sur mer surtout⁶² ! Des officiers comme Jan Meppel, mort en 1669, ou Adriaen Banckert, mort en 1680, n'atteindront pas ce statut de héros malgré leurs états de service. Cornélis Tromp est une exception. Il est le fils de Martin Tromp qui était surnommé « Bestevaert », le Cher Père, et il s'est fait une sacrée réputation. L'action en mer doit être importante, il faut que ce soit une bataille, mais parfois aussi une escarmouche peut faire l'affaire, du moment que l'essentiel est de se distinguer et de défendre le drapeau de sa patrie. Ainsi à la bataille de Livourne de 1653, Jan Van Galen est tué dans l'action mais son comportement lui permet de faire partie des héros.

La nation, via les États-Généraux, reconnaît et récompense ces actions sous diverses formes : chaîne en or, médaille, choppe ou lampe en argent pur ; des sabres d'honneur, des rentes pour les veuves ou des emplois, comme pour le fils de Tjerk Hiddes de Vries qui naît le lendemain du décès de son père et reçoit un traitement de capitaine de vaisseau soit 360 florins annuels. Il mourra à 23 ans dans un combat contre ... Jean Bart. Après la victoire de Schooneveldt, les États de Hollande donnent des lettres de rente de 6 000 florins à De Ruyter et pour les autres officiers de 1 000 à 4 000 florins.

Ces récompenses ne sont qu'un aspect de cette héroïsation du monde maritime. La construction du héros est politique. Toute une propagande, une politique de communication, sont mises en place par l'image, l'oral et le texte afin de toucher le plus possible la population. Rappelons que les Pays-Bas sont un haut centre culturel et artistique : de grands peintres, des penseurs et des scientifiques tels Spinoza, Grotius, Huygens, Vondel, Rubens, Rembrandt... C'est un grand marché de l'art, de la presse aussi. On y publiera de nombreux journaux protestants et pamphlets contre Louis XIV. De nombreuses gravures, poèmes, libelles, feuilles volantes, portraits sont affichés et distribués. Il existe des séries de peintures commandées par les États-Généraux ou certaines provinces représentant les officiers généraux ayant participé à telle ou telle bataille qui s'ajoutent aux tableaux de Van de Velde et autres peintres sur les victoires hollandaises.

Cette popularité de certains officiers est instrumentalisée. Michiel de Ruyter est appelé « Rechterhand van de staaten », la « main droite de l'État ». Johan de Witt tire partie de cette renommée qui permet à De Ruyter de devenir commandant en chef. C'est le seul officier qui, provenant d'une province rivale (Zeeland), atteint les plus hauts grades dans une autre amirauté, celle de Hollande. De Witt stimule cette popularité en faisant paraître certaines correspondances. Il existe alors un culte de Cornélis Tromp et de De Ruyter. Cela se matérialise par des gravures, des impressions de portraits, des médailles en argent faits par des artistes connus comme Willem van der Velde le Jeune ou Jan Lievens le Jeune, un poème par le prince des poètes, Joost van den Vondel. Après le raid de Chatham, dans chaque amirauté, on accroche le portrait de De Ruyter réalisé par Ferdinand Bol. Quand à

Tromp, son image est diffusée dans les boutiques à tabac et son nom est utilisé par des auberges, signe aussi de sa popularité.

La population hollandaise baigne alors dans la culture gréco-latine. Elle s'en imprègne et donne à ses héros un surnom provenant de la mythologie greco-latine : Aert van Nes est l'Ajax Hollandais ; De Ruyter est appelé l'Achille. Cette identification à la culture grecque est renforcée par l'idéologie qui se dégage. Ces héros sont des héros civiques : ils sont au service de l'État, même s'il existe des rivalités provinciales et personnelles; mais ils se sacrifient pour l'intérêt général. Cette jeune nation hollandaise qui n'a pas de passé⁶³, se cherche et se crée des personnages qui symbolisent les valeurs de la République. Pour garder en mémoire cela, pour fédérer cette candeur populaire, pour se souvenir, rien de mieux qu'une tombe, un objet éternel qui n'est pas sans transmettre un message.

QUELQUES

HEROS

MARINS

Le premier qui a eu la qualité de héros maritime, c'est Jacob van Heemskerck, mort à la bataille de Gibraltar en 1607. Selon les témoignages, il encourage jusqu'au bout ses hommes. Cet engagement total arrive aux oreilles de la population. Il s'en suit un développement de pamphlets, de poèmes, de portraits. Un tombeau est érigé le 5 juin 1607 à Amsterdam aux frais des États-Généraux, c'est le premier cas, seul Guillaume d'Orange avant lui avait bénéficié de ce traitement. Sur le tombeau, figure une épitaphe et une représentation de la bataille. Plusieurs peintures sont réalisées à posteriori de la bataille. Celle de Vroom coûte 6 000 florins d'époque (plus de 72 000 livres tournois). Sur le tombeau d'Heemskerck, figurent son casque, son épée, ses armes et la balle même qui l'a tué, comme une relique.

Le second héros, nous l'avons déjà rencontré : c'est Piet Hein. Son succès à Matanzas est reconnu par les États-Généraux, même si l'action a été menée pour le compte de la WIC. Une compétition entre les États Généraux et la WIC se crée pour la possession des symboles et des signes de cette victoire, comme les drapeaux ennemis par exemple. Piet Hein décède en 1629 dans une campagne contre les Dunkerquois. Sa tombe se trouve à Delft. Ses armes, ses armures et signes de commandement sont déposés. La procession sera suivie par 585 proches et près d'un millier de gens en tout. Le tombeau ne sera réalisé qu'en 1638 suite à un conflit entre les États-Généraux, l'amirauté et la bourgeoisie de Delft. Il sera financé en définitive par VOC. Le tombeau est en marbre, réalisé par Pieter de Keyser, d'une célèbre famille de sculpteurs, qui a réalisé aussi celui des Nassau et d'Erasmus⁶⁴.

Le troisième héros et non des moindres, c'est Maerten Tromp. En 1639, il est victorieux dans deux confrontations majeures. Le 18 février avec une flotte de 10 navires, il met en déroute 22 navires dunkerquois leurs causant la perte de 1 800 hommes. Il reçoit des États-Généraux et des États provinciaux de Hollande des chaînes en or. Louis XIII, roi de France, le récompense aussi car il empêchait ainsi les Espagnols de recevoir des renforts : il est fait chevalier de l'ordre de Saint Michel. Quand au cardinal de Richelieu, il lui envoie une troisième chaîne en or. La seconde confrontation est la plus célèbre. Elle a lieu le 21 octobre aux Dunes où les Espagnols perdent près de 7 000 hommes. Cette bataille a une signification particulière. Elle met fin à l'hégémonie espagnole dans les eaux du nord de l'Europe ainsi qu'aux plans d'invasion des Pays-Bas. C'est une victoire importante de la marine hollandaise qui depuis 1627 n'avait pas réalisé de grande expédition victorieuse et apparaît alors comme la force militaire maritime en Europe.

Cette victoire des Dunes est suivie de récompenses financières, de la frappe de médailles commémorant cette rencontre et de festivités : banquets, feux de joie et d'artifice. Louis XIII anoblit Maerten Tromp. Des dizaines d'images et de peintures sont imprimées. Celle de Salomon Sauvery montre un combat entre le navire amiral de Tromp et d'un bateau espagnol, événement qui n'a jamais eu lieu ! Les amirautés s'arrachent les représentations de cette bataille comme les gravures faites par Balthazard Florisz van Berckenrode. Tromp meurt le 10 août 1653 dans un combat contre les Anglais. Son corps sera transporté avec soin à La Haye. Lors de son enterrement le 5 septembre, il est emmené avec ses armes et ses attributs de héros marin (son drapeau, ses gants en fer, son heaume, ses éperons de

chevaliers et son épée). Il est porté par ses pairs, suivi par les membres des États-Généraux, les différentes structures étatiques et sociales, les magistrats, les officiers administratifs et militaires, des bourgeois et le reste de la population. Il est amené de la Haye à Delft, salué quatre fois par des tirs. Une femme écossaise se dit contente de sa disparition : la population saccage sa maison. Il existe plusieurs portraits réalisés par différents artistes destinés aux amirautés ou à des particuliers. Un buste de marbre est réalisé par Rombout Verhulst : Tromp est représenté sur son tombeau avec des tritons, des figures marines. Les États-Généraux promettent 10 000 florins (120 000 livres tournois) à la famille pour exécuter le tombeau. Celui-ci est terminé en 1658, la veuve ne sera payée qu'en 1661 mais elle percevait toutefois des rentes mensuelles de la part des amirautés d'Amsterdam et de Rotterdam (60 et 20 florins).

Jan Van Galen est l'un des rares officiers de marine qui, n'étant que commandeur et donc ne faisant pas partie des officiers généraux, figure dans cette galerie de héros⁶⁵. Sa mort en 1653 à Livourne a lieu dans des conditions « héroïques ». Il lutte contre des forces supérieures et réalise un geste « héroïque » : une canonnade le blesse pour la seconde fois, ses proches l'emmènent dans l'entrepont où le médecin se prépare à lui amputer la jambe. Il boit un verre de vin et s'écrie que les « meurtriers anglais » doivent payer pour leur canonnade. Il se lève alors et se fait mener sur le pont où il continue le combat. Il mourra des suites de ses blessures une semaine plus tard. En reconnaissance de sa vaillance et de son courage, les États-Généraux autorisent la publication de sa vie et l'édification d'une tombe en marbre terminée en 1656 par Rombout et Keyser.

Witte de With est un personnage particulier. Il est populaire malgré son sale caractère. Sa mort en novembre 1658, est suivie de la parution de nombreux poèmes et d'une vie écrite peu de temps après par ses proches⁶⁶. Il aura droit à une sépulture qui ne sera terminée qu'en 1669 et dont le coût s'élèvera à 4 000 florins dont 3 000 florins payés par les États-Généraux et 1 000 par l'amirauté de Rotterdam. Le monument respecte un schéma qui est en train de s'établir. Il y a un gisant avec des armes, une description des batailles, des inscriptions latines et des images de Neptune et de Mars.

Avec la seconde guerre anglo-hollandaise, les premiers à être héroïsés sont deux nobles. Le premier est Jacob van Wassenaer Obdam, le vaincu de la bataille de Lowestoft. Cette rencontre est une cuisante défaite hollandaise provoquant un scandale politique et une immense émotion parmi la population. Une enquête est menée pour connaître les coupables de cette défaite. Cornelis Tromp dirige la commission et blanchit Johan Evertzen mais la raison d'État en décide autrement : il est démis de ses fonctions. Les causes de cette défaite proviennent des instructions données à Van Wassenaer Obdam, ainsi que des manœuvres que celui-ci avait transmises aux capitaines qui n'étaient plus habitués à combattre dans de gros affrontements. Van Wassenaer Obdam n'est d'ailleurs pas le seul officier général d'origine noble à décéder dans cette bataille. Il y a aussi Egbert Meeuwsz Kortenaer. Tous les deux bénéficieront d'un cénotaphe. Pour celui de Van Waasnaer d'Obdam, les États-Généraux donnent une somme de 12 000 florins. L'artiste choisi avec l'accord de la famille est le jeune Eggers. L'œuvre, terminée en 1667, comporte une nouveauté, la présence d'un baldaquin (le seul précédent est celui de Guillaume d'Orange dit le Taciturne). Des figures allégoriques représentant la Bravoure, la Prudence, la Vigilance et la Fidélité entourent le corps. Le cénotaphe de Kortenaer n'a coûté que 5 000 florins aux États-Généraux. Il est réalisé par Rombout qui le termine en 1669. Il est classique avec le héros dont la tête repose sur un canon et les pieds sur un casque avec à côté ses armes.

Les États-Généraux n'ont pas, seuls, l'initiative de ce culte des officiers marins ; ils n'en avaient pas le monopole : c'est aussi un espace occupé par les États provinciaux. Il ne faut pas oublier l'existence d'une certaine rivalité, voire confrontation, entre la Province de Hollande et celle de Zeeland. D'où la décision prise par les États de Zeeland d'ériger une tombe pour les frères Cornelis et Johan Evertzen décédés à la suite des combats de juin et août 1666. C'est une première pour la province qui dispose de ses propres héros marins, mais aussi une première dans la conception du tombeau : le cénotaphe accueille les deux

frères côte à côte. La commande n'a lieu qu'en 1680 seulement auprès de Rombout et Verhulst. Le tombeau sera terminé en 1685 et payé par la famille.

LE PLUS GRAND DES HEROS : MICHIEL ADRIAEN DE RUYTER

De Ruyter meurt le 29 avril 1676 dans un combat contre la flotte française. Son corps arrive au large des côtes hollandaises le 30 janvier 1677. La nouvelle de son décès provoque un choc dans le pays, la population prend rapidement conscience que c'est la fin d'une période avec la mort de « l'Achille Hollandais ». L'État de Hollande décide le 9 juillet 1676 de la réalisation d'un tombeau d'honneur et propose 10 000 florins. Le 4 février 1677 débute une procession qui sera saluée sur son passage, par tous les forts et les navires. L'arrivée à Amsterdam a lieu le 16 février. L'inhumation a lieu le 18 mars: les éperons, les gants, les armes, les armures, les casques, les signes de commandement sont apportés. Le corps est porté par ses pairs et suivi par les représentants de l'État, la famille, les proches, les ambassadeurs, les consuls du Danemark et de l'Espagne ; les collègues des bourgeois, la foule... plusieurs centaines de gens. Le coût de l'enterrement s'élève à 14 626 florins, somme qui aurait dû être réglée par les Etats Généraux mais qui le sera en réalité par la famille et l'amirauté. Le tombeau est réalisé par Rombout et Keyser. Il est commencé en 1677 et ne sera achevé qu'en 1681, durée qui peut s'expliquer par le différend survenu entre Rombout et la famille qui se verra contrainte de payer à l'artiste la somme de 5 122 florins. Le cénotaphe comporte des inscriptions latines, une description des services de De Ruyter et de la bataille, un gisant, les armes du défunt et tous les symboles de son commandement. De son côté, la famille mène une action afin que la population, la nation se souviennent de cet homme et ce qu'elle lui doit. D'où la parution peu de temps après d'une immense biographie commencée par Gerard Brandt à partir de documents que lui laissera consulter Engels de Ruyter.

La famille est ainsi un élément tout aussi capital dans l'héroïsation du défunt. On vient de le voir dans le cas de De Ruyter. Il n'est pas le seul. La sœur de Stellingwerf écrit aux États-Généraux pour se plaindre de ce que l'on ne reconnaît pas l'action de son défunt frère. Les États-Généraux donnent raison à sa plainte et demandent à l'amirauté de Frise de s'exécuter, ce qui sera fait par la réalisation d'un grand portrait.

La question que l'historien se pose est de savoir pourquoi tous n'ont pas eu droit aux mêmes égards. Après le facteur « bataille », l'importance de l'amirauté dans laquelle l'officier sert constitue un autre facteur. Ainsi chaque officier général des amirautés d'Amsterdam et de Rotterdam est connu, mémorisé. Dans les autres amirautés, il faut, la plupart du temps, avoir été lieutenant général. Le succès de l'officier rejaillit sur l'amirauté. L'existence d'une compétition entre celles-ci et de rivalités entre les villes et les églises n'est pas absente non plus : Obdam est enterré à Utrecht et van der Zaan à Dordrecht, soit hors de l'amirauté, ce qui constitue une exception. La compétition pour recevoir les tombeaux des héros entre la Oude Kerk à Amsterdam et la Sint-Laurenskerk de Rotterdam est forte. Et toutes les amirautés ne sont pas assez riches pour pouvoir financer des dépenses élevées. En Frise, il n'existe pas de tombe de héros car l'argent fait défaut. Enfin, tous ces personnages n'ont pas la même envergure nationale ou régionale. De Ruyter et Tromp seront les seuls à atteindre même une renommée quasi internationale. Celle-ci ne diminue d'ailleurs pas par la suite, preuve en est, les nombreux ouvrages consacrés à ces personnages. Selon les décomptes effectués dans les catalogues des images et peintures de Muller et Van Someren des années 1880, pas moins de quarante officiers de marine ont été représentés rien que pour le XVIIIe siècle. De Ruyter est en tête avec 45 images dépassant de peu Maerten Tromp avec 44. Beaucoup de celles-ci sont visibles dans les musées de Rotterdam et d'Amsterdam. En guise de conclusion, la construction de l'État nation hollandais autour de l'élément marin est à mettre en parallèle à celle de la France et de l'héroïsation de l'armée de terre, de la relation entre la population et cette institution, notamment depuis la Révolution. Rien de comparable ne semble exister en ce qui concerne la marine. Certes, la France a rendu hommage à certains de ses officiers mais bien plus tard, au XVIIIe ou au XIXe voir au

début du XXe siècle, notamment comme lors des hommages nationaux rendus à la dépouille de Jean Bart.

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59 Rappelons que les seuls débarquements sur Walcheren auront lieu en 1809 par les Anglais, et en 1944 par les Alliés. Le premier sera un échec pour les Anglais, mais pas le second.

60 Titre d'un chapitre de Jan Glete de son livre, Warfare at Sea 1500-1650. Maritime Conflicts and the Transformation of Europe, Routledge, 2002, 231 p.

61 Une description dramatique en a été faite par Alexandre Dumas, dans son roman La Tulipe noire de 1850.

62 La première bataille maritime des Hollandais a eu lieu en 1214 devant Damiette et la dernière en 1942 dans la mer de Java sous le commandement de Karel Doorman.

63 Il y a certes le mythe ancien des Bataves, vaillants peuples et de la lutte contre l'eau pour l'acquisition et le maintien des terres.

64 Pour une description du tombeau, voir Ronald Prud'homme van Reine, Admiral Zilvervloot. Biografie van Piet Hein, éditions Arbeidpers, 2003, le chapitre 6.

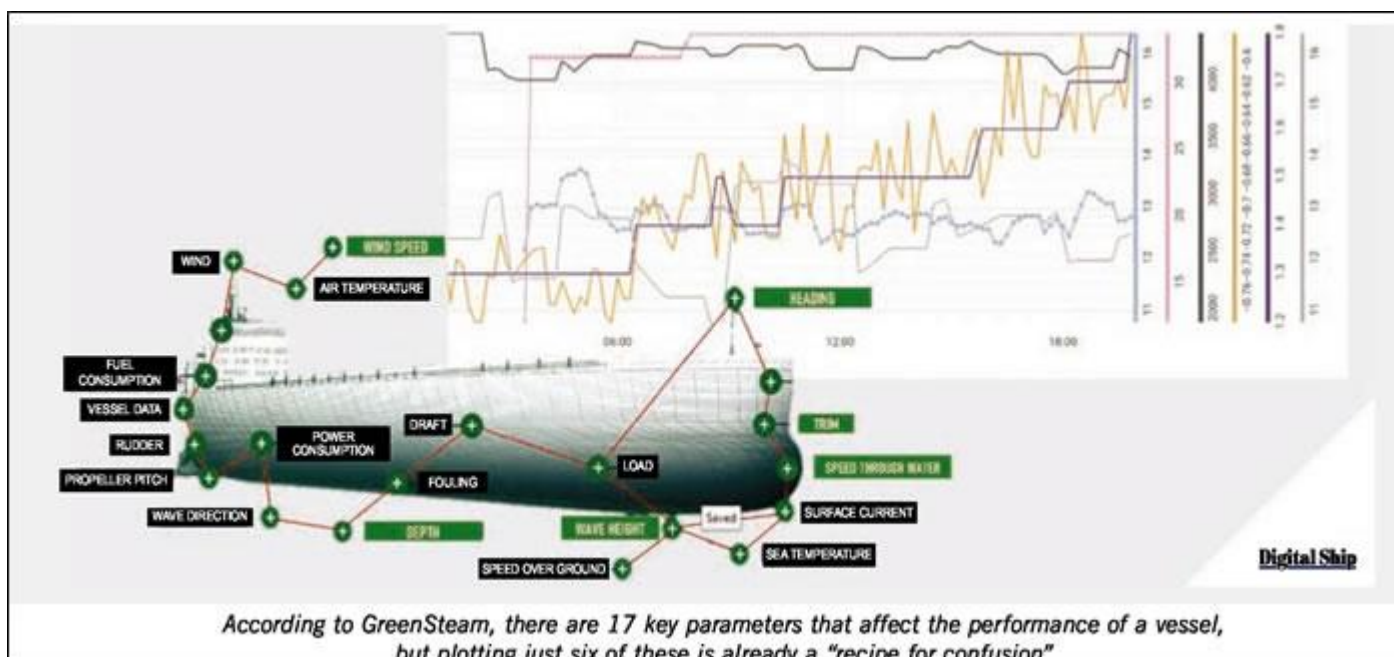
Inséré 05/02/22 DOSSIER Enlevé 05/03/22

GreenSteam: making AI analytics accessible

GreenSteam scientists have spent the last 12 months improving the clarity and accuracy of AI analytics for ship performance insights. The company has launched two new solutions to improve access to high quality, high-frequency AI-driven data.

One of two major challenges shipping companies face today when looking to optimise vessel performance is acquiring clear, accurate and trustworthy data. A second challenge is knowing how to gain knowledge from that data to improve vessel performance.

According to GreenSteam CEO Simon Whitford, while the data for improving ship performance exists, understanding what this data means for vessel performance is a "recipe for confusion," he noted during a webinar 'Analytics and advice using low frequency vessel data & data collection' [1] held on March 23 and hosted by Digital Ship's sister platform, VPO Global. He explained that there are 17 critical parameters that significantly affect vessel performance and in order to make noticeable improvements on the performance of the vessel, these parameters must be fully understood.



For owners and operators, it can be an overwhelming task trying to make sense of high-frequency, complex data sets. Moreover, identifying the impact of natural variables such as weather and sea temperature versus manmade decisions like course and speed, versus biological influences such as hull and propeller fouling, is an additional complexity that needs navigating to better understand vessel performance.

The image demonstrates the complexity of trying to understand these 17 variables their impact on vessel performance. The graph only plots six of the 17 parameters over a 12-hour time period but is already complex to look at. Adding more variables into the graph only exacerbates this. Mr Whitford likened this situation to 17 people from different countries speaking different languages at the same time, trying to communicate but without much success.

Greensteam has spent 13 years trying to master this complex subject and believes that AI is essential to managing this kind of data and in finding patterns that can makes sense of the data.

Non-artificial intelligence (AI) methods can be used, but the GreenSteam CEO says these solutions "cannot handle anything quite like these 17 dimensions and have to filter out 90 per cent of the data in an attempt to make the data manageable. This changes the problem you are trying to solve and doesn't give you the clarity or accuracy you need."

Mr Whitford noted that until now, the world of vessel performance management has been split into two parts. One is manual noon reports and the other is automated high-frequency data collection, of which currently only makes up a small proportion of the fleet.

According to GreenSteam, a major problem is that a lot of manual are misreported, which in turn holds back the accuracy of AI models. Mr Whitford noted that some of the 17 variables are more susceptible to misreporting than others. "Trim is really difficult, whilst fuel consumption is obviously subject to some biases here."

"The overall problem is that artificial intelligence and high-quality vessel data are the two necessities. That's clear. The problem is that both of these come with their own baggage. Nothing is simple. With all the problems in inaccuracies of noon reports, it looks like for the moment, we're tied to relying on autolog data, which expensive and difficult to install. And then, since AI models are so data sensitive, it takes them quite a while to see enough data to get to know and understand vessel performance. This means the waiting time for good results is about 90 days."

Mr Whitford went on to say that while this is possible for an owner operator that has the time to wait to ensure they have the highest accuracy of vessel specific models, for most vessels that are on a short-term time charter, this 90 day wait time is too long.

He believes that “artificial intelligence is essential,” and that “data hungry AI is the only workable approach to understanding vessel performance and emissions.”

In 2019, GreenSteam began a project to bring clarity and accuracy of AI analytics to every vessel across the world fleet. The first challenge they looked at was how to cut the time to get a decent AI model to one third of typical 90-day time period, making it suitable for a much wider group of ships. The second challenge looked at how to “evolutionise” in Mr Whitford’s own words, “noon reporting of the data needed for vessel performance to both increase frequency accuracy and make reporting transparent.”

The result was the launch of two new applications – a hybrid AI model and an app called GreenSteam Capture.

The hybrid AI model is based on 13 years of GreenSteam’s research and experience in various types of vessels and segments. Data scientists across the UK, Denmark and Poland have brought the hybrid model concept to life in the last 12 months. The hybrid AI model learns not only from the vessel specific data, but also takes more broader lessons and guidance from vessels that have previously used GreenSteam’s platform.

The hybrid model can deliver AI clarity after just 30 days of good data. The model makes very few assumptions; instead it continuously searches for patterns in the data to predict the power required from various inputs on the vessel.

The company’s second new technology, which it started working on in September 2019 is called GreenSteam Capture. The initial question that started off this project was how to get accurate vessel data, especially fuel consumption data, without manual entry from any gauge or metre on every vessel. The solution also aims to increase the frequency of data collection.

GreenSteam Capture is a downloadable app, which a seafarer can use by simply pointing it at a metre which captures the image and converts it to data. It also provides task lists to remind the operator when readings are required. Every reading is date and time stamped for accuracy. The app can read any metre on any vessel and can be used worldwide.

The app also triggers smart alerts so that onboard or onshore personnel can make timely decisions. Operational teams are alerted to investigate when thresholds are breached, so that remedial action can be taken. For example, if the hull is underperforming, intervention can be arranged to prevent additional fuel consumption.

“The key factor about GreenSteam Capture is it validates and captures audit images of every metre. With our new hybrid model, which gives clear, accurate AI analytics after 30 days of good data, and GreenSteam Capture, which provides three to four times as much data as noon reports, we have taken a good step towards democratising data collection for all, and making AI analytics available to every vessel in the world fleet,” Mr Whitford explained. “We don’t need equipment onboard, and we don’t need to test your patience waiting for good results.”

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2021 Was a Year of “Ressurrection” for Many Vessels Deemed Obsolete Just a Couple of Years Back

Vessels classes deemed out of favor and obsolete a few years back, made their glorious return during 2021, riding the wave of favorable market conditions, both in the dry bulk and the container segments. In its latest weekly report, shipbroker Intermodal noted that “back in early June 2021, the weekly brokers’ insight ended with the well-known quote

"A rising tide lifts all boats." Today, comparing the pre COVID times with how things have turned on dry and container during the pandemic it is interesting to see how the sizes deemed "obsolete" or "outdated" by most of us have performed and how investing in shipping can be more basic some times than we tend to think".

According to Intermodal's SnP Broker, Mr. Timos Papadimitriou, "the well-known and for a long time popular 28k dwt BC was by most classified as outdated during the market's downcycle over the previous 5 years. On the container segment, the panamax and post-panamax ships were deemed un-fixable and there were many of them around 10 years of age that got sold close to demo levels back in 2017-2018. During the above period, along with the panamax post panamax ships, the 1700 – 2200 feeders were also sent to the beach frequently. A lot of them were sold strictly for demolition as the thinning of the fleet was necessary based on the liners and charterers for the readjustment of the supply-demand balance. But there were a lot of them circulated for further trading before eventually sent to scrap yards. Where I am going to with this is that these ships were passed by some but others did buy some of those un-fixable ships purely because they were priced around demo levels".



*The 2017 built 81237 t DWT **STEFANOS***

"Ship owners bought ships at a bad market purely because they were relatively young but very cheap. So, it was a matter of confidence and buyer reflex. These buyers did not anticipate that a 10-12 year old ship that could actually be scrapped at the time to be valued north of 50 million in 3 years time or that she would be making 100k pd for 90s days or 50k for 3 years. The buyers purely acted on the notion that if you can't make money from a ship bought at scrap levels then maybe you should do something else. This is a rather tough and in many ways unfair concept and one can and will argue that these sort of bets/gambles can be placed by owners with the financial capacity to subsidize such assets, which is true. But if you ask the buyers of those ships they will tell you that it was not a gamble. They bought a ship at demo levels and with the potential to trade her maybe for another 10 years, so the long-term investment horizon in shipping does count. They got lucky indeed but luck some times is nothing more than acting when the opportunity appears", Papadimitriou noted.

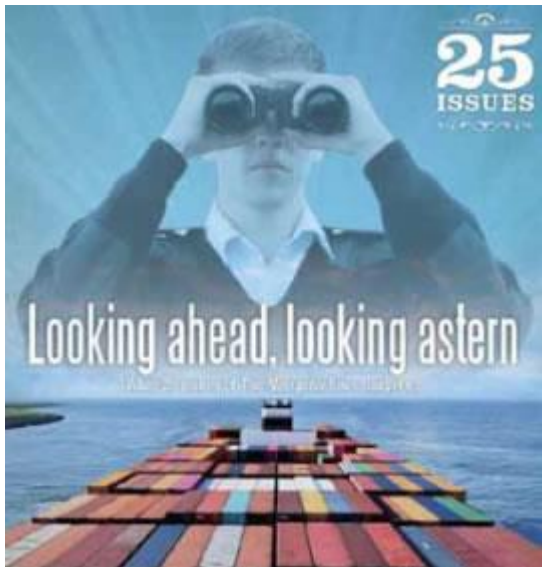
"This was not seen only on the container segment. Buyers went after 28k dwt that were not priced at demo levels, but they had a significant discount compared to the rest of the Handysize segment. Again nobody anticipated what would follow in 2021 but the idea of buying a "good" ship even if it is considered outdated paid up in this highly cyclical business. I guess this is what makes shipping so special and even though it is an open industry, it is not for everybody.

Thank goodness!", Intermodal's analyst concluded.

Source : Nikos Roussanoglou, Hellenic Shipping News worldwide

Inséré 07/02/21 BOEKEN LIVRES BOOKS Enlevé 07/03/22

Silver celebrations as The Navigator publishes its 25th issue



The **Nautical Institute** is celebrating a special milestone for The Navigator, the free magazine aimed at maritime navigators around the world. The new issue, which is published this month, is the 25th edition of the award-winning publication launched in 2012.

Articles include a look back at a few of the top tips shared in past editions, an interview with Senior Vice-President of The Nautical Institute and distributor of The Navigator, Captain André LeGoubin FNI, a collage of reader photographs and letters and a reminder of some of the technology articles written by Dr Andy Norris FRIN FNI on behalf of the Royal Institute of Navigation.

David Patraiko FNI, Director of Projects for The Nautical Institute, said: "The Navigator was originally conceived to ensure that every professional navigator recognised the importance of navigating. It has grown beyond its original brief, however, as it's not just navigators of all ranks who read it. We know that company directors and engineers have enjoyed it too.

"As we hit our 25th issue, I would like to take the opportunity to thank our volunteer distributors, without whom we couldn't afford such an enterprise, nor enjoy the impact we have done from getting so many copies onboard ships around the world. I would also like to thank the International Foundation for Aids to Navigation (IFAN), supported by Trinity House and Steamship Mutual, for their generous funding of The Navigator".

The Navigator is produced by The Nautical Institute with support from the Royal Institute of Navigation. It is available as a free pdf or as a digital magazine via The Nautical Institute website and dedicated app. Printed copies are distributed alongside The Nautical Institute's membership magazine, Seaways, and through missions and maritime training establishments. Click [HERE](#) to read the latest copy of The Navigator today.

Inséré 08/02/22 DOSSIER Enlevé 08/03/22

Where automation ends and autonomy begins

As the marine industry increases its use of automated processes, and artificial intelligence matures, the time is ripe for a clearer understanding of when an automation system becomes an autonomous one, writes Dr. Kalevi Tervo, corporate executive engineer and global program manager at ABB Marine & Ports.

Navigation on autopilot

Automation systems rely on clearly defined logic, mathematical models and algorithms to guide their actions. An example is a ship's autopilot system tasked with controlling course according to a predetermined setpoint – such as true heading at 90 degrees. The autopilot senses the vessel's heading using a gyrocompass, analyses the deviation between actual and desired heading and adjusts the rudder angle accordingly.

Mathematical models and algorithms can be designed to enable a conventional automation system to handle very complex tasks, but the technology is only as sophisticated as the input it receives – it cannot 'think' for itself. If the actual situation calls for a deviation from the plan, the system is missing these inputs as well as the capability to analyse those, and therefore is unable to respond appropriately. As a result, human intervention is required to bring the operation to a successful conclusion.

For instance, if the vessel is on course to collide with another ship, the ability to understand the risk and adjust course in line with the rules of the road relies on the operator's perception, understanding and decision-making capabilities. So, while a standard automation system can sense, analyse and act based on existing input, it lacks the ability to recognise and comprehend unexpected threats and present solutions to deviate from those inputs and mitigate the risks associated with the situation.

An autonomous system, by contrast, simulates these human faculties within the scope of a particular operation. An autonomous navigation system would be able to perceive another ship, interpret the threat and change course to prevent a collision in a safe and efficient manner. However, in the foreseeable future even an autonomous system would require a human in the loop to complement the operation in a collaborative manner. In fact, the combination of human capabilities and experience, and autonomous technology can do a better job together than any one of the two could do alone.



ABB Marine's control room

Automated auxiliaries

Autonomous and automation systems are not only used for vessel navigation; the technology is also deployed in auxiliary machinery such as cranes. An advanced automated (but not autonomous) crane can adapt its behavior depending on factors such as the length of a rope or the mass of a load. The effects of these variables are relatively simple and can be described with mathematical modeling.

Again, however, if the automated crane was presented with an unforeseen obstacle preventing it from hoisting the load, it would rely on the intervention of a human operator. An autonomous crane, on the other hand, could 'perceive' the item, recognise that it presented an obstruction and find an alternative path by which to move the load. Again, the human supervisor would be on hand to intervene if necessary.

The distinction between automation and autonomy, then, lies in the presence, or absence, of the decision-making cycle that includes perception, understanding and problem-solving. In short, a system can be considered autonomous where technology steps in to handle multi-sensory perception and interpretation of the current situation based on previous experience or learned concepts to apply spontaneous problem-solving.

It is worthwhile to note, however, that autonomy is not about an 'all or nothing' approach. A system that begins to complete or execute any aspect of the 'perception – understanding – problem-solving' loop can be considered to have aspects of autonomy. This is due to the fact that such a system is able to partially or fully execute tasks which, by contrast, would be only done by human in an automation system.

The far end of the spectrum

Although autonomous systems can mimic certain cognitive processes and take action towards a favorable outcome, today their abilities are limited to specific tasks – like navigating a ship or controlling industrial machinery. A fully autonomous system, regardless of the context of its application, would apply humanlike creativity, judgment, learning and knowledge to solve any number or any type of problems in any context.

Today, 'generic AI' does not exist, and it is likely to be a decade – at least – before the technology with the ability to learn any type of application emerges without context-specific tailoring. And even then, humans will remain key for supervising the vast majority of shipboard activities. Yet, even in its current stage of maturity, autonomy is a valuable tool which is easing the physical and mental burden on shipmaster and crew and which – already – is changing the roles of those working on board ship for the better, safer and more efficient operations. And even when the level of automation increases, we will always need competent crew working alongside the technology.

Inséré 09/02/22 DOSSIER Enlevé 09/03/22

Developments at OCIMF

In its May, June and July newsletters, OCIMF reported on finding a pathway with climate change, West Africa piracy government initiatives, and concerns about marine loading arm maintenance, and much more

Recently things have been quite quiet in the Middle East, but you will be aware of the terrorist attacks on two tankers over the past few days [late July 2021], Mercer Street in the Arabian Sea and Alberta in the Red Sea – resulting in the deaths of two seafarers on Mercer Street," said Rob Drysdale, managing director of OCIMF.

"Condemnation from various countries has followed and there is a real risk of further escalation in the region. I sincerely hope that the situation is not allowed to get out of control."

Climate change

For climate change initiatives, "there is so much going on within this space that it can be difficult to track what has already been done, what is being done today and what still needs to be done," Mr Drysdale said.

OCIMF is reviewing what role it will take in greenhouse gas emission reductions. "We cannot be involved in everything, so we need to focus our collaboration efforts where we can best bring value for our members and for the maritime industry as a whole."

"New fuels, whether they are reduced carbon, carbon neutral or zero carbon, are going to be a big part of the solution."

"The technical challenges are huge, in fact, technical solutions have a long way to go to have any chance of catching up with the ideas for new fuels and hitting the deadlines set by IMO for 2050 let alone the aspirational targets already being discussed by others."

"One of the problems not yet fully appreciated is the potential safety impacts of these new fuels on bunkering, storage and handling onboard."

OCIMF has joined a "Safety of Future Fuels" working group in May, which was launched by the "Together in Safety" coalition (see <https://togetherinsafety.info/>). This group is doing a Strength, Weakness, Opportunity and Threat (SWOT) analysis of various fuels, and risk assessments.

West Africa piracy

OCIMF noted that the first meeting between the Nigerian government and the Inter Regional Coordination Centre (ICC) Yaoundé was held on July 14, as the "Gulf of Guinea Maritime Collaboration Forum / Shared Awareness and De-confliction (GOG-MCF/ SHADE)."

The Yaoundé Interregional Coordination Centre in partnership with NIMASA (Nigerian Maritime Administration and Safety Agency) and the Nigeria Navy chaired the meeting.

"This is a huge landmark in the journey to addressing maritime piracy, kidnap and ransom in the region. There is still a lot to do, but with the collaboration of all stakeholders I am confident of success," said Rob Drysdale, managing director of OCIMF.

The Director General of the International Chamber of Shipping (ICS) made the following remarks at the meeting. "Regional coastal states are on the right track, ramping up their law enforcement, judicial processes, and military capabilities to establish maritime security in their waters.

"Among these, Nigeria's Deep Blue project is notable. It is by far the most ambitious and promising project in the region right now and has the potential, over time, to be a game changer to the fight against piracy."

OCIMF also said it was pleased about Nigeria's "Deep Blue" maritime security project. "This is a significant investment in military and law enforcement infrastructure to secure its maritime domain and address the ongoing piracy issue in the Gulf of Guinea,"

"Managed by the Nigerian Maritime Safety Agency (NIMASA), the multi-agency project will significantly increase maritime security in the region. A central command and control centre based in Lagos will oversee a network of integrated assets including two special mission vessels, two special mission long-range aircraft, 17 fast-response vessels capable of speeds of 50 knots, three helicopters and four airborne drones, providing 24/7 cover for the region. These complement the Yaoundé ICC structure offering real capability to both Nigeria and the region."

"OCIMF hopes Deep Blue assets, coordinated with the activities of other navies and programmes through the mechanism of the GOG-MCF/SHADE, will seriously impact on the ability of pirate groups to prey on merchant shipping."

IACS meeting

OCIMF joined an International Association of Classification Societies (IACS) meeting on Jul 19-21, for an update on progress on working groups, in the lead up to an annual "Tripartite" event in Autumn. The three parties represent shipowners, shipyards and class, discussing design, construction and operation of new and future ships. Themes of the discussion were decarbonisation, human-centred design, design safety and digitalisation. There were updates on fire risks due to leakage from low pressure fuel pipes, and on the joint industry working group on anchoring equipment.

Mooring equivalency

OCIMF has initiated and is funding a joint industry project to study the performance of mooring systems, in order to see how alternative mooring systems compare. The project is being led by research institute MARIN.

Examples of alternative mooring systems are vacuum pads and magnets. There have been growing safety concerns about conventional (rope based) mooring systems due to injuries after ropes have snapped.

"OCIMF supports the application of new technology when its safety and reliability can be demonstrated," OCIMF said.

The MARIN led project will also identify the most important data to analyse, when assessing a mooring system.

Root cause investigations

At the IACS meeting, OCIMF presented an update on an IMO submission to MSC 104 to amend the Casualty Investigation Code to mandate root cause investigations.

This follows OCIMF's analysis of an investigation report into the Sanchi-CF Crystal incident (collision between a tanker and bulk carrier off Shanghai in 2018 with 32 casualties). The analysis showed a lack of evidence related to human factors were identified during the investigation.

SIRE 2.0 inspector training

OCIMF's SIRE 2.0 training programme for SIRE CAT 1 accredited inspectors began with the first course successfully conducted from 19-23 July.

Each course consists of a segment on human factors and non-technical skills, delivered by industry experts, and has segments on technical skills as well as a focus on Ethics and Code of conduct.

Online courses are being held weekly in different time zones to facilitate the transition of existing SIRE inspectors to the SIRE 2.0 programme, which will commence on 1 April 2022.

Website / annual report

In July, OCIMF rolled out a new website at ocimf.org. The content is now available in nine languages. "I believe it is much more intuitive than the old version and should be easy for you to navigate," said Rob Drysdale, managing director.

The 2021 OCIMF Annual Report, covering activities throughout 2020, is now available to download from the website at OCIMF - Oil Companies International Marine Forum - Annual Reports

Marine Loading Arm failure

OCIMF noted that the UK's Health and Safety Executive (HSE) has issued a "Safety Alert" after a catastrophic failure of a Marine Loading Arm (MLA) at a UK terminal.

This was found to be due to lack of lubrication, leading to a failure of the pivot.

In its report, the HSE Alert referenced OCIMF documents – the SIGTTO/OCIMF Jetty Maintenance and Inspection Guide 2008 and OCIMF Design and Construction Specification for Marine Loading Arms 2019.

OCIMF is currently revising the Jetty Maintenance and Inspection Guide and will take into account immediate findings for inclusion into the revision of current guidance for MLAs, it said.

California berth emissions

OCIMF has joined a workshop organised by DNV, related to their technology assessment of emissions control regulations being considered for vessels at berth in California.

The full name of the regulations is "2020 amendments to California Air Resources Board's (CARB) Ocean-Going Vessels at Berth Regulation."

Over 40 stakeholders joined the workshops, representing ports, terminals operators, shipping companies, equipment vendors, trade organisations, Classification Societies, as well as oil companies (OCIMF).

The discussion included understanding requirements for shore power technology, categorising the "novelty" level of elements involved, and identifying critical risks. OCIMF provided input on engineering, operational and safety aspects in connecting shore power to tankers. A future step will include assessing threats and risks.

Infrastructure

OCIMF participates in a number of working groups from the World Association for Waterborne Transport Infrastructure (PIANC).

This includes working groups on design and assessment of marine oil, gas and petrochemical terminals; design and assessment of marine single point mooring and multi point mooring facilities; design of fender systems; criteria for acceptable movement of ships at berths; mooring bollards and hooks; met ocean related risk in construction of marine works; and inspection, maintenance and repair of waterfront facilities.

OCIMF members provide expertise from the oil and gas sector, in operations, inspection and maintenance of infrastructure.

Tanker Accident Database

OCIMF encourages tanker operators to register with the Tanker Accident Database, so they can submit reports about accidents, which are then anonymised, so that OCIMF / Intertanko is only able to read about the accidents, not the company involved.

The database is operated by an independent company, MIS Marine, on behalf of OCIMF and Intertanko, but with OCIMF / Intertanko not having any access to the data collection area.

Data can only be submitted by vessel operators holding a Document of Compliance.

The way the system maintains anonymity is by having two separate digital systems. The data is entered into a first system, all information that could possibly identify a company is stripped away, and then it is added to a second system.

The data is used for statistical analysis, trending and benchmarking.

"Despite being launched during a global pandemic many companies have already registered and begun submitting data.

The more companies that join them the better the data pool becomes," OCIMF said. More information is at <https://www.tankeraccidentdatabase.org/> British Standards Institute

OCIMF has joined the "Maritime Works" committee CB/502 under the British Standards Institute.

It monitors European and international activity in equivalent work areas, particularly Eurocodes and optimisation of UK influence.

It oversees the BS 6349 series of standards that provides guidance on the planning, design, construction and maintenance of maritime structures.

STS hoses guidelines

OCIMF has a new paper, "Guidelines for the Handling, Storage, Use, Maintenance and Testing of STS Hoses." It is designed to be used together with OCIMF's STS Transfer Guide and ISGOTT. It is available for download from its website.

Meetings

The Environmental Functional Committee met on July 2, to finalise the committee environmental plan, to review progress on emerging risks, and to review recent IMO meeting briefs on greenhouse gases.

The Human Factors Functional Committee met on June 23, looking at an information paper on the human factors element for the TMSA, due to be published in Sept 2021; contributions to SIRE 2.0 including human factors training and a review of human factors related questions.

OCIMF held a meeting of its executive committee on Jun 9-10. Topics included a strategy implementation update; in-depth discussion on OCIMF's draft Environment Plan; seconded resourcing; update on SIRE 2.0 progress; 2021 financial projection versus approved budget; principal and Functional Committee updates. The next meeting is scheduled for 1 December 2021 in London.

OCIMF's Maritime Security Committee held a meeting on June 9, looking at development of OCIMF's Risk Advisory Function; completing new guidance for the Employment of PMSCs (Private Maritime Security Contractors); reviewing the Indian Ocean High Risk Area.

The Programmes Committee met on June 15, making decisions on the Vessel Inspection Programme (VIP) project that will deliver SIRE 2.0, new criteria for becoming a Programme Submitting Company, review of work experience requirements for applicant inspectors, launching of the revised Programmes policies, procedures and user guidance, and launching of the Programmes Participants Code of Conduct.

Barge inspections

The European Barge Inspection Scheme (EBIS), which has been running by oil and chemical companies since 1998, was transitioned into OCIMF's Ship Inspection Report (SIRE) programme on 1 January 2021, to create a single barge inspection scheme within Europe.

There has been an "OCIMF-EBIS Transition Taskforce" and a "BIQ5-EBIS9 Inspection Working Group" managing the change.

Half of EBIS members are now approved by OCIMF to commission IQ-EBIS9 inspections within the SIRE programme.

This article is a summary of OCIMF's newsletters for May, June and July 2021. The full text is on [ocimf.org](https://www.ocimf.org)

TankerOperator

Inséré 11/02/22 NIEUWS NOUVELLES Enlevé 11/03/22

What does demurrage cover?

The Court of Appeal has handed down an important judgment in K Line PTE Ltd v. Priminds Shipp

The Court of Appeal has in *ing (HK) Co Ltd (Eternal Bliss) [2021] EWCA Civ 1712* in which it overturned a first instance decision as to when an owner can claim damages for delay, as well as demurrage.

Demurrage provisions provide an agreed or liquidated figure for the damages payable for detaining the vessel beyond the agreed laydays. Typically, an owner's loss will be the loss of income during this overrun and demurrage is often thought to be a pre-estimate of this loss, binding on both the owner and the charterer. What is the position if the owner also suffers an entirely different type of loss? Can the owner recover this as well or is the owner bound by and limited to the agreed demurrage rate?

Such losses can arise in two different situations. It may be that the charterer has committed two breaches of contract – failure to load or unload within the laydays and another separate breach. If this is the case and the loss flows from the separate breach, the loss is recoverable. However, what if there was only one breach? That was the situation that the Court had to assume had happened in this case.

In previous cases and articles, there have been two schools of thought – one of which considered that demurrage covered all losses and the other that it only covered the claim for the loss of use of the vessel during the detention.

The background facts

The owner chartered the vessel to carry soya beans to China. After tendering notice of readiness at the discharge port, the vessel remained at anchor for 31 days because of congestion and lack of storage space. Once it started discharging, the cargo receiver alleged that the cargo was caked and mouldy. They demanded security and eventually the cargo claim was settled for approximately \$1 million. Could the owner recover this sum from the charterer for breach of their obligation to discharge the vessel within the laydays?

The Commercial Court conducted an exhaustive review of the authorities. It held that damages could be recoverable in addition to demurrage, even where there was only one breach of contract if the nature of the damage suffered by the owner was of an entirely different type to the loss of use of the vessel as a freight-earning chattel during the period of detention. On appeal, the Court of Appeal unanimously overturned this decision. The Court of Appeal stated that it was open to parties expressly to agree that demurrage covered all or only some of the losses flowing from a breach of the laytime obligation. However, its task was to decide what the term "demurrage" was understood to mean by those involved in shipping in a case such as this one, where there was no express statement as to what was covered by the term.

Similarly to the Commercial Court, the Court of Appeal reviewed the key decisions but took a different view and decided that those authorities and the text books did not provide a decisive answer. The Court of Appeal, therefore, approached the issue as a matter of principle. It decided that unless the contract indicated otherwise, demurrage covered all losses. Therefore, if the owner sought to recover damages in addition to demurrage arising from delay, they had to prove a breach of a separate obligation.

Decisions for decision

The Court of Appeal came to this view for a number of reasons including the following:

1. The owner's construction would deprive the demurrage provision of some of the certainty that liquidated damages clauses are intended to provide and which avoid disputes of this nature. Therefore, if the parties want only certain losses to be covered, they should use clear words to say so.
2. Any other decision would inevitably lead to arguments as to whether a particular loss was or was not of a type covered by the clause.
3. Insurance, including P & I insurance was part of the costs of running the vessel and the consequence of the owner's interpretation would be to "transfer the risk of unliquidated liability for cargo claims from the owner who has insured against it to the charterer who has not".

4. Allowing the appeal would produce clarity and certainty while leaving it open to individual parties or industry bodies to stipulate for a different result if they wished to do so.

We may not have heard the last of this matter as the owner is seeking to appeal the decision to the Supreme Court. If the decision is not disturbed, it is likely to provide certainty as the Court of Appeal predicted. However, it will be interesting to see whether, in future, owners or BIMCO take up the Court's invitation to stipulate a narrow definition of demurrage in their voyage charterparties and whether charterers will accept this. The decision may also lead to owners arguing that other breaches of charterparty have been committed, including breaches of implied terms.

Source: Baltic Exchange

Inséré 12/02/22 NIEUWS NOUVELLES Enlevé 121/03/22

2021 carrier bonanza could presage a crash of the ocean titans in 2022

By Gavin van Marle

Reading supply chain industry tea leaves has become near-impossible over the past couple of years. Nonetheless, the first missive from Fiata this year contains some notably spikey wording, which suggests 2022 will see increasing opposition to the growing influence of cash-rich box shipping lines outside their core business.



*HAPAG's 2016 Hyundai Samho built **14500 TEU AL JASRAH** arriving in Singapore from Ningbo (China)*

Newton's third law of motion contends that, when two bodies interact they apply an equal force to each other, but in opposite directions. This may be one of the cornerstones of his theory of gravity, but it has also been applied in other fields of academic research, including economics and, after liner shipping's pandemic-era profit surges, the signs are that there will be a substantial backlash from their principal customers/partners/competitors... the freight forwarders.

Fiata said: "The recent notice to users of the freight services of AP Møller-Maersk Group and its integrated services which restricts access for international freight forwarders in many economies through shifts from contracted arrangement to spot rates, raises serious concerns as to significant changes in business practice and the long established *lex mercator* in the shipping industry. In purely business terms, freight forwarders are currently

in a weak position. Capacity remains exceptionally tight and, in any case, it is up to the shipping lines to assign their capacity however they wish.

Secondly, the highly fragmented nature of the freight forwarding sector almost precludes any co-ordinated response in the same way, for example, that the liner shipping alliances were able to address the anticipated contraction in volumes during the early days of the pandemic through blank sailings.

Necessity being the mother of invention, the best recourse for forwarders to strengthen their position will be through the law, and the Fiata statement focuses on the special privileges many shipping companies have enjoyed for decades: the block consortia exemption in Europe, various state subsidies that from time to time have staved off bankruptcies and so on...

Fiata director general Dr Stéphane Graber said: "These changed arrangements, which have been accelerated and facilitated by the pandemic, have resulted in significant unanticipated profits by these 'few' and their ability to determine the viability of others offering freight services in a now highly disrupted and volatile marketplace. "Their integration allows them to make price differentiations, which impacts free market competition. It is highly regrettable that these profits are not better used to invest in decarbonisation and a more sustainable maritime industry. "The protection afforded to shipping lines under a variety of economies' antitrust/anticompetitive legislation is, in reality, a relic of the past and must now be questioned in all jurisdictions as to shipping line marketplace domination, competitive neutrality and price setting," he added. Certainly, in respect to EU legislation, carriers have been sailing close to the wind for a number of years, but the lack of legal action can be explained by the fact that, for most of the time, they simply didn't have any money. Now that they do, the lawyers are suddenly far more interested, and The Loadstar knows several cases claiming antitrust infringements by carriers that are in pretty advanced states of preparation.

Source : the loadstar

Inséré 13/02/22 HISTORIEK HISTORIQUE Enlevé 13/03/22

Les sous-marins Belges d'autrefois

par le Lt. Colonel hbre (R) Paul EYGENRAAM

La plupart des Belges l'ignorent : seuls quelques vétérans de la première guerre mondiale le savent ; il fut le temps où la Belgique était bel et bien titulaire d'une flottille de sous-marins modestement composée de deux submersibles. C'était au lendemain de la première guerre mondiale. La Force Navale d'aujourd'hui s'appelait le Corps des Marins et Torpilleurs (CTM). Un corps issu du Dépôt des équipages.

Les Alliés de l'époque, en vertu des dispositions du traité de Versailles, se partageaient la dépouille de la Marine Impériale Allemande dont la puissance avait dangereusement menacé les flottes réunies de la France, de l'Angleterre et des États-Unis. Les grands vainqueurs prirent la plus large part du butin laissant les miettes aux petits.

Déjà en 1914/18 l'Allemagne de Guillaume II, dans le but d'affamer l'Angleterre en compromettant son ravitaillement d'outremer; accorde une attention particulière à la guerre sous-marine qui en était encore à ses débuts. En 1917 plus de six millions de tonnes furent coulées. Les importations britanniques tombèrent de 54 à 26 millions de tonnes. Ces circonstances dramatiques suscitèrent entre autres le raid de Zeebrugge mené en avril 1918 par l'amiral Keyes.

En 1940/45 le IIIème Reich d'Adolf Hitler fit 'lui aussi appel à la même stratégie. L'animateur en fut le très nazi amiral Doenitz mort en 1980 et qui termina sa carrière comme

successeur du chancelier Hitler à la tête de l'État Allemand. Pendant la première guerre c'est l'amiral von Tirpitz ministre de la marine impériale de 1898 à 1916 qui non seulement créa la flotte allemande de haute mer, — exemple suivi au moment du réarmement hitlérien par l'amiral Raeder, — mais encouragea également la mise en chantier d'une redoutable escadre «d'U Boten».

Lendemain de défaite

Au lendemain de la défaite des armées du maréchal Hindenburg et du général Ludendorff, une commission navale interalliée que présidait le grand ami de la Belgique que fut l'amiral Keyes nous attribua un choix de bâtiments de guerre allant du remorqueur fluvial au torpilleur de haute mer en passant par... deux sous-marins ! De quoi faire démarrer une marine militaire au départ de 9 petits torpilleurs, 5 grands, 3 remorqueurs, 2 vedettes de rivière, 1 poseur de mines, un bâtiment de service, 40 vedettes poseurs et chasseurs de mines... et les deux U boten en question du type mouilleur de mines, l'un de 800 et l'autre de 5000 tonnes, amarrés à Portsmouth.

Ce butin de guerre ne tarda pas à devenir un cadeau empoisonné ayant ses partisans et ses adversaires. Il divisa l'opinion publique belge. Les uns faisaient écho aux débats des premiers temps de la Belgique indépendante lorsque la Marine-Royale fut créée en 1831 afin de permettre à la nation de disposer d'une flotte de guerre au même titre que les Pays-Bas. Les autres, confirmant le propos de Léopold III sur les petits gens aux vues étroites, jugeaient trop élevée la facture de l'entretien du matériel et du personnel. Ils étaient d'avis qu'en cas de guerre, — jugée d'autant plus improbable que la Société des Nations promouvait l'utopie politique du désarmement, — les grandes puissances alliées veilleraient sur l'intégrité de nos côtes, la navigabilité de nos voies d'eau et de nos routes maritimes internationales. Bien entendu, les parcimonieux l'emportèrent. Le 9 juillet 1926 un arrêté supprimait en date du 31 mars 1927 le Corps des Torpilleurs et Marins (CTM) créée le 19 novembre 1919 sous le nom de Détachement des Torpilleurs et Marins.

Le sort de nos sous-marins

Entretiens, qu'étaient devenus nos sous-marins ? Les premiers dans l'histoire de la Marine Militaire Belge ! En fait la flottille des submersibles belges était mort-née, malgré les efforts des autorités pour lui insuffler vie. Efforts louables mais incomplets. En effet, dès 1919 l'enseigne de vaisseau de 2^{me} classe Delande, à l'origine sous-lieutenant auxiliaire au 21^{me} de Ligne, effectua un stage à l'École des sous-mariniers français. Sa formation achevée, il reçut l'ordre de se rendre à Portsmouth, avec un équipage de fortune, pour y réceptionner les deux submersibles accordés à la Belgique. Officier consciencieux et réaliste, Delande s'empessa de faire remarquer que le métier de sous-marinier ne s'improvise pas, à fortiori avec des marins d'eau douce ignorant tout de la vie en mer. Il exigea des intéressés un entraînement spécial d'autant plus nécessaire que les bâtiments attribués à notre pays n'apparaissaient pas de premier choix. Le commandement n'abandonna pourtant pas la partie. L'enseigne de vaisseau de 1^{ère} classe Pinay, initialement lieutenant de réserve au 3^{me} chasseurs, et huit marins sélectionnés pour leurs connaissances des moteurs diesel, furent envoyés en France pour y faire l'apprentissage des techniques de conduite des sous-marins. Pinay, après l'écolage à Toulon et un stage à bord du «Néréide» obtint son brevet d'aptitude avec la plus grande distinction. Cet officier possédait autant de caractère que de matière grise. Sa conduite à bord du sous-marin lors de difficultés dans le Golfe de Gascogne lui valut la légion d'honneur.

Efforts louables mais vains

En attendant des équipages qualifiés, les deux sous-marins se détérioraient chaque jour un peu plus. Faute d'entretien journalier la rouille rongait leurs œuvres vives. Finalement lorsque la Belgique disposa enfin de marins capables d'amener les bâtiments à bon port, leur état de délabrement était tel que les indispensables réparations se chiffraient à

450.000 fr. Le gouvernement rechigna. Après quelques controverses la décision fut prise de renoncer aux submersibles et les mettre à la ferraille.

Le triste sort des éphémères sous-marins belges de 800 et 500 tonnes du lendemain de la première guerre était scellé pour toujours.

Inséré 15/02/21 BOEKEN LIVRES BOOKS Enlevé 15/03/22

“Sietas and its ships (Part 1)”.

BOOK REVIEW

Recently **Coastal Shipping Publications** published a new title **“Sietas and its ships (Part 1)”**, written by Bernard McCall. The shipyard of J J Sietas is arguably one of the best-known in northern Europe. It was founded in 1635 and from its inception, the company was continuously owned by the founding family until April 2014.

From the mid-1950s a decision was made to classify the vessels according to types. A numerical scheme began with Karin in 1958. This scheme still continues to the present day. In this book Bernard McCall concentrates on cargo ships, but other types also appear to illustrate the variety of ships that were built. It has been realized that two volumes will be needed to cover all the various types.

“Sietas and its ships” (ISBN 978-1-913797-01-0) is a hardback book of 96 pages, lavishly illustrated. The price is £16.50 plus £1.50 UK postage and £3.00 overseas postage. Ordering via all good bookshops, or directly via the publisher, Coastal Shipping, 400 Nore Road, Portishead, Bristol BS20 8EZ, UK. Tel/Fax: +44(0)1275.846178, www.coastalshipping.co.uk, e-mail: Bernard@coastalshipping.co.uk.

Alternatively, it can be purchased at all good bookshops.

Inséré 15/02/22 DOSSIER Enlevé 15/03/22

The way ahead for automation

Working with the maritime industry to foresee the training needs and standards of the future, Seabot XR’s Gordon Meadow and Ifor Bielecki are clear on one thing – whatever happens in automation and digitalisation, the future of shipping is almost certainly ‘crewed.’

Though it is seen in some quarters as an inevitable, or even desirable, side effect of digitalisation, an overall reduction in the number of seafaring jobs is far from certain. Crucially, while it is anticipated that certain functions will relocate to shore, this will not inevitably lead to a loss of jobs, according to expert Gordon Meadow, founder and CEO of Seabot XR.

Having recently announced project partnerships with a range of maritime sector partners including the Royal Navy, The UK MCA, Fugro, the National Oceanography Centre (NOC) and Ocean Infinity, Seabot XR is leading the discussion into how digitalisation will change – rather than replace – maritime competencies over the next decades. “Right now SeaBot XR is developing training standards for a new type of multiskilled maritime labour force, capable of working above the surface, and below it using marine robotics and smaller vehicles,” Mr Meadow told Digital Ship.

“The focus is on more intelligently integrating of new technology, to increase the capability of today’s crews. There will of course be new algorithms developed in the realms of vessel safety, navigation, propulsion. There may even be greater use of robotics. We’re seeing increased involvement of drones in ship inspection, repair, and elsewhere.”

But what about seafaring jobs? “Thinking about reducing crew is rather putting the cart before the horse,” said Mr Meadow. “If you replace a human with an algorithm, you’re not really removing human error, because currently, all algorithms are either written by humans, or use human experience as their raw material, their input. “It’s easy to point at something like the Ever Given, say, and say, if we just remove the humans from the equation that’ll never happen again. But that’s a kind of thinking informed by a culture and an approach to safety management that other industries have moved past. In shipping, we generally only hear about things going wrong. We don’t hear about the near-misses, the crises averted due to quick-thinking, on-the-spot decisions by well-trained, experienced crew.”

Gainful employment

The main benefit of automation will be to remove the ‘dull, dirty and dangerous’ tasks from the equation. “The fact is that we’ve already whittled down crews over the last 50 years. If somebody is there, it’s because they need to be there. It’s unlikely, but it’s just possible that you’ll have someone standing around doing nothing. The issue is, if there’s a fire in the main engine, you’ll need four people to put it out.

“We are talking about things like running a watch. You stare out at an empty horizon, sometimes for hours at a time, often at night, keeping your eyes peeled for an obstacle that isn’t on the chart, that 99.99 per cent of the time, doesn’t exist. That’s the kind of thing that a machine could do, with the right sensors and situational awareness, and won’t get bored or distracted. It can act as an advanced navigation system, collating data, and presenting it intuitively when human intervention is required. Ultimately you will still need a human in the loop, on the bridge, or sitting in a shoreside command centre.

“We take the human brain for granted, but it’s more powerful than any computer ever made. There are things algorithms are good at – number crunching, processing, boring tasks – and things a brain is good at – lateral thinking, creativity, problem-solving. Let’s say you have 12 of these ‘super-computers’ on a ship, and one of them is rappelling down into a tank to clean off the toxic residues. Really? Is that how you want to deploy your most valuable asset?”

First things first

Foundational to Seabot XR’s thinking, Mr Meadow explained, is expertise from aviation, where, unlike in shipping, all new technology is designed to fit with two standardised cockpit layouts, allowing automation to well outpace that in maritime. If for Bielecki, Seabot XR chief operating officer, brings experience from the aviation industry, including as a commercial pilot and training captain. “I think we can pretty much rule out the idea of a fullyfunctioning autonomously enabled ship, that never requires human intervention, never makes a mistake, and never mal-functions,” he told Digital Ship. “In the airline industry what we’ve seen is that even with a high level of standardisation, rigorous testing, we still haven’t managed to iron out the kinks.

“That’s what you saw with the Boeing 737 Max, which killed more than 300 people in 2018-19. In both crashes, the manoeuvring system jammed open the flaps and put the plane into a dive, and the flight crew were unable to regain control from the system. That is what we call a design-induced error. It’s the sort of thing that happens when a technology developer goes above the heads of the folks actually flying the plane.

“If you’re going to develop a system, you have to have thought of all the angles at the design stage, and programmed them for every eventuality. That’s almost impossible, and in practice what you are looking at is a kind of trial-and-error period. Well, that’s not so great when you’ve got a VLCC, or an LNG carrier. In the long run it’s going to be a lot less

expensive for you to have a crew on hand, either on deck or on shore, who can step in if something is about to go wrong.”

Myriad benefits

Instead, as the technology proves itself, Mr Meadow envisions a future in which vessel functions are controlled, monitored, and managed through autonomous systems and decision support, whether from deck or shore.

“We will build our trust in systems that can be used for longer and longer periods between human intervention, to perform tasks better suited to repetition and labour intensive functions, or to circumvent the potential for dangerous events,” he said. “The use of digital twins will see technical experts having to fly to vessels less frequently, extending the time between yard visits, and see advances in remote pilotage. But someone has to design, build and maintain the digital twin, retrain the pilot, and help the technical expert to use the system to get what they need to do their job.

“But the bigger picture is even more exciting than that. Accessibility is a big one. As the connected infrastructure matures, we will see people working in the maritime sphere for whom the sector has previously been closed off. Not many ships have wheelchair access, for example, mission control centres will. Here, you could afford to be more flexible with working hours, too, have more sensible sleep/work schedules; we’re also talking about the possibility of crew going home at the end of their shifts, experiencing family life -- that’s a huge benefit for recruitment, and for the longevity of maritime careers.”

Identifying and teaching the competencies to support the greater use of more advanced technology will result in a paradigm-shift, and far from eliminating jobs, could benefit crew and shipping lines alike, Mr Meadow added.

“For me, the most exciting possibility is that the technology will help to challenge sea-blindness,” he said. “Some vessel ‘crews’ will live and work alongside the general population, and we’ll be much harder to ignore. I’m really looking forward to a time when people will see shipping for what it is – the arteries of the world.”

Inséré 17/02/22 NIEUWS NOUVELLES Enlevé 17/03/22

It’s official: 96 container ships are waiting to dock at SoCal ports

By : Greg Miller, Senior Editor

In addition to 40 waiting close to shore, another 56 farther out
There were 40 container ships waiting for berths within 40 miles of the ports of Los Angeles and Long Beach on Friday. But there were also 56 container ships waiting farther out to sea, putting the actual tally at an all-time-high of 96, according to new data from the Marine Exchange of Southern California. The Marine Exchange has just unveiled its new methodology for counting container ships waiting outside the 40-mile “in port” zone.

A new queuing system has been in place since mid-November that encourages container ships to wait outside of a specially designated Safety and Air Quality Area (SAQA) that extends 150 miles to the west of the ports and 50 miles to the north and south. This has sharply reduced the number of ships closer to shore, leading to suggestions that efforts to tackle port congestion are cutting into the offshore queue — a misconception that should be dispelled by the Marine Exchange’s new counting method. In addition to the 96 ships waiting offshore on Friday, there were 31 container ships at terminal berths, bringing the grand total to 127, at or near an all-time high. The total number of container ships either at berths or waiting offshore continues to rise: It is up 25% from the beginning of November, 41% from the beginning of October and 79% from the beginning of September.

The new queuing system reserves a ship's spot in line based on its calculated time of arrival (CTA), as opposed to the previous first-come, first-served system that entered a ship in the queueing list when it came within 20 miles of the ports. The CTA is derived from when a ship would have hypothetically arrived from its last port of call, as calculated by the Pacific Maritime Monitoring System. The ship can then wait anywhere it wants outside the SAQA — even on the other side of the Pacific — knowing it has a spot saved in line based on its CTA. Capt. Kip Louttit, executive director of the Marine Exchange of Southern California, said in his daily report on Friday, "The new methodology for determining the container-ship backlog for the ports of Los Angeles and Long Beach was approved by the working group this morning."

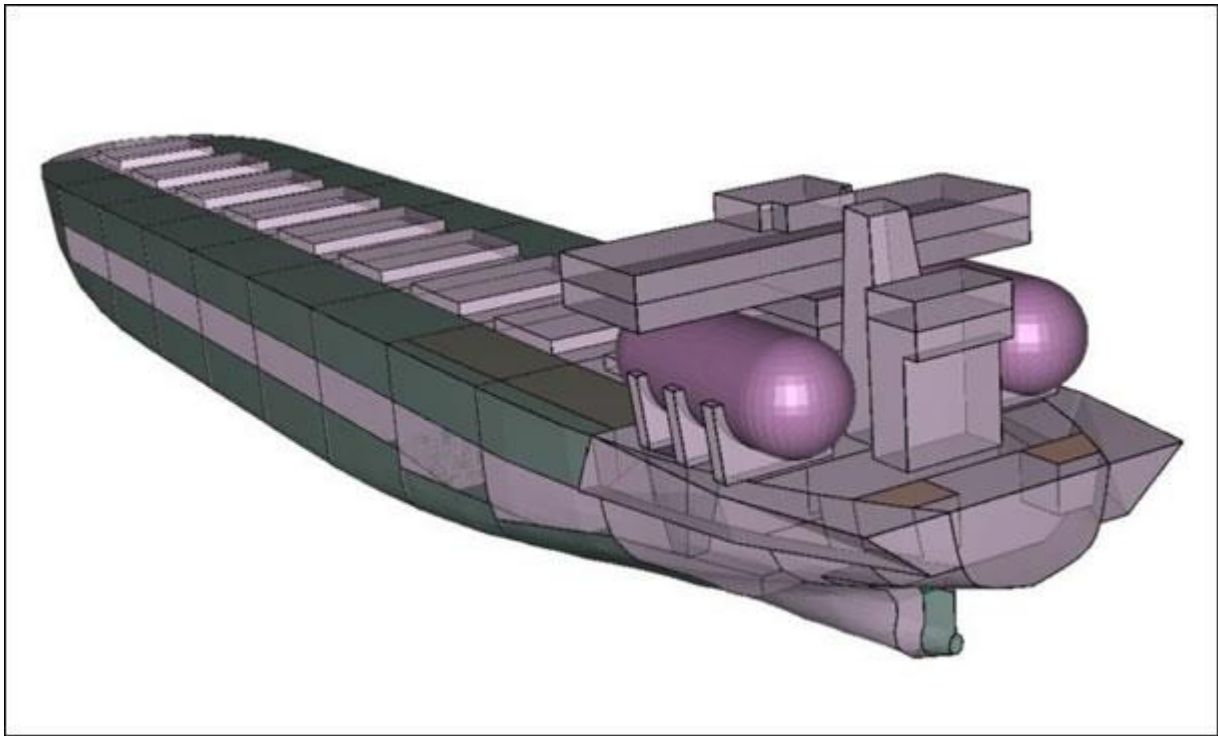
The methodology, he explained, is to "take the traditional count of container ships anchored or loitering inside 40 miles of the ports" and then "add container ships loitering and slow-speed steaming across the Pacific outside the SAQA whose CTA is before the time of the report." (Prior to Friday, American Shipper used the same methodology to estimate the total queue.) The new queuing system was designed to improve safety and air quality, not reduce the number of ships in the queue. It doesn't seem to have increased the backlog, either. The recent rise in the overall number of ships waiting at sea is in line with the historical pattern. «Sanity check: The container-ship backlog was 86 on Nov. 16 when this new queuing system started and 10 more today is reasonable," said Louttit. The 96 ships in the queue had an aggregate capacity of 732,263 twenty-foot equivalent units. In 2020, the customs value of imports to the Port of Los Angeles averaged \$43,899 per TEU. Assuming ships are at or near capacity, and cargo values are in line with last year's, this implies there is roughly \$32 billion of cargo in Southern California's offshore queue.

Source : freightwaves

Inséré 18/02/22 NIEUWS NOUVELLES Enlevé 18/03/22

Ammonia-fuelled newcastlemax project makes headway

An innovative ammonia-fuelled newcastlemax bulker design from Anglo-Eastern Technical Services (AETS), a technical consulting arm of Hong Kong-based shipmanagement giant Anglo-Eastern, has been granted approval in principle (AIP) by American class society ABS.



The dual-fuel 210,000 dwt ship design is said to sacrifice no cargo space by using deck-mounted IMO Type C tanks under the accommodation block on each side of the vessel. AETS has designed the system for retrofit to existing vessels as well as ammonia-fueled and ammonia-ready newbuildings.

"The transition to alternative fuels is an unavoidable part of our industry's journey towards net-zero propulsion technologies. Having in place advanced alternative ship designs of equivalent safety as conventional vessels will facilitate the rate of adaptation. We are proud to be a first mover at this critical juncture of decarbonising international shipping," said Bjorn Hojgaard, CEO of Anglo-Eastern Univan.

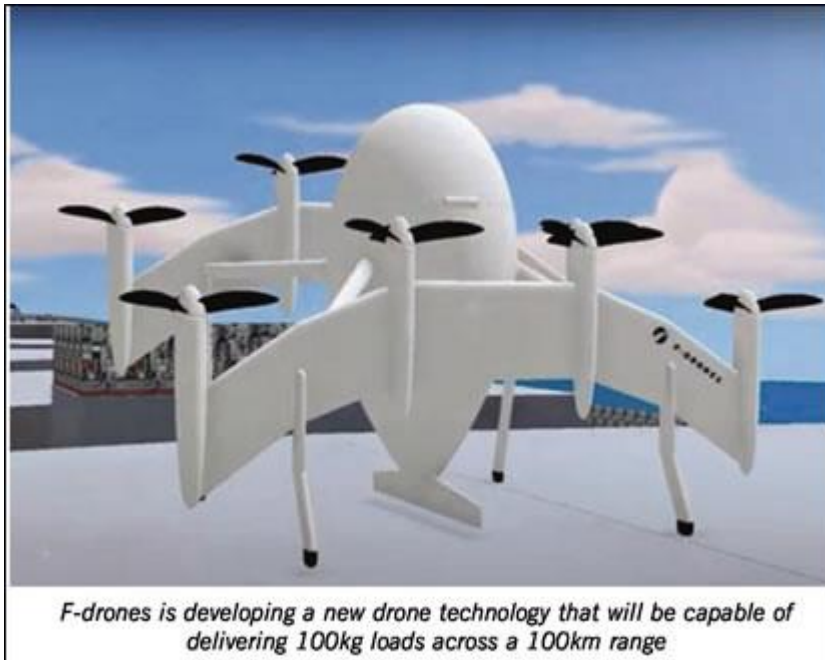
Earlier this year, Anglo-Eastern became the first shipmanager to join Itochu Corporation's joint study framework aimed at advancing ammonia as an alternative marine fuel. The study group was first launched in June with 23 founding member companies and has since grown to over 30 participants. Members include CMA CGM, FMG, Genco, Maersk, Rio Tinto and Vale, as well as class societies DNV, ClassNK and Lloyd's Register, plus MAN Energy Solutions, amongst others.

ABS also recently moved to support the adoption of ammonia as a marine fuel with the publication of guidance for the design and construction of ammonia-fueled vessels.

"Ammonia is a fuel with high potential as a solution for shipping companies looking to decarbonize their operations. ABS is committed to supporting its safe adoption by the industry and is working with forward-thinking companies such as AETS to develop the systems the industry will require," added Christopher J. Wiernicki, ABS chairman, president and CEO.

Inséré 19/02/22 DOSSIER Enlevé 19/03/22

Singapore start-up unveils plans for ground-breaking drone technology



Singapore start-up F-drones announced earlier this year its success in raising seed capital to further develop large scale autonomous drones for maritime logistics. Digital Ship spoke with Mr. Yeshwanth Reddy, CTO and co-founder of F-drones to find out how the investment will help the company develop a new ground-breaking drone capable of transporting 100kg over 100km.

F-drones is the first company in the world to provide 24/7 commercial

Beyond- Vision-Line-Of-Sight (BVLOS) drone deliveries to ships. It is currently in the middle of expanding its drone delivery services and has devised an 18-month roadmap to develop and commercialise its technology. The first step in the roadmap is to conduct test flights on the Hyperlaunch, a drone that is able to lift 5kg over 50 kilometres – significantly more than any other drone’s capabilities today. F-drones hopes to commercialise this technology in the next several months.

Once completed, F-drones will pursue development of its next-generation drone, the Hyperlaunch Heavy (HLH). This will be a fully electric and autonomous proprietary drone capable of delivering 100kg payloads over 100km. Following the completion of documentation and certification work, the HLH is expected to launch in around 18 months’ time and will mark a significant milestone in drone capabilities.

Design and technology

Both the Hyperlaunch and the HLH are based on F-drones’ proprietary design concept. The drones will each have two wings and eight motors to facilitate vertical take-off. The aircraft will be capable of performing a complete 90-degree rotation to cruise like an aeroplane. “Such an innovation in the design has enabled us to develop these aircrafts to lift heavier payloads over longer distances than any other option out there,” Mr Reddy told Digital Ship.

“Our drones do not have any single point of failure, meaning we have redundancies in every component. In the unlikely event of two rotors failing for example, the system can still safely complete its delivery mission.”

The current drone technology can withstand winds up to 50 kilometres per hour, giving an 80-90 per cent uptime in locations with very high winds and stormy weather. F-drones is currently planning all future drones to be fully operational in all weather conditions.

The current technology also features a traffic light system that changes from red to green, alerting crew onboard the vessel when it is safe to approach. This enables crew to simply pick up or drop off their items without having to operate the drone in any way, as this is all done by experienced operators onshore. The drones also feature multiple onboard cameras to identify the surrounding environment and potential risks. According to Mr Reddy, F-drones is looking at developing a computer vision technology that is capable of identifying the safest spot for a drone to land on.

It is also possible for multiple drones to be operated by a single operator. This reduces the time needed to deliver several packages to a single vessel. “The aim with the Hyperlaunch

and Hyperlaunch Heavy is to cut down delivery times by up to 80 per cent," Mr Reddy confirmed.

The drones feature rechargeable and switchable batteries, enabling quick and timely battery changes. Going forward with the HLH, Mr Reddy admitted they will have to "be a bit more creative on how to swap these batteries as they are pretty heavy."

F-drones is currently working to minimise the size of the components with the goal of producing compact drones that are able to fit into small spaces, while retaining the heavy payload needed to transport large items such as vessel spare parts.

Funding and development

The seed capital round, which was led by ship manager Eastern Pacific Shipping (EPS), will enable F-drones to spend the next 18 months preparing HLH for operation, and following that to continuously advance the technology.

F-drones' relationship with EPS extends back to November 2019 when the start-up was selected to join the Eastern Pacific Accelerator Powered by Techstars, a programme that helps start-ups to develop their technology and bring it to the maritime industry. "The most important thing for us was to do some of the flight tests and to understand the operational requirements. We didn't have the technology before we joined the programme, we just had an idea and the passion, but EPS trusted us and they let us leverage their resources to do some of the initial trials. We couldn't have imagined how we would have done our initial trials without the active involvement of EPS. The accelerator has acted as a catalyst to our development from both a solution building angle and from an industry network point of view."

Following involvement in the EPS programme, F-drones became the first company to secure a permit and complete commercial drone deliveries to vessels. From then on, the company started to gain significant traction. "We've been really excited with the closing of this half because now we have the resources to go ahead and commercialise, expand and advance the technology."

Expanding footprint

As part of the roadmap, Mr Reddy envisions rolling out the drone technology to at least four additional ports beyond Singapore. "We have identified a few ports that we hope to be operational in including Panama, Gibraltar, UAE and Sri Lanka. We're quite advanced in terms of our discussions with the local authorities and shipping companies and so we're really hoping to be operational in these ports later this year."

Wider global expansion of the drone technology will in some part be determined by regulation, which Mr Reddy sees as a bit of a bottleneck. "Often we see the technology available and ready, but the regulation and societal aspects are still trying to catch up." For F-drones, a major advantage is that the technology operates over water, making it inherently safer than similar technology operating over land. According to Mr Reddy, this has led to promising conversations with various regulatory authorities. Moreover, as the first company in Singapore to deliver drone technology for maritime operations, F-drones has worked in close collaboration with authorities to make the technology safe and effective.

Partnerships

F-drones is now looking for some "game changing partnerships both on the commercial side as well as the technology side." This includes shipping companies with a strong regional presence to enable the start-up to rapidly commercialise the technology. The ultimate goal is to establish a strong range of partnerships that will facilitate a global network of drone deliveries to improve shipping and port efficiency.

On the technology side, F-drones is on the lookout for "partners who can help us be ahead of the curve. We are already working in partnership on the computer vision side, autopilot development, propulsion systems, airframe manufacturing, and much more. We are

focused on building the best drone delivery solution for maritime logistics and as is the case with most big tech start-ups or companies, we need such partnerships to be able to bring out the best in each other.”

Mr Reddy noted that the funding awarded to F-drones has provided an assurance to its current and potential partners to go ahead and take this on for the long run. “It’s given us a lot of confidence that people will be able to trust in us.”

Mr Reddy confirmed that since establishing F-drones, feedback has been positive and there has been an overwhelming amount of excitement for the opportunities the technology will bring. “Since day one we could see the support, and this has only increased as we have progressed. More and more people are showing confidence in what we are doing. One of the testimonials to everything is that the major investors who have invested in our last round are all from the shipping industry, so they know the industry in and out and we feel this is a testimonial to what we are trying to solve.”

Moving forward post-pandemic

Despite the global pandemic, the start-up has seen “strong traction, not just in Singapore, but around the world where people are actually looking forward to us introducing this technology,” Mr Reddy told us. One of the bottlenecks has been the restricted travel across borders. “We’ve been slightly hampered by the fact that we are unable to kind of showcase or expand our physical presence.”

F-drones is determined to advance its drone technology to meet some of the major shipping and operational problems in Singapore, and worldwide. “We are quite confident that by the end of the year we will have out together a fantastic solution, just in time to expand globally when the pandemic subsides.”

DS

Inséré 20/02/22 DOSSIER Enlevé 20/03/22

Decarbonisation and shipping: alternative fuels

As shipping pivots towards greener operations, and opportunities to increase ship efficiency decrease (as they inevitably must), a major issue the industry must get to grips with is fuel transition.

Shipping is heavily reliant on fossil fuels, and the huge majority of ships globally are powered today by hydrocarbon based fuel oils, albeit with some variation in grade and specification. Burning this fuel releases large quantities of carbon dioxide into the atmosphere, which significantly contributes to its insulative properties and to global warming and climate change. Fuel oils have found favour in the marine industry, and almost all other industries, due to their high energy density, wide availability and the relative ease with which they may be stored, transported and handled. Although care is certainly needed, and fuel oils are not without inconveniences and difficulties, we live in a world almost universally well adapted to handling these. Replacing ubiquitous and convenient fossil fuels is a challenge, which all industries face. However, some dimensions of the challenge specific to shipping include:

- limited storage capacity on board ships coupled with, in some cases, long distances between land based refuelling stops
- the necessary proximity of fuel storage and human living quarters on board ships
- uncertainty (in some cases) as to schedule and future ports of call and a preference to

retain flexibility as to port calls (i.e. to be able to fuel anywhere globally)
- limited storage capacity ashore at ports and terminals

Alternative fuels – candidates

The industry has by no means agreed on a shortlist of alternative fuels. However, in order to illuminate some of the considerations at play, we take a quick look below at some pros and cons of three future fuel candidates:

Hydrogen

Pros: speed and ease of refuelling; green production by way of electrolysis powered by renewable energy is possible; suitable for use in fuel cells; already produced in substantial volumes for use in the chemical industry; falling cost of renewable energy may lower green production costs.

Cons: currently produced mostly from fossil fuel sources; green production currently expensive; low energy density, requiring 8 x more volume than fuel oils for equal power output, and consequent storage capacity issues; must be kept at -253C to be stored as a liquid; highly combustible and explosive, giving rise to safety issues; combustion produces nitrous oxides; fuel cells not currently capable of powering large vessels; large capital investment needed for storage and refuelling infrastructure for shipping.

Ammonia

Pros: speed and ease of refuelling; green production, using green hydrogen and renewable power for the conversion process, is possible; conversion process relatively cheap and uncomplicated; already produced in substantial volumes for the chemical industry; handling issues in relation to marine transportation are already well understood; higher energy density than hydrogen; storage requires refrigeration only.

Cons: highly toxic; the conversion process requires an additional input of energy compared to green hydrogen; requires energy input for refrigeration; less energy dense than fuel oils, requiring larger storage capacity and/or more frequent refuelling; large capital investment needed for storage and refuelling infrastructure for shipping.

Methanol

Pros: speed and ease of refuelling; low cost for conversion of existing engines; minor modifications to existing storage and bunkering facilities only; widely traded, well understood and already available in some ports for bunkering; biodegradable, with a lower impact on the environment in the event of spillage; more energy dense than hydrogen and ammonia; relatively clean burning with low levels of SOx and NOx; liquid at ambient temperatures, no need to heat or cool.

Cons: lower energy density than fuel oil, requiring larger storage tanks and/or more frequent bunkering; low flash point represents a fire risk; toxic when inhaled, ingested or handled; increased corrosion risks; large capital investment needed for more widespread storage and refuelling infrastructure for shipping

Can one fuel serve all needs?

Whilst early dialogue and vigorous speculation on this topic envisaged a single 'new' fuel might replace fuel oils in the future, discussion more recently has swung towards embracing a future in which multiple fuels will likely have a role to play in shipping's green transition.

As the ongoing machinations of the International Maritime Organisation (IMO) testify, accomplishing a single solution for shipping globally is challenging, and even if the industry were to agree to switch to a single alternative fuel, it is not practically possible to flick the switch overnight. Changing fuel means huge investments in fuel production, infrastructure and supply chains, retrofitting of ship engines and storage and bunkering facilities, modification of fuel tanks and fuel delivery systems, retraining of crew and terminal staff,

adjustments to contracts, and reappraisal and recertification of equipment and processes. It requires foresight, planning and collaboration extending beyond the shipping industry. It also requires fuel availability, at scale and at a viable price.

Consequently, shipping finds itself in a classic 'chicken and egg' situation. Owners will understandably be reluctant to initiate the refitting of their vessels (or to order new vessels built to burn different fuels) whilst ever an alternative fuel is unproven at scale, not globally available, and comes with the high price tag that vast infrastructure projects tend to generate. Meanwhile, if there is no demand signal from shipping, energy producers will be slow to orientate their efforts towards creating shore side availability of alternative fuels and to start producing at sufficient scale to supply those sites. The solution to moving beyond this impasse, seems to be emerging, as is true in relation to other aspects of the decarbonisation landscape, at a more local level. Not all shipping operations are the same and neither are all ships. Needs, and the capacity for compromise, therefore vary significantly across the industry. A ferry running between the same few ports on a regular schedule, and never at sea for more than a few hours, can utilise an alternative fuel option which would be simply unworkable for a vessel tramping the deep seas, away from port for weeks at a time and not always knowing which port it will arrive at next. As recognition of this reality spreads, owners and operators are increasingly looking to find a solution that is right for their fleet and its activity, rather than waiting for a one-size-fits-all solution, and pockets of new practise are now emerging around the world in the form of trials, and one to several ship experiments.

Keeping the big picture in mind

Two important considerations for the industry to keep in mind throughout its transition to alternative fuels, are that: the objective of reducing greenhouse gas emissions from shipping exists in the context of an urgent need to reduce greenhouse gas emissions from all human activities; and the move to alternative fuels in industries other than shipping is an opportunity for shipping to downsize, given that a large percentage of the cargo it carries (some put it as high as 40%) is fossil fuel.

In relation to both of these considerations, a critical question of any new fuel for shipping is: how green are its credentials?

Displacing emissions up the production chain, so as to burn a clean fuel on the ship, which has nonetheless emerged from a polluting production process, will do little to halt the climate crisis. Equally, where an opportunity exists to recreate the fuel production and supply chain, using fuel that has been unnecessarily transported around the world, instead of generated in facilities close to the source of demand, will be an incomplete answer to the emissions emergency.

Just as the blending of fuel oils to achieve a reduced sulphur content led to an increase in output of black carbon particles, sparking a debate about whether there in fact was a net benefit to reducing sulphur levels in marine fuels, the widespread use of alternative fuels in the marine industry may give rise to unforeseen adverse consequences. Being aware of that possibility, and approaching the issue with as broad a view as possible, should help to reduce the risk, although accomplishing this means keeping the big picture in mind at all times.

Conclusion

As things stand at present, it appears that the transition to alternative fuels for shipping is likely to be led by industry participants, rather than regulators, and that the future is likely to be diverse. A variety of fuels may be deployed across the industry with not all sectors, or even ships within sectors, utilising the same fuel and possibly even with some ships utilising multiple fuels, and fuel supplements such as wind and solar power, aboard. Production and upstream pollution, and the emissions of combustion products other than CO₂, will be factors for consideration when selecting alternative fuels and at some

point the industry may start to downsize, as a result of a global drop in demand for fossil fuels. This may go hand in hand with older fossil fuel burning (and carrying) vessels naturally reaching their end of life, and could lead to a spike in ship disposals, as vessels become economically and environmentally obsolete. A new era of ships and shipping dawns.

Source: Hill Dickinson, By Rachel Hoyland, Senior Associate

Inséré 21/02/22 NIEUWS NOUVELLES Enlevé 21/03/22

IMO Designates May 18th as 'International Day F or Women in Maritime'

By : Mike Schuler



The UN International Maritime Organization has adopted a resolution to designate May 18th as International Day for Women in Maritime. The resolution was adopted by the IMO Assembly, the international shipping regulator's highest governing body, during its 32nd session currently being held from December 6-15. The day of observance will celebrate women in the industry and is intended to promote the recruitment, retention and sustained employment of women in the maritime sector, raise the profile of women in maritime, strengthen IMO's commitment to the United Nations Sustainable Development Goal 5 (to achieve gender equality and empower all women and girls), and support work to address the current gender imbalance in maritime.

The maritime industry is historically a male-dominated industry.

According to the BIMCO/ICS 2021 Seafarer Workforce Report, women represent only 1.2% percent of the global seafarer workforce, with the report estimating there are 24,059 women serving as seafarers, which is a 45.8% increase compared with the 2015 report. But the IMO has been making a concerted effort to help the industry move forward and support women to achieve a representation. The IMO's Women in Maritime program, established in 1988, takes a strategic approach towards enhancing the contribution of women as key maritime stakeholders.

The proposal to establish an International Day for Women in Maritime was approved by IMO's Technical Cooperation Committee (TC) in September and subsequently endorsed by

the IMO Council during its meeting in November. "This day for women in maritime will further efforts to achieve SDG 5 on gender equality," said IMO Secretary-General Kitack Lim.

"It is a perfect follow-on action to the 2019 theme of empowering women in maritime and the Assembly resolution adopted in 2019. I am pleased that the Member States have joined in the call to achieve a barrier-free environment for women, so that all women can participate fully, safely and without hindrance in the activities of the maritime community, including seafaring and shipbuilding."

Source : gCaptain

Inséré 23/02/21 BOEKEN LIVRES BOOKS Enlevé 23/03/22

'De maritieme geschiedenis van Baasrode'



De "Scheepswerven Baasrode" zijn één van de mooiste industrieel-archeologische plaatsen van Vlaanderen. Niet zo heel lang geleden waren de Scheepswerven Baasrode nog gedoemd om te verdwijnen, maar dankzij de volharding van enkele idealisten én een herziening van de houding van de overheid werd hun voortbestaan verzekerd. De werven

zijn sinds 1993 integraal beschermd, en voor het grootste deel eigendom van de Provincie Oost-Vlaanderen.

In het boek 'Maritieme geschiedenis van Baasrode' ontdek je de bewogen historiek van deze uitzonderlijke plek.

Inséré 23/02/22 HISTORIEK HISTORIQUE Enlevé 23/03/22

Het Gentse kofschip "Loochristy"

Kofschepen of koffen kwamen in de loop van de 18de eeuw in de vaart in de Lage Landen, waar ze voornamelijk als kustvaarder gebruikt werden. Zij hadden een lengte van 16 tot 30 meter en een draagvermogen van 100 tot 300 ton.



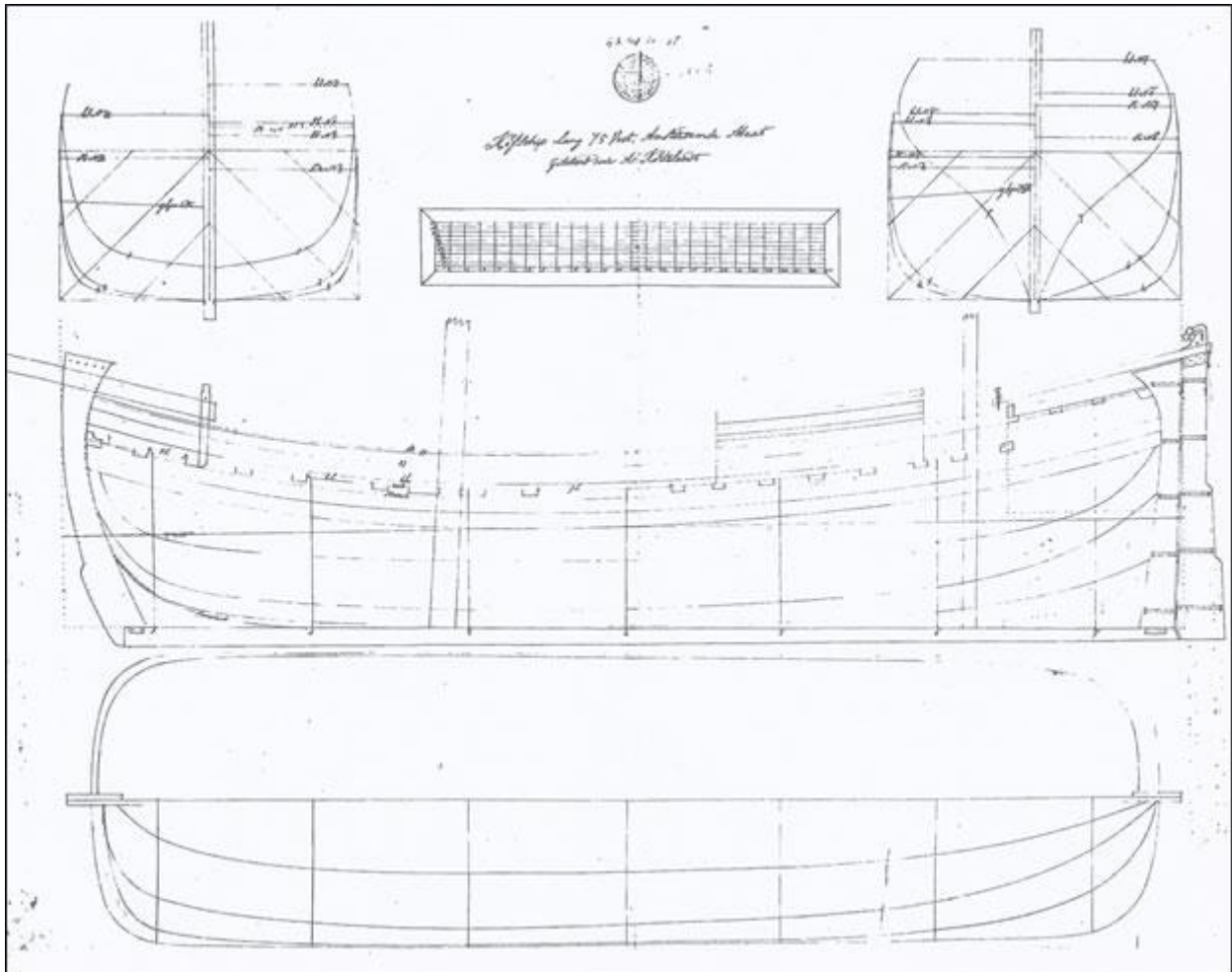
Ets uit G. GROENEWEGEN, Verscheide soorten van Hollandse vaartuigen. Rotterdam, 1786-1801.

U, zoals vele anderen, leerde op de lagere school de vuistregel, dat op het einde van een werkwoord in het verleden deelwoord een T dient geschreven te worden, als de stam van dit werkwoord eindigt op één van de letters uit het woord „t kofschip”, Velen onder ons hebben nooit geweten wat dit woord kon betekenen wij stonden er niet bij stil — en doorgaans dacht men dat „t kofschip” een kunstmatige samenstelling was om die regel uit de spraakkunst onthoudbaar en het woord uitspreekbaar te maken.

Mis hoor ! Een kofschip, kortweg „kof” genoemd, is wel degelijk een goed Nederlands woord waarmee een scheepstype aangeduid wordt, dat in de Lage Landen en in Duitsland voorkwam van in het Begin van de 18de eeuw tot in de tweede helft van de 19e eeuw.

Deze schepen waren kustvaarders die allerlei vrachten vervoerden tussen de Europese havens, van Archangel tot Odessa, alhoewel sommige een reis over de Atlantische Oceaan niet te gewaagd vonden. In acht genomen dat deze schepen van 16 tot 30 meter lang waren en een draagvermogen van 100 tot 300 ton hadden, blijken zij toch zeer stoere zeeschepen geweest te zijn. Deze afmetingen kunnen ons wel een beetje verwonderen, want wij zijn de dag van vandaag aan andere cijfers gewoon. Doorgaans stellen wij ons de vroegere zeilschepen veel groter voor dan ze in werkelijkheid waren. De juist genoemde cijfers. vertellen U echter dat zij dikwijls kleiner waren en minder vracht konden vervoeren dan een hedendaagse kleine binnenvaarder.

Plan van een kofschip. De hoekige vorm gaf een naar verhouding (mot laadvermogen, maar was oorzaak dat het schip een deel van zijn zeewaardigheid inboette en veel drift had. Het gepiekte achterschip heeft dit nadeel ten dele verholpen. Dit 18e eeuwse plan stelt een schip van 75 voet lengte voor. Antwerpen, Nationaal Scheepvaartmuseum. (afb. 2)



Kofschepen kwamen in de vaart in het begin van de 18e eeuw in vervanging van de oudere fluiten en katboten — vreemde namen voor een scheepstype (afb. 1). De kof groeide uit tot één van de populairste vrachtschepen voor de kleine vaart, de zgn. kustvaart. Het type moet ontstaan zijn in Nederland en wel in Friesland waar het, evenals later in Groningen, gebouwd en ontwikkeld werd. Naderhand werden ook koffen gebouwd in Dordrecht en kwamen de schepen eveneens in gebruik in Duitsland waar ze van stapel liepen in Bremen, Danzig, Elsfleth en elders. Ook in België kwam de kof in de vaart en zij werd gebouwd te Antwerpen, Brussel, Boom, Baasrode, Mechelen -en Oostende (afb. 2). Vele Belgische rederij en telden koffen onder hun schepen, zo ook de Gentse rederij N.J. De Cock, Frères. Deze rederij, gesticht in de Hollandse tijd, was de grootste van de Zuidelijke Nederlanden. Te Antwerpen was zij vertegenwoordigd door een bijhuis onder leiding van Nicolas De Cock. Tussen 1830 en 1833 weken enkele schepen ais gevolg van de Belgische Revolutie uit naar Rotterdam. De vloot van De Cock bestond in 1830 uit volgende schepen:

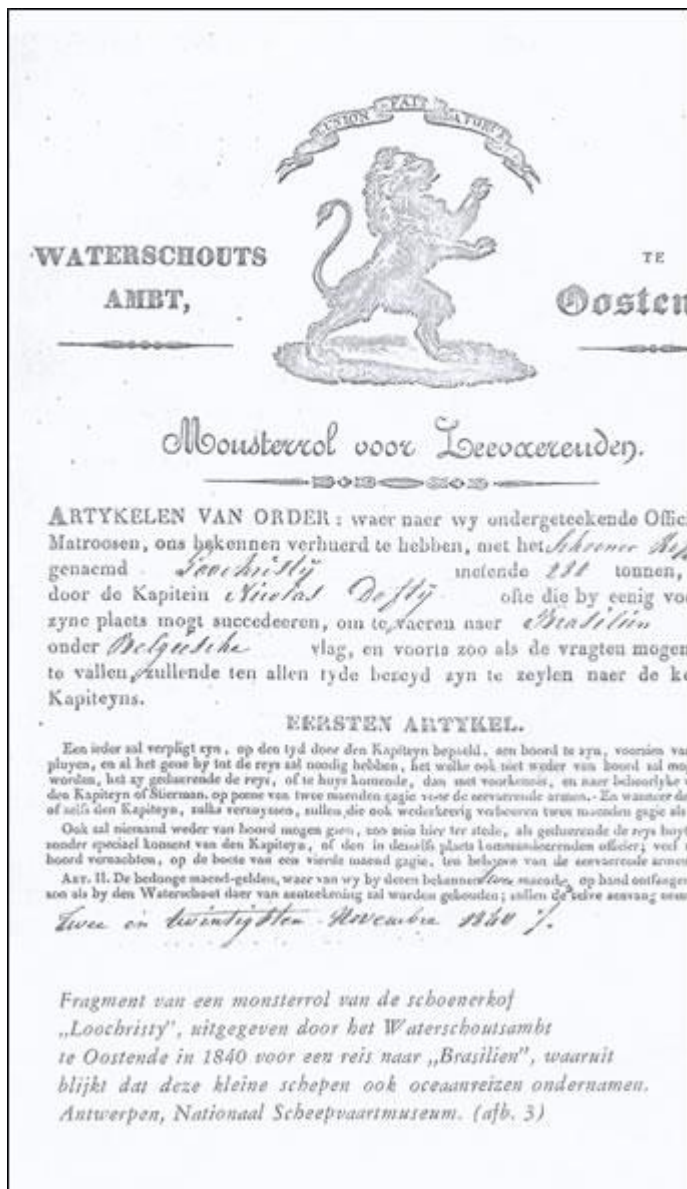
-	de	driemastbark	„Adèle”,	240	ton;
-	het	volschip	„Auguste”,	343	ton;
-	de	driemastbark	„De Cock”,	150	ton;
-	het	volschip	„Delphine”,	392	ton;
-	de	bijlander	„Deux-Amis”,	80	ton;
-	de	schoenerkof	„Diomède”,	300	ton;
-	het	volschip	„Fanny”,	286	ton;

- de schoenerkof „Frédérica", 300 ton;
- het volschip „Hortense-", 375 ton;
- het volschip „Java", 560 ton;
- de bijlander „Johanna", 70 ton; de kof „longe Nicolas", 202 ton;
- de driemastbark „Louisa-Augusta", 250 ton;
- de bijlander „Maria-Angéline", 98 ton;
- de kof „Pauline", 226 ton;
- de kof „Theodore", 170 ton;
- het volschip „Vasco da Gama", 348 ton.

In 1833 echter kwam één van de gebroeders De Cock, Theodore, terug naar België en associeerde zich te Antwerpen met een andere firma onder de benaming Bisschop-Basteyns et N.J. De Cock. Enkele tijd later vestigde de rederij N.J. De Cock Frères zich opnieuw te Gent. In 1847 telt de vloot volgende schepen:

- het volschip „Emanuel", 851 ton;
- de driemastbark „Maria-Louisa", 291 ton;
- de driemastbark „Theodore", 282 ton;
- de kof „Augusta", 239 ton;
- de kof „Égide", 258 ton;
- de schoenerkof „Joseph", 145 ton;
- de schoenerkof „Loochristy", 281 ton;
- de schoenerkof „Pairnyr", 252 ton.
- Een galjoot van 400 ton, „Gaston", was in aanbouw.

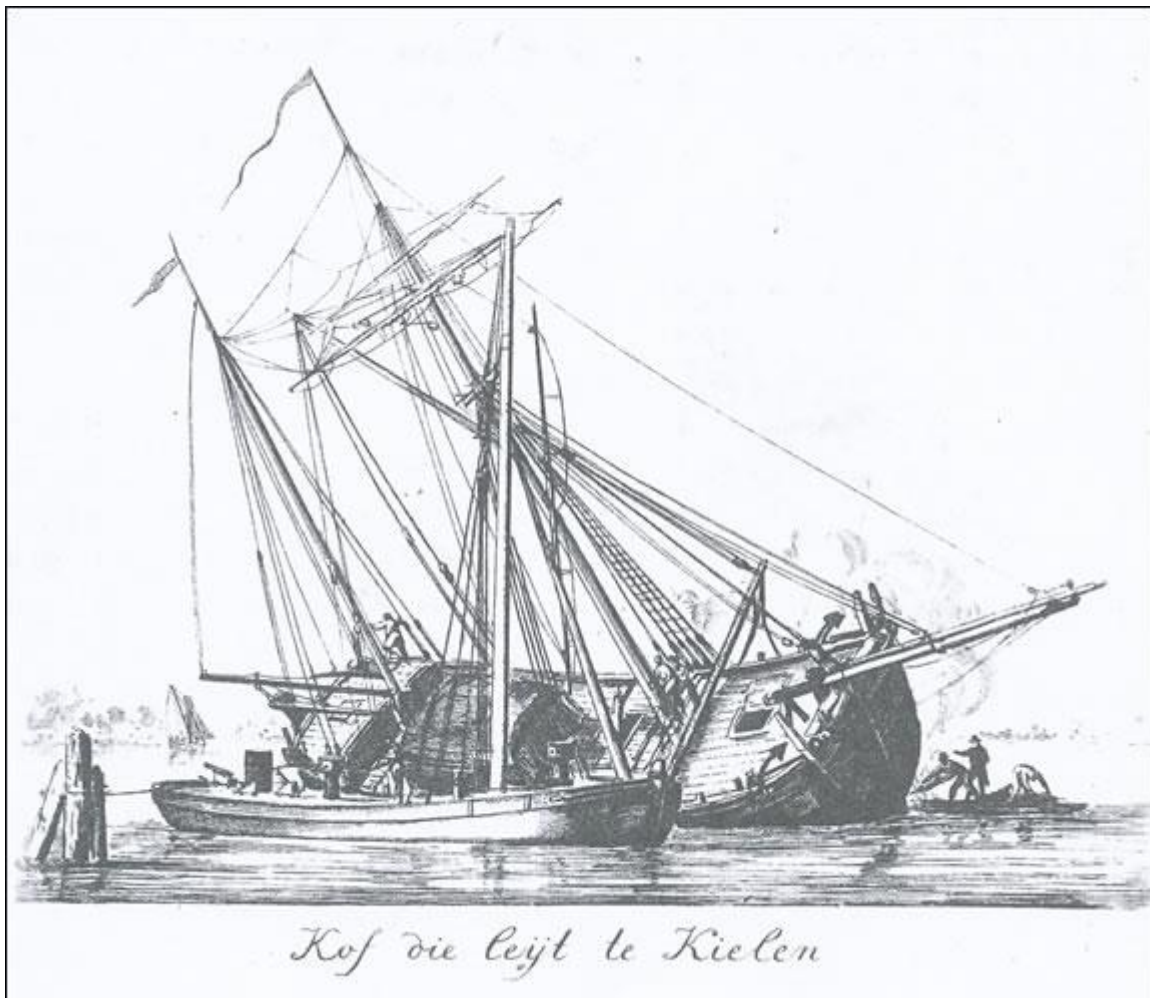
Het is wel merkwaardig dat de reders één van hun schepen doopten met een aardrijkskundige naam en dan nog van een kleine gemeente, waar de andere schepen meestal een persoonsnaam droegen. De reden hiervoor was een gevoelskwestie. De familie De Cock was namelijk afkomstig van Lochristi waar zij 's zomers woonde in het buitenverblijf Rozelaar. Dit buitenverblijf bevindt zich op dezelfde plaats waar voorheen het kasteel van Lochristi stond, reeds vernoemd in 1287 als eigendom van de St.-Baafsabdij te Gent, maar in 1797 ten gronde afgebroken als gevolg van de Franse Revolutie. Een aantal leden van de familie De Cock ligt begraven in de kerk van Lochristi waar zich achter het koor een wit marmeren graftombe bevindt.



Onze schoenerkof „Loochristy" treffen we voor het eerst aan in het „Registre Veritas" in 1840. Het Registre Veritas vermeldt alle schepen die onder de technische controle van dit classificatiebureau gebouwd werden. Wij lezen er dat de „Loochristy" in 1839 gebouwd werd te Antwerpen, voor rekening van N.J. De Cock te Gent. De tonnenmaat bedroeg 281 ton. Een andere Bron deelt ons mede dat de kief van het schip gelegd werd op 20 januari 1839 op de werf van Louis Lecarpentier, gelegen aan het „Stoketsel" te Antwerpen, d.i. ten zuiden van de stad ter hoogte van de huidige Cockerillkaai. De scheepsbouwer P.L.L. Lecarpentier (1790-1866) was een Fransman uit Cherbourg die in 1810 in bevolen dienst naar Antwerpen kwam als scheepsbouwer op de werven van Napoléon. Na de val van de keizer bleef hij als zelfstandig scheepsbouwer te Antwerpen en richtte er twee scheepswerven op, één ten noorden en één ten zuiden van de stad. Na 1841 dreef hij de werven samen met zijn zoon Louis-Victor (1814-1877). De „Loochristy" liep in september 1839 van stapel.

Na 1830 was het zeer pover gesteld met de Belgische koopvaardijvloot. Teneinde de scheepsbouw te stimuleren loofde de jonge Belgische staat een premie uit die evenredig was met de tonnenmaat van het schip. Ook de „Loochristy" genoot van deze maatregel en er werd een voor die tijd behoorlijk bedrag van 8430 fr. voor neergeteld.

Uitgereed voor de eerste reis monsterde men de bemanning van elf koppen aan te Oostende op 6 december 1838 „om te vaeren op avontuur". Wij noemen dat nu trampvaart of wilde vaart. Het schip gaat op zoek naar een vracht, in welke haven deze dan ook te vinden is en naar welke bestemming deze vracht dan ook moet vervoerd worden. Eenmaal daar aangekomen wordt weer vrachtgezocht voor een andere haven. Zo vaart het schip zonder vaste reisroute, fading innemend waar deze aangeboden wordt. De eerste reis ging door onder bevel van de Zweedse kapitein Nicolas Doflij uit Gateborg, 36 jaar oud. Zijn stuurman was de 23-jarige Gentenaar Francis Cornelis, gage 76 fr. per maand. Deze Cornelis werd in 1842 kapitein op de „Loochristy" en bleef dit tot in 1852. De timmerman was een Duitser uit Emden, de bootsman een Oostendenaar, de kok stamde uit Zeestermue (?), vier matrozen woonden in Oostende, de vijfde in Heist. De lichtmatroos was een Antwerpenaar.



Herstellings- en onderhoudswerken aan een kofschip. Hiervoor werd het gekield of gekrengd, d.i. op een ondiepe plaats ten dele omvergetrokken, zodat men het onderwaterschip kon bereiken vanop een werkvlot. (afb. 4) Ets uit G. GROENEWEGEN, Verscheide soorten van Hollandse vaartuigen. Rotterdam, 1786-1801.

Lang was het schip niet weg, want op 6 februari 1840 monsterde men opnieuw te Oostende voor een reis naar Mantanza, tegenwoordig genoemd Matanzas, gelegen aan de noordkust van Cuba, ten oosten van Havana. Deze reis ging eveneens door onder het bevel van dezelfde kapitein, maar één van de Oostendse matrozen was ondertussen tweede stuurman geworden en de Antwerpse lichtmatroos matroos. Deze laatste verdiende nu 45 fr. in plaats van 40 als lichtmatroos. Alle andere bemanningsleden waren nieuwe elementen. Zes en een halve maand later was het schip klaar voor een kort reisje van Oostende naar Liverpool, maar op 22 november 1840 monsterde men een nieuwe bemanning aan voor „Brasilien" (afb. 3). De kapitein was nog altijd dezelfde — zijn gage blijft geheim — maar de eerste stuurman verdiende nu al 97,35 fr., de tweede 76,19 fr., de timmerman 71,95 fr., de bootsman 52,91 fr., de kok eveneens 52,91 fr., de vijf matrozen ieder 45 fr. en de lichtmatroos 42,32 fr.

De „Loochristy" was dus wel degelijk één van deze kleine scheepjes die — laten we maar zeggen — regelmatig de oceaan overstaken tussen de „kleine" reisjes over de Europese wateren, feitelijk hun normaal werk-terrein. We vinden het schip in het Registre Veritas terug onder de rederijvlag van N.J. De Cock Frères tot in 1862. In april 1862 wordt het schip van de hand gedaan aan de Gentse rederij Van den Kerckhoven-Van Dooren. Jaren tevoren o.m. in 1847, was een Van den Kerckhoven kapitein op de kof „Auguste" van N.J. De Cock Frères. Het is niet bekend of de firmant van de nieuwe rederij van de „Loochristy" dezelfde persoon was als deze kapitein. Het is niet helemaal onmogelijk, want het was niet

zeldzaam dat een kapitein tijdens zijn loopbaan een schip bij elkaar vaarde en van zijn spaarduiten zelf een vaartuig kocht en uitbaatte, hetzij als kapitein-reder, hetzij als reder. Wat er van zij, de „Loochristy" bleef voor deze rederij varen tot in 1869. Na dertig jaar in bedrijf geweest te zijn staat het schip dit jaar voor het laatst in het Registre Veritas vermeld. Wat ervan geworden is weten wij niet, maar de ouderdom wijst er op dat het schip gesloopt werd en in rook is opgegaan als brandhout (afb. 4).

Welk soort vracht heeft een schip zoals de „Loochristy" in de loop van zijn bestaan in zijn ruim vervoerd?

In de meeste gevallen was een bepaalde vracht wel karakteristiek voor een bepaalde haven. Schepen zoals de kofschepen vervoerden zowat alle producten die de Europese markten en nijverheid verhandelden. Uit de vrachtlijsten die we nasloegen in eigentijdse dagbladen als „Lloyd Anversois" is zeer duidelijk na te gaan wat o.m. kofschepen zoal vervoerden. De kof „Joseph" — ook van N.J. De Cock — staat o.m. vermeld met een vracht van 586 kistets suiker uit Cuba, naar Antwerpen gebracht in 1859. Andere kofschepen brachten rogge uit Rusland aan, zout uit Cadiz, wijn uit Bordeaux, kolen uit Wales, stokvis en levertraan uit Bergen in Noorwegen en ook teer uit Noorwegen of Zweden, lijnzaad, tabak en bout uit Riga, tarwe en maïs uit Odessa, marmer uit Livorno, ijzer en gant uit Stockholm, solfer uit Alicante, witte zeep en amandelen uit Marseille, kolen en slijp stenen uit Newcastle, groene erwten uit Hamburg en lijnkoeken uit Altona, vislijm en potas uit St.-Petersburg, koffie rechtstreeks uit Haïti, maar ook als transitwaar uit Londen, naast wol, katoen, colzazaad, enz. Naast deze massavrachten, waarvan de meeste in balen, zakken en vaten verpakt waren — tegenwoordig zijn vele ervan stortgoederen — werden ook stukgoederen uit alle windstreken geladen. Daar de luiken van deze schepen zeer beperkte afmetingen hadden konden enkel weinig omvangrijke vrachten geladen worden. Daarom konden ijzeren balken of planken en bomen niet door het gewone luik aan boord genomen worden. Schepen die regelmatig deze vracht vervoerden, waren hiervoor uitgerust met een laadpoort, een zgn. houtpoort die zich naast de achtersteven bevond. Hierdoor kon men lange stukken in het schip schuiven en in langsscheepse richting stouwen.

Misschien kan het de lezer interesseren wat de "ijzeren zeeman op houten schepen" zoal te eten kreeg? Uit de monsterrollen van 1839-1840 lichten wij artikel VI:

Art. VI. Een ieder zal zich te vreden moeten houden met het rantsoen, hier nevens bepaeld, te weten: 2 lb VLEESCH, 1 lb. BOTER, 1 lb. SPEK, 1 lb. STOKVISCH, 5 1/2 lb. BROOD per week; en by gebrek aen boter 1 1/2 musje zoete olie.

Dock indien, (dat God verhoecle) door eenig toeval, het zij van eene lange reys of andere oorzaken, by den Kapiteyn en verdere officieren, noodzaekelyk geoordeeld word het gemelde rantsoen te verminderen, zal een ieder der ekwipagie verpligt zyn, zich daer mede te vreden te houden, op verheurte van al deszelfs te goed hebbende gagie, ton voordeele van de reedery, en op poene van arbitraire korrektie.

Kommentaar overbodig!

Een monsterrol van de „Loochristy" uit 1844 toont nochtans een lichte verbetering in de toestand, zonder dat het menu bepaeld luxueus werd:

Art. 6. Een ieder zal zich tevreden moeten houden met het wekelyksch rantsoen, hier nevens bepaeld, te weten:

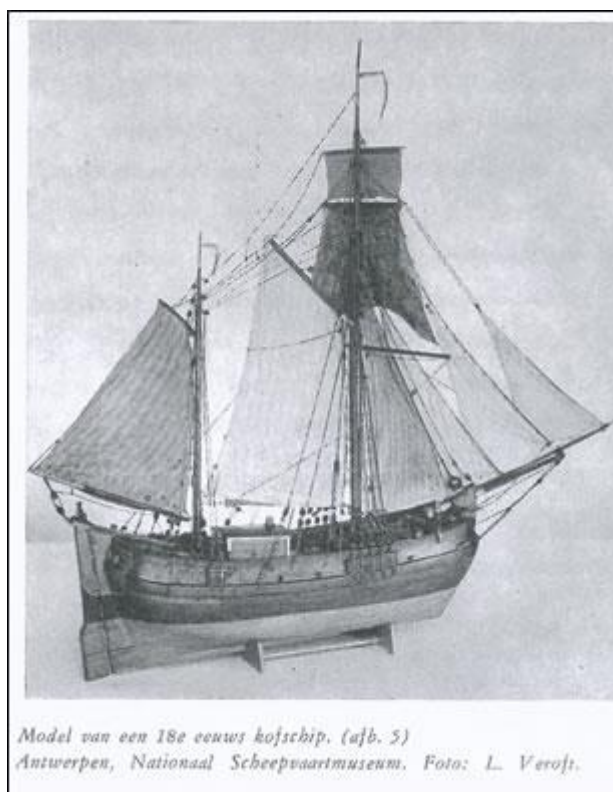
2 kil.	gezouten vleesch	of	1 kil.	50 versch vleesch.	0,50 spek.
0,25					stockvisch.
0,50	boter	en	by gebrek	0,20 liter	zoete olie.
3,00					brood.
1,25			gort	of	ryst.
1,25	groene		of	witte	erwten.
0,75	grauwe erwten of bruine boonen.				

In geen geval zal het scheepsvolk aanspraak noch vergoeding kunnen eischen, voor de mindere gebruikte of overgeschotene levensmiddelen van het bepaeld rantsoen.

Doch indien (dat God verhoede) door eenige toeval, het zy van eene lange reis of andere oorzaken, by de kapitein of verdere officieren, noodzakelijk geoordeeld wordt het gemelde rantsoen te verminderen, zal een ieder der ekwipage verplicht zyn, zich daer mede te vrede te houden, op verbeurte van al deszelfs te goed hebbende gagie ten profyten van de kas der noodlydende en gebrekkige zeelieden.

In dat geval het te min ontvangen, zal by terugkomst hier te lande, voor zoo verre namelyk voor zoodanige artikelen voor dewelke niet geheel of gedeeltelijk anderen in de plaets gesteld zyn, aen de officieren en manschappen in geld worden uitbetaeld, naer de pryzen van den dag.

Na de bombardementen van Algiers, in 1815 uitgevoerd door een gecombineerde Engels-Hollandse vloot is de zeeroverij in de Middellandse Zee zo goed als uitgeroeid. Toch is de veiligheid op zee in de eerste helft van de 19e eeuw nog niet volstrekt. Talrijke koopvaarders voeren nog geschut aan boord en in de monsterrollen worden nog altijd voorschriften opgenomen, die bindend zijn voor de bemanning. Men vermeldt er nog altijd „rovers”, Tees zeerovers, in artikel XII:



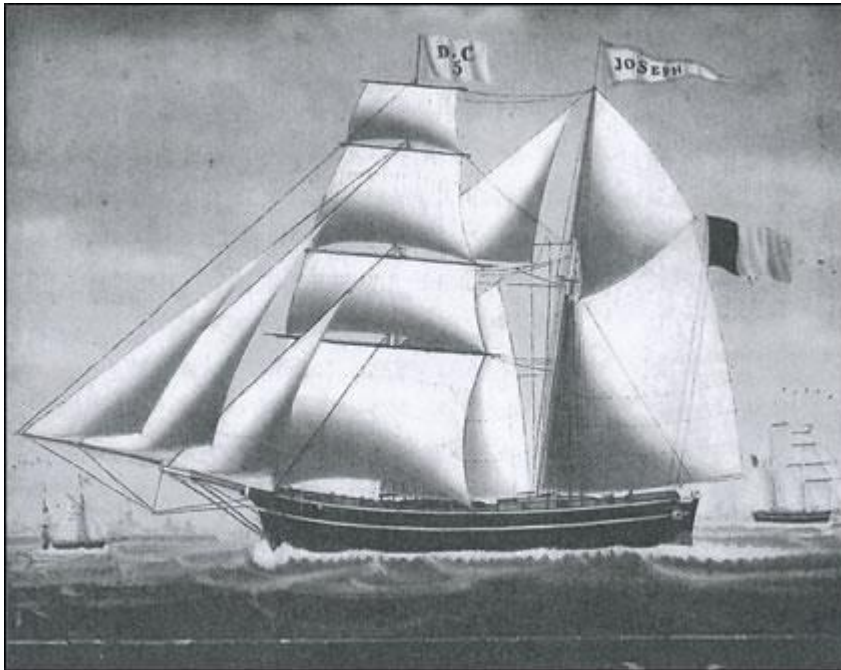
Art. XII. Indien het, onverhoopt, mogt gebeuren, dat het schip door roovers, of anderen, by den, Kapiteyn voor vyanden herkend, wierd aengevallen, zal een ieder gehouden zyn, naer zyn best vermogen, het schip te helpen beschermen en tegen den vyand te verweeren, zoo als braeve officieren en matroosen betaemd, zonder elkanderen lafhertig te verlaeten: en wie hier in naelaetig mogt zyn, zal aangemerkt worden als eerloos en infaem, en verbeuren nog daer-en-boven al zyne maend-gagien en goederen, ten profyten van hun die zich dapper gekwetten hebben. En zullen die genen, welke in zoodaenig gevegt, gekwetst of verminkt mogten worden, voor scheeps rekening worden genezen en verpleegt.

De scheepskanonnen werden echter niet enkel tegen eventuele zeerovers gebruikt maar o.m. ook voor het geven van signalern en het afschieten van

reddingslijnen. Het geschut van de „Loochristy” donderde ook over Gent. Vroeger — en nu nog — was het gebruikelijk bij feestelijke gelegenheden of plechtigheden vreugdeschoten af te vuren. In het „Journal de Bruges et de la Province” van 18 april 185a lezen wij volgend bericht (vrij vertaald uit het Frans): „Deze morgen werd in de kerk van St.-Pieter te. Gent het huwelijk ingezegend van de heer De Jaegher, Gouverneur van Oost-Vlaanderen met mejuffrouw Louise De Cock. De huwelijkszegen werd aan de echtelingen gegeven door Monseigneur de bisschop. Ter gelegenheid van het huwelijk waren alle schepen die in de haven gemeerd waren feestelijk bevlagd en vanop het schip „Loochristy”, kapitein Cornelis, werden voortdurend kanonschoten afgevuurd...” Mejuffrouw Louise De Cock was namelijk de dochter van één der gebroeders De Cock. Het hoeft dus geen betoog dat de rederij die dag in feest was. De „Loochristy”, die toen juist in de haven lag, kwam de eer toe de plechtigheid met het nodige „feestlawaaï” te onderstrepen er het is allicht een vrolijker aangelegenheid met los krui tussen de Gentse huizen te knallen dan zijn hachje trachten te redden door met scherp op zeerovers te schieten.

Zeelui hadden in deze dagen niet bepaald een goed(faam, overigens niet geheel ten onrechte. Er waren hee wat rabauwen onder, die bel noch duivel vreesden Nochtans werd elke dag op de schepen gebeden onder leiding van de kapitein, tenzij er een geestelijke

aar boord was, wat enkel op grotere schepen het geval was Deze bidstonde was eveneens verplicht zoals blijkt uit artikel XVII van de monsterrol:



*PETRUS WEYTS (1799-1855),
portret van de schoenerkoff
„Joseph“ van de rederij N.J. De
Cock te Gent. Achterglasschilderij
geschilderd in 1850. Kapitein
Antonius Vollemaere. Dit schip
werd in 1833 gebouwd te Oostende,
145 ton. De schoenerkoff
„Loochristy“ was precies hetzelfde
schip. (afb. 6)
Antwerpen,
Nationaal Scheepvaartmuseum.*

Foto: L. Verofjt.

Art. XVII. Vermits het alle menschen getaemd God te loven en te danken, zoo zal ook een ieder verplicht zyn, de dagelyksche gebeden met eerbied by te wonen.

Hoe zag een kofschip eruit (afb. 5) ? Een afbeelding

van de „Loochristy“ kennen wij niet, al zou het ons geenszins verwonderen dat er ergens in Gent een portret van dit schip hangt. Het was in die dagen te Oostende en te Antwerpen een zeemansgebruik scheepsportretten te schilderen en wel op glas. De bevelvoerende kapitein bestelde, als souvenir, een scheepsportret bij één van de gespecialiseerde volksschilders. Deze produceerde dan een afbeelding van het gewenste schip en gebruikte daarvoor een zeer speciaal procédé dat in België grote populariteit genoot: het églomisé- of achterglasschilderen. Het scheepsportret werd in spiegelbeeld op de achterkant van een glasplaat geschilderd. Honderden van deze schilderijen werden door vreemde kapiteins meegenomen en men vindt ze nu terug in talrijke privé- en openbare verzamelingen in vele delen van de wereld vooral in Amerika, Scandinavië en Duitsland. Maar ook onze reders en kapiteins bestelden dergelijke scheepsportretten, o.m. de kapitein van de kof „Joseph“ van de rederij N.J. De Cock (afb. 5). Het lijkt ons dus niet onmogelijk dat ook de „Loochristy“ afgebeeld werd. Wat er van zij, het hierbij afgebeelde portret van de „Joseph“ kan ons een beeld van het uitzicht van de „Loochristy“ geven, vermits de „Joseph“ geheel van hetzelfde type was, alleen kleiner.

Kofschepen waren stoergebouwde koopvaarders met massieve vierkante kop, een vrij sterke zeeg (langsscheepse bocht) en een hoog achterschip met ronde kont (excuus: is nu eenmaal de vakterm). Aanvankelijk voerden alle koffen zwaarden, d.z. grote segmentvormige plankenborden, waarvan er één bevestigd was aan ieder scheepsboord ter hoogte van de grote mast. Door een zwaard te laten zakken kon men het zijdelings afdrijven onder druk van de wind en de stroom enigszins beperken, d.i. men kon de drift tegengaan, zodat het schip beter de gewenste koers kon volgen en bovendien scherper in de wind varen. In 1735 was er echter een Friese kofschipper, later scheepsbouwer, Hylke Jansz. Kingma, die een grotere en diepe kof liet bouwen in Lübeck. Dit was de eerste kof zonder zwaarden. Deze zwaardloze koffen werden echter met een gepiekt (scherp, S-vormig) achterschip gebouwd, waardoor de romp een grotere zijdelingse weerstand verkreeg en dus minder drift had. Ook het voorschip werd lichtjes gepiekt. Toch bleef de kof nog altijd een schip dat veel wraak (neiging tot afdrijven) had, wat bij slecht weer en aan lager wal de ondergang van vele van deze schepen voor gevolg had. Onderstaand zeemansrijmpje is dan ook veelbetekenend voor de zeilkwaliteiten van deze schepen:

Koffen
sünd

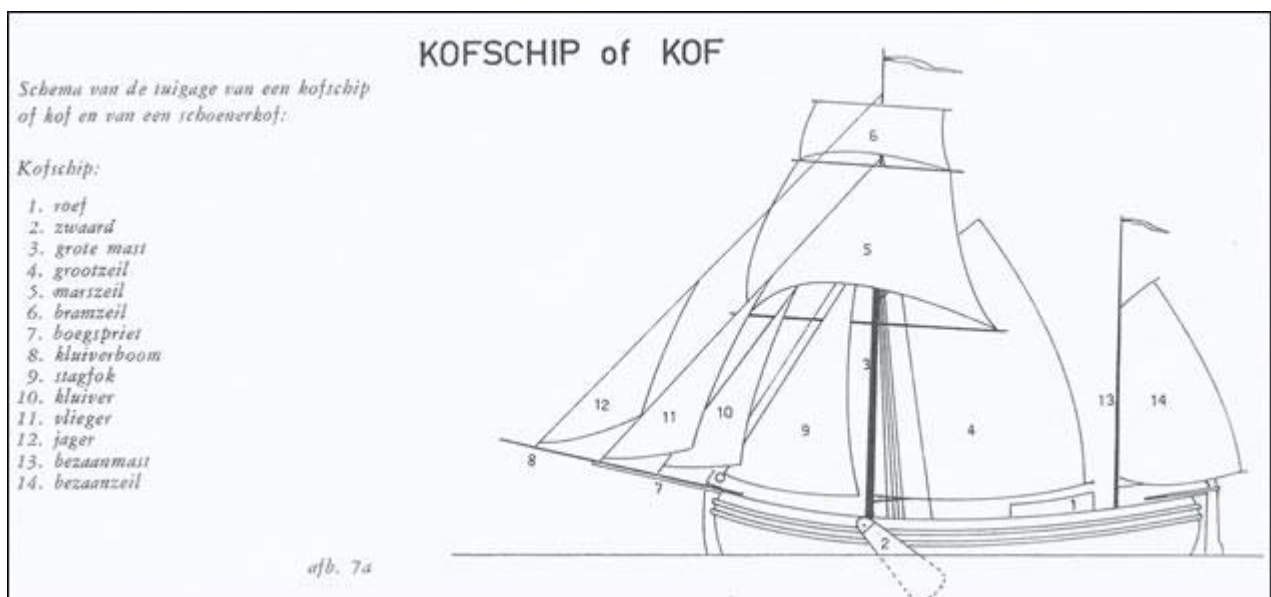
un

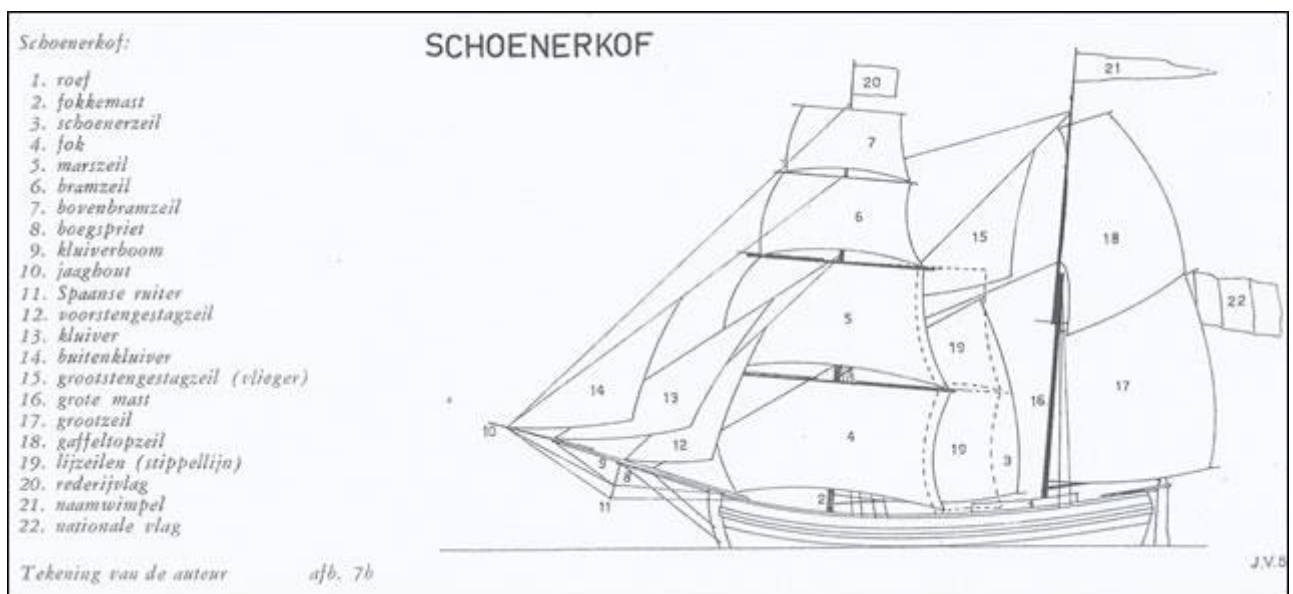
Snzacken
Waterbacken

Toch was de kof een zeewaardig schip, dat zwaar weer kon verdragen zij het niet altijd geheel comfortabel want een variante op het vorige rijmpje zegt:
Koffen en smakken
zijn waterbakken
Hoekers en buizen
zijn zeemanshuizen

waarmede bedoeld werd dat de eerste twee veel water overnamen en bij wijze van spreken bij stormweder onder de golven doorgingen in tegenstelling met de vishoeker en de haringbuis, waarvan gezegd werd dat men op zijn kousen over dek kon lopen.

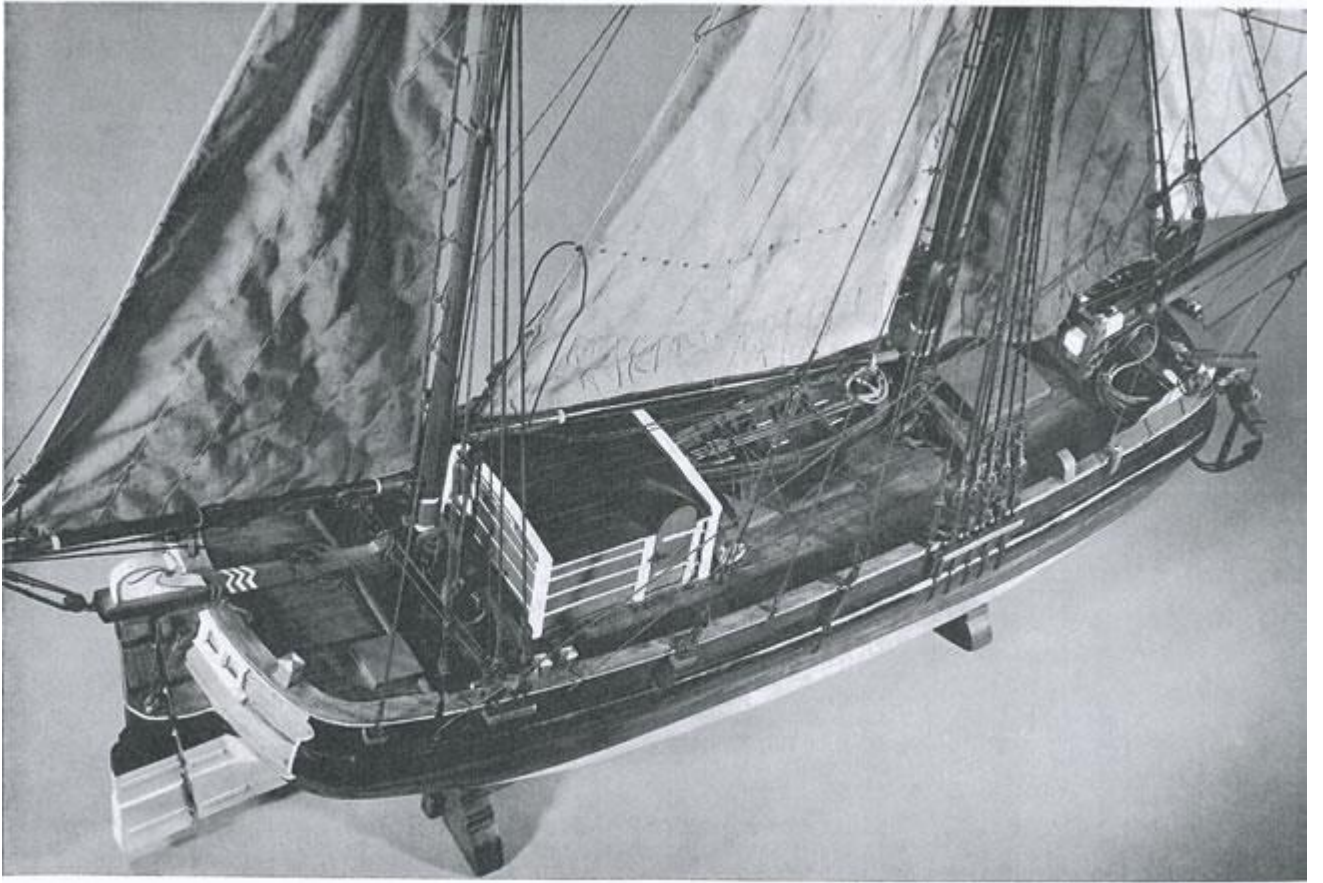
Het eenvoudige tuig, dat grote zeilmogelijkheden bood en aan betrekkelijk weinig slijtage onderhevig was, maakte van de kof een voordelig schip. Zij kon gevoerd worden met een kleine bemanning, die naargelang de aard van de reis van vijf tot twaalf man telde. De klassieke kof voerde een zgn. anderhalfmasttuig dat aanvankelijk bestond uit een gewone paalmast met een grootzeil en een razeil en een bezaanmast op het achterschip. Later werd de mast-verlengd met een steng waaraan een topzeil kon gevoerd worden. De boegspriet was in vele gevallen voorzien van een lopende kluiverboom (verlengstuk van de boegspriet) en droeg vier stagzeilen. Deze tamelijk uitgebreide tuigage bood vele mogelijkheden in allerlei weersomstandigheden. In de dertiger jaren begon men de voorheen vaste steng te vervangen door een schietende. Het oude anderhalfmasttuig werd toen ook vervangen door een schoenertuig. De kleine bezaanmast werd verlengd, meer naar voor geplaatst en kwam midden in de roef. Het kleine bezaanzeil werd vervangen door een groter en aangevuld met een topzeil. De grote mast kreeg een volgetuigd brikstuig met vier raas en tussen beide masten werden nu ook één of meer driehoekige stagzeilen gehesen, terwijl bovendien ook lij -zeilen konden bijgezet worden (langwerpige zeilen die bij gunstig weer en niet te harde wind op spieren uitgezet werden naast de razeilen, dus aan de buitenkant ervan (afb. 7). Het invoeren van deze schoenertuigage ging ook gepaard met een wijziging in de verhoudingen van de romp. Waren de verhoudingen lengte:breedte vroeger 3:1 dan werden deze nu vergroot tot 4,4:1. Deze wijzigingen kwamen de snelheid en het laadvermogen ten goede en verhoogden de zijdelingse weerstand, waardoor ook de drift verminderde.





De romp van een kofschip was gewoonlijk als volgt ingedeeld: in het voorschip het volkslogies met vaste kooien en kasten. Onder dit verblijf trof men vaak dé leggers met water en brandhout aan, nodig voor de reis. Het ruim strekte zich uit over de ganse overblijvende lengte en breedte van het schip, behalve een kleine ruimte in de achterpiek die als kabelstelling voor het touwwerk bestemd was. De kajuit was ook achter in het schip en stak voor een deel in het ruim en voor een deel boven dek. Hier verbleef de kapitein, heel dikwijls vergezeld van zijn gezin, kinderen inbegrepen. In de kajuit waren eveneens vaste kooien en kasten naast een „geheim gemak" (W.C.). Op het dek stond vòôr de bezaanmast een roef waarin zich een kombuis (keuken) bevond en tevens logies voor de stuurlieden en een ruimte voor waarloze zeilen en victualiën (voorraad). Bij stormweer werd deze roef extra vastgesjord aan ringbouten in het dek. Ervoor was een luik waarop de boot stond in een paar schragen (afb. 8).

Gezicht op het dek van een model van de kof „De Stad Antwerpen". In het achterschip bevindt zich de kajuit voor de kapitein en zijn familie; voor de bezaanmast staat de roef waarin het kombuis (keuken) en de slaapkooi voor de stuurman ondergebracht waren. Daarvoor is de boot vastgesjord boven het luik. Vòôr de grote mast: is het luik dal toegang geeft tot de verblijven van de bemanning. In de kop van het schip ligt het spil en staat de beting vo, de boegspriet. Dit model werd door de Stad Antwerpen geschonken aan HH. KK. HH. Peins Albert en Prinses Paola ter gelegenheid van hun huwelijk in 1959. (afb. 8) - Foto: L. Veroft.





*Afbeelding van een smakchip
of smak op een tageltableau.
Maklum (Friesland),
18e eeuw. De smak werd
de „zuster der kof" genoemd.
Het was een kleiner schip
met een eenvoudiger tuigage.
De romp is gebouwd met
een „hennegat", een
driehoekige opening op het
achterschip, waarboven de
bezaanmast staat. (afb. 9)
Antwerpen,
Nationaal Scheepvaartmuseum
Foto: L. Veroff.*

Nog even een paar gegevens over sloopstypen die nauw met de kof verwant waren en er soms wel mee verward worden: de smak en de galjoot. De smak —weer zo'n gekke sloopbenaming werd de „zuster der kof" genoemd. Het was een kleiner vaartuig met een laadvermogen van 70 tot 140 ton, een platboomd, ondiep schip dat verder weer verwant was met de Friese tjalk. Smakken voeren vooral tussen Lissabon en de Oostzee en zij waren bijzonder geschikt voor de Waddenvaart en ander ondiep vaarwater. Zij vertoonden zich ook op de binnenwateren. De bemanning telde van vijf tot zeven man. Uiterlijk kon men de smak al dadelijk van de kof onderscheiden door de bouw van de romp. De smak had namelijk een „hennegat" of „staatsie". Dit is een bouwwijze waarbij het boord van het schip boven het achterschip zo gebouwd is dat er op die plaats een driehoekige opening ontstaat waardoor de helmstok steekt. Op dit hennegat staat een kleine bezaanmast. De smak voert tevens een lichtere tuigage o.m. maar één topzeil en maar Brie stagzeilen (afb. 9).

Het verschil tussen een kof en een galjoot is minder opvallend. De kof zou volgens sommige 19de-eeuwse vakmensen meer zee hebben (meer langssloopse bocht) en op de

verschansing nog ijzeren scepters voor een wandelspier, terwijl de galjoot een geheel gesloten verschansing behoort te hebben. Dit blijkt echter niet uit de bestaande afbeeldingen en scheepsmodellen. Een geoefend kenner merkt echter wel dat een galjoot een minder hoekig schip is, fijner in de boegen en eleganter vergeleken bij de stugge kof (afb. 10).



Fragment van een monsterrol van het galjoetschip „Loochristy”, (feitelijk de schoenerkof „Loochristy”) uitgegeven door het waterschouwsambt te Oostende in 1844 voor een reis „op avontuur”. (afb. 11)
Antwerpen, Nationaal Scheepvaartmuseum

De Amsterdamse burgemeester Nicolaes Witsen, die de auteur is van het eerste Nederlandstalige boek over de scheepsbouw, schreef in 1671 al: „De Geslachten van

Scheepeni worden dikmael zeer vermengt". Een scheepstimmerman uit de 18e eeuw vermeldt in zijn „scheepsboek" een kof die hij bouwt, maar spreekt in zijn verdere administratie steeds van een galjoetschip. Het hoeft ons dan ook niet te verwonderen dat men bij het lezen van de monsterrol uit 1844 van de „Loochristy" spreekt van een „galjoetschip". Een echte galjoot was echter een groter schip met een tonnenmaat van 160 tot 500 ton. Zij voerden wel hetzelfde anderhalfmasttuig en later ook een schoenertuig, maar kwamen ook als driemastschip voor. Zij voeren vooral op West-Indië en werden beschouwd als snelle schepen, wat voor de kof zeker niet het geval was. Bepaalde galjoten waren gebouwd met een vrij scherp onderwaterschip en men sprak dan van „hardlopergaljoten." Zij hebben nooit zwaarden gevoerd. Misschien waren de kwaliteiten van de galjoot aanleiding tot een beetje broodnijd onder de zeelui en gaf men zijn kof liever op als een galjoot. Het gaf een ietsje meer prestige en zeelui uit de zeiltijd waren nu eenmaal gevoelige lui als het op het beoordelen van hun schip aankwam. De „Loochristy" was in ieder geval een echte schoenerkof, de typische koopvaarder zoals men er steeds in de havens van Antwerpen, Brussel, Gent en Oostende zag liggen. Het waren stevige en sympathieke schepen die het hunne bijgedragen hebben tot de ontwikkeling van onze zeevaart en onze vlag vertoonden in alle Europese havens en zelfs daarbuiten (afb. 11).

J. Van Beylen
Nationaal Scheepvaartmuseum
 Antwerpen



*De galjoen was een fijner en eleganter schip dan de kof, maar voerde overigens dezelfde tuigage. Zij werden echter gebouwd met een draagvermogen tot 500 ton en kwamen ook met een driemasttuig voor, gelijk aan dit van driemastbarken. Koffen en galjoten werden dikwijls met elkaar verward. Ets uit G. GROENEWEGEN, *Verscheide soorten van Hollandse vaartuigen*. Rotterdam, 1786-1801.*

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Inséré 25/02/22 DOSSIER Enlevé 25/03/22

The hidden CO2 emissions from tank cleaning

Fuel consumption, and CO2 emissions, from tank cleaning can amount to as much as 12 per cent of the total emissions for a vessel, according to figures provided by Tanker Operator by Guy Johnson of consultancy L&I Maritime.

Fuel consumption, and emissions, from tank cleaning, can be as much as 12 per cent of all emissions by a chemical tanker, according to figures provided to Tanker Operator magazine by Guy Johnson of consultancy L&I Maritime.

Typically during tank cleaning, the boiler and auxiliary engines consume 0.5-0.6 metric tonnes of fuel per hour, in order to produce hot water and steam, Mr Johnson says.

Ships don't clean every day, but as a minimum there will be one cleaning operation per month.

One cleaning operation can take as much as 236 hours (see below) so at 0.6 tonnes of fuel per hour, one clean per month, this means 141 tonnes of fuel used per month for tank cleaning.

Daily fuel consumption of a chemical tanker is around 35-40 metric tonnes of fuel per day. At 40 tonnes a day, with 25 days operation a month, that's 1000 tonnes per month. This is based on personal experience, and depends on size, loaded capacity and of course speed. On this basis, the percentage of all fuel used on tank cleaning is $141 / (1000 + 141) = 12.3$ per cent.

Hot water washing is an integral part of all tank cleaning operations, but it needs to be effectively and safely controlled.

Over cleaning

Mr Johnson believes that charterers are pushing vessels to overclean to standards that are, in the vast majority of cases, just not necessary to ensure the quality of the next cargo.

"This has to be regulated. Otherwise fuel consumption during tank cleaning is likely to increase, rather than the opposite," he says.

"Many cargo interests, by their own admission, do not understand tank cleaning. As a result, pre-loading inspection specifications tend to be over cautious, which all but forces the vessels to over-clean."

"But how can not understanding ever be a defence for enforcing unsafe and environmentally polluting practices?"

Let shipowners decide

At the end of the day, the owners/operators of tankers are always responsible for the quality of the cargo loaded on board their vessels, regardless of how many hoops they have had to jump through to get the cargo on board, Mr Johnson says.

"If the owners/operators are ultimately culpable, let them take responsibility, by monitoring their own tank cleaning, using tried and tested methods and procedures."

"Cargo interests only need declare any specific quality concerns so owners/operators can deal with these correctly and precisely. This is necessary because many times a cargo has become "contaminated" because cargo interests did not state that their cargo was sensitive to a specific contamination. Instead, they relied on a wall wash inspection to ensure that the cargo tanks were sufficiently clean enough to load."

"If the next cargo is sensitive to aromatics, or oxygenates, or organic chlorides or whatever, let this be known to the owners/operators and don't pretend a wall wash inspection will lessen or even remove the impact of this contamination potential."

Environmental footprint calculation

The following environmental footprint calculation for tank cleaning is based on real information supplied by L&I Maritime.

It is based on the same vessel cleaning from the same previous cargo to load the same next cargo, but in two different occasions, and the charterer and the respective pre-loading inspection requirements were different for the two cases.

The vessel is 45k DWT tanker with 16 cargo tanks coated with zinc silicate.

The previous cargo was ultra-low sulphur diesel. The next cargo is methanol to IMPCA (International Methanol Producers and Consumers Association) quality and purity standard.

The Basic Tank Cleaning Procedure uses two fixed and two portable machines per tank. Two cargo tanks can be washed simultaneously.

The procedure was:

- Annex I wash to slop; 3 hours (70-80oC) hot seawater open washing;
- 4 hours hot (70-80oC) seawater open washing; 4 hours hot (70-80oC) chemical recirculation (Recirculation in 10M3 of FW. First round of recirculation with 0.5% detergent and 2% sodium hypochlorite. Subsequent rounds of recirculation with 0.5% detergent only).

- 4 hours hot (70-80oC) seawater open washing; gas free and wall wash inspection for compliance with pre-loading inspection specifications. Repeat the 4 hours hot seawater open washing / chemical recirculation steps above until pre-loading inspection specifications are met.

- 30 minutes hot (70-80oC) freshwater open washing; de-ionised water rinsing; ventilation / mopping to dryness

The pre-loading inspection specifications in the first loading port were 1ppm max inorganic chloride, 50 minutes minimum permanganate time, a pass for hydrocarbons water miscibility, and 5 APHA max colour. The second loading port did not set any such specifications.

This meant that in the first loading port, the total cleaning time required to meet the inspection specifications was 236 hours (8 tanks, and 27 – 35 hours per tank, 3 or 4 rounds recirculation). In the second loading port, the total cleaning time was 92 hours, or 11.5 hours per tank (1 round recirculation).

The methanol cargo loaded at both load-ports met the same internationally accepted quality standards, and both cargoes were discharged successfully.

"This can only say one thing, that the additional tank cleaning carried out prior to loading at loading port 1, was completely unnecessary," Mr Johnson says.

The 144 hours of hot water washing liberates 273.6 metric tonnes of CO2 into the atmosphere.

Charterers

Does the role of the charterer directly contribute to the environmental footprint of tankers?

"Absolutely yes, to the tune of 144 hours (236 – 92) of hot water washing in this example, which is equivalent to 61 per cent more GHG emissions at loading port 1," Mr Johnson says.

"Furthermore, because tank cleaning prior to loading at loading port 1 required multiple rounds of cleaning chemical recirculation to achieve the pre-loading inspection specifications, an additional 1.8 cubic metres of detergent was unnecessarily pumped into the sea."

"If tankers are going to have any chance of achieving the far-reaching demands of MEPC 75 and beyond, charterers have to be stopped from forcing vessels to over-clean, simply because they can."

"This is not just about the ethical question of whether the cargo has a higher value than the environment (or crew safety), this is now about global sustainability."

"How can any charterer justify that their cargo is worth 61 per cent more GHG emissions and 1.8 tonnes of excess detergent dumped into the sea, for the sake of a wall wash

inspection, that actually provides no reassurance, guarantees nothing and ultimately has no impact on the ability of the vessel to load and discharge the cargo successfully?"

"This is even more astonishing when it is recognised that tank cleaning is based on what charterers perceive as being "clean", in other words, commercial preference."

"Just because one charterer demands APHA colour 10 in a wall wash inspection, but another demands APHA colour 5, does not mean that one vessel is "dirty" and the other is "clean". But cleaning "from colour 10 to colour 5" will very often require chemical and / or hot water washing."

Inséré 27/02/22 NIEUWS NOUVELLES Enlevé 27/03/22

LNG fleet seriously exposed to CII impact

The world fleet of LNG carriers is expanding fast. A record 85 newbuilding contracts agreed at substantially higher prices in 2021 will boost today's 610 deep sea trade LNG ships and we expect another year of record contracting in 2022. Ten more LNG carriers were ordered in the first few days of January, taking the orderbook up to more than 130 ships, close to 20% of existing fleet capacity. With projects lined up however this number could easily triple soon.

In these conditions, concerns are raised about regulatory compliance. We are likely to have a shortage of ships that comply with the IMO's carbon intensity indicator (CII) from 2025 onwards. This could limit charterers' options, propel rates for compliant ships to new highs, and ultimately put a brake on the world's decarbonisation process to the extent that this is driven from the coal to gas shift. The supply squeeze is inevitable despite the arrival of several newcomers in LNG construction. The handful of specialist builders, including South Korea's Daewoo, Hyundai, Samsung and China's Hudong, have been joined recently by Dalian Shipbuilding and Jiangnan Shipbuilding. Despite the newcomers, LNG builders are full until 2025 for a sector which historically presented a capacity of approximately 30 units a year. Meanwhile LNG trade is predicted to grow by 250 million tonnes per annum, until 2030, according to MSI and IGU forecasts putting even more pressure on the shipbuilding sector.



The 165000 cubic meters Liquid Gas LNG tanker [ENERGY UNIVERSE](#) enroute from Yokohama to the Suezcanal

Older technology steamers

Here are the challenges to today's existing fleet. There are about 250 elderly steam turbine vessels which typically have a daily boil-off rate (BOR) of about 0.15% of cargo but cannot use this as fuel. These ships were designed to use 'Boil-Off' for propulsion. In this manner their propulsion arrangements did not look on efficiency but to the productive consumption of liquid turning into gas. For this reason, boilers coupled with steam turbines seemed like a good match despite its efficiency being marginally over 30%, or even lower when away from the optimum operating point like in 'slow steaming' conditions.

The next stage of LNG ship design moved from steamers to four-stroke, dual- or tri-fuel diesel-electric propulsion systems, using types of marine fuels or LNG. These vessels, with lower BORs of around 0.1%, have smaller engines and better efficiency of more than 40%. There are about 150 of these ships in the fleet today.

The latest generation of two-stroke LNG vessels have BORs as low as 0.07%. Their efficiency is almost or marginally below 50% and these vessels are equipped with reliquefaction plants on board to convert any excess boil-off back into liquid cargo.

So, during a slow canal transit, for example, or port operations when propulsion power is not required, operators of such vessels can conserve cargo and its value. There are about 280 of these ships in operation today, making up the balance of the fleet.

CII fleet impact

The first two ship categories, well over half of the existing fleet, are unlikely to achieve CII ratings of A, B, or C when they are gauged next year. This means that ships rated E will have to undergo carbon-efficiency improvements immediately (a subject which I will cover in my next blog) and owners of D-rated vessels will have to ensure that ships become more fuel efficient within the three following years.

However, since CII assessments will become progressively stricter from 2027 until the end of the decade, ships which are adapted to meet CII requirements by 2024/5 may subsequently fall into categories D and E later in the decade. Owners of these older vessels will then be faced with the decision over whether to invest in expensive sustainability measures, sell them for conversion to floating LNG plants, or dispose of them for recycling.

So, on one hand, there is limited scope to raise supply to meet the growing demand for seaborne LNG because shipbuilders have no extra capacity. On the other, you have a

majority of ships in the fleet which are unlikely to meet CII requirements from 2025 onwards, in what could resemble to a perfect storm!

Decarbonisation delay

Ultimately, in a macro context, this has serious implications. The most important aspect of global decarbonisation is to stop the use of coal in power generation. Key economies such as China and India still rely heavily on this worst type of carbon-generating energy source. LNG offers the best available energy source to replace coal and achieve a carbon reduction of about 50% in the process. But if there is insufficient shipping capacity, or the price is too high, consumers will not switch from coal to gas and ultimately the global decarbonisation process will be set back.

Clearly, no-one wants this to happen. However, this means that the decision on managing the application of CII to the existing LNG fleet needs to be addressed in a sensitive and substantiated manner, radical changes could have the exact opposite effect.

Source: Lloyd's Register

Inséré 28/02/22 NIEUWS NOUVELLES Enlevé 28/03/22

DEME en Jan De Nul mogen haventoeegangen uitbaggeren



*Jan de Nul's TSHD **SEBASTIANO CABOTO** operating in the port of Ostend*

DEME en Jan De Nul slepen het contract in de wacht voor de onderhoudsbaggerwerken op de maritieme toegangswegen naar de Belgische havens. Het gaat om een contract van net geen 800 miljoen euro. De havens van Antwerpen, Gent en Zeebrugge zijn belangrijke toegangspoorten voor de Vlaamse economie. Om te vermijden dat de vaargeulen naar die havens dichtslibben en om te garanderen dat de schepen over voldoende diepgang beschikken, moeten de klok rond onderhoudsbaggerwerken worden uitgevoerd. Die onderhoudswerken werden de afgelopen vijftig jaar zonder onderbreking toegekend aan de Belgische baggeraars DEME en Jan De Nul, die daarvoor een tijdelijke vereniging oprichtten.

De essentie

De baggeronderhoudswerken in de havens van Antwerpen, Gent en Zeebrugge werden de afgelopen vijftig jaar zonder onderbreking toegekend aan de Belgische baggeraars DEME en Jan De Nul. Critici en concurrenten noemden het contract een onrechtstreekse

subsiëriëring van de Belgische baggersector. Pas in 2019 kon de Vlaamse overheid dat contract verbreken. Het nieuwe contract vanaf 2022 stond open voor alle baggeraars. De tandem DEME en Jan De Nul heeft de openbare aanbesteding opnieuw gewonnen.

In 2016 noemde het Rekenhof dat overheidscontract zonder einddatum strijdig met het mededingingsprincipe. Het 'eeuwige' contract bracht beide baggeraars tot dan al 600 miljoen euro op, stelde het Rekenhof. Critici en concurrenten noemden het contract al jaren een onrechtstreekse subsiëriëring van de Belgische baggersector. Een perpetuum mobile met hoge marges, want het gros van de gebaggerde specie belandt terug in het water. De overheid kon die kritiek niet zomaar naast zich neerleggen en ondernam meerdere vergeefse pogingen om het contract te verbreken. Pas in 2019 rekende de Vlaamse overheid af met wat ze 'een erfenis van de oude politiek cultuur' noemde. Ze bundelde alle onderhoudsbaggerwerken in één contract zodat baggerschepen efficiënter kunnen worden ingezet en besliste het contract vanaf 2022 open te stellen voor alle baggeraars.

Boskalis

Midden dit jaar stapte de Nederlandse baggergigant Boskalis alsnog naar de Raad van State. Volgens de concurrent van DEME en Jan De Nul was een specifiek selectiecriteria te veel toegespitst op de concrete opdracht zonder dat dat essentieel noodzakelijk was om de opdracht uit te voeren. De Raad van State gaf Boskalis gelijk. De Vlaamse overheid hield rekening met de uitspraak en verfiënde naar eigen zeggen haar bestek.

143,5 miljoen EURO

De onderhoudsbaggerwerken op de Schelde en de maritieme toegangswegen naar de havens kosten jaarlijks 143,5 miljoen euro. De tandem DEME (en dochter Decloedt) en Jan De Nul heeft nu opnieuw de openbare aanbesteding gewonnen. Het contract start begin volgend jaar en loopt over een periode van 5,5 jaar. De Vlaamse overheid raamt de kostprijs van de werken op 143,5 miljoen euro per jaar, samen een slordige 790 miljoen euro. Volgens het kabinet van Vlaams minister van Openbare Werken Lydia Peeters ligt de prijs lager dan vroeger. Toen was nog sprake van drie afzonderlijke baggeronderhoudscontracten. Het nieuwe contract behelst de baggerwerken op alle maritieme toegangswegen naar en in de Vlaamse havens, op de Noordzee, tussen Wielingen - de zuidelijke hoofdgeul die naar de Westerschelde voert - en de zeesluis van Wintam, en op de Antwerpse Linkeroever aan het Deurganckdok. Het gebruik van milieuvriendelijke baggervoertuigen was volgens Peeters een belangrijk selectiecriteria.

Amoras

Het slib afkomstig van de onderhoudsbaggerwerken wordt terug in zee gestort of in de Schelde. Het slib van werken in de haven van Antwerpen wordt verwerkt op de Antwerpse rechteroever in de slibverwerkingsinstallatie Amoras, een van de modernste in Europa. Amoras is een project van de Vlaams overheid en het Antwerpse Havenbedrijf. De ambitie is dat slib na zuivering te recycleren voor nuttige toepassingen. De uitbating van Amoras - kostprijs 120 miljoen euro - is sinds de start van het project in 2011 voor 15 jaar toegekend aan de milieudochters van DEME en Jan De Nul. Dat contract had een waarde van 482 miljoen euro.

Source : Tijd

Inséré 02/03/21 BOEKEN LIVRES BOOKS Enlevé 02/04/22

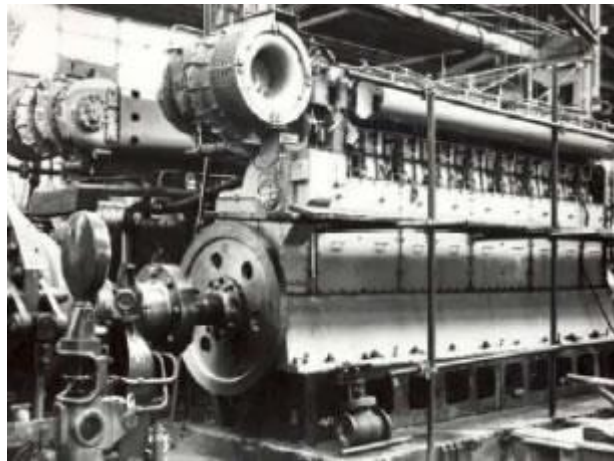
SMIT-M.A.N dieselmotoren 1923-1969.'

Boekbespreking.



ze zijn geproduceerd bij **J. & K. Smit's Machinefabrieken N.V.** in Kinderdijk. Het boek is geschreven door **Henk van Beest**. De auteur overhandigde het eerste exemplaar aan **Piet Boon**, verkoper van reserveonderdelen bij IHC Smit, die hem bij het opzoeken van diverse gegevens en documenten heel goed heeft ondersteund. In zijn voorwoord schrijft Henk dat het een herinnering is aan de tijd dat hij bij J. & K. werkte, met uitleg van wat het bouwen van een scheepsdiesel inhoudt. Vanaf het moment van tekenen, werkvoorbereiding, vervaardiging van de benodigde houten modellen voorafgaande aan het gieten van de onderdelen, het machinaal bewerken, het werk van de bankwerkers, pijpfitters en magazijnpersoneel.

Het boek telt 282 bladzijden op A4-formaat. Het heeft een kartonnen kaft en bevat een lijst van bijna alle bij J. & K. Smit van 1925 tot 1969 gebouwde motoren met honderden foto's van het bedrijf, de motoren, schepen waarin ze geplaatst werden, documenten en niet te vergeten tekeningen van de motoren. De eerste was een een cilinder R22 in 1925 gebouwd, de laatste een twaalfcilinder R66, gebouwd in 1969. Die motoren waren van zulke goede kwaliteit dat een aantal nog steeds in gebruik is. Henk beschrijft precies hoe ze gemaakt werden, met leuke anekdotes tussendoor. Ook staan erfoto's in van personeel (met namen), zoals een groepsfoto van bankwerkers in 1950 en van bijvoorbeeld Baas De Vreede, voor wie hij veelwaardering had. Ook een verslag van een uitbrengreis of een reparatie in een ver land zal veel (oud-) J. & K.'ers aanspreken. Het boek is uitgegeven door de **Stichting Publicaties West-Alblasserwaard**. De verkoopprijs bedraagt 15,00 euro. Toesturen per post is mogelijk. Bestelinformatie is verkrijgbaar bij **Henk van Beest**; h.van.beest1@kpnplanet.nl telefoon: 06-11084333



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EU Ship Recycling Regulation: An Inhibitor or Catalyst for Greening Ship Recycling Yards ?

Within the last two weeks, the ongoing debate on the European Union Ship Recycling

Regulation and a bilateral agreement between the European Union (EU) and India to solve the Basel Ban Amendment conundrum is re-surfacing once again, as the Danish Environmental agency is reportedly investigating Maersk's recycling standards in India. Moreover, in its recent webinar, the European Community Shipowners Associations (ECSA) strongly defended the position that the EU must recognize the developments made by the Indian ship recycling yards and include them in the EU-list of approved yards, in order to boost further development of yards in India. Maersk also stated that some of the Indian ship recycling yards that applied for inclusion on the EU-List are even better than the yards that are already approved by the EU.

Even though the EU has audited a few yards in India, they did not approve them for two external factors, which are beyond the control of yard owners. For example, modern hospitals (including a Trauma centre) and downstream waste management facility that is equivalent to EU Standards. It is to be noted that the Gujarat Maritime Board has already approved a USD 1 million grant for developing a trauma center in Alang, along with advanced healthcare infrastructure for yard workers. The Beaching method itself is the indirect criterion for not accepting any yards in India, even though the EU never pointed it clearly out in its regulation or its audit reports. In order to deduce whether the beaching method itself be the indirect reason to neglect Indian yards, a technical assessment of the recycling process in India must be conducted, including the cost and quality of recycling at an EU- approved ship recycling facilities vs. at an Indian recycling yard. The most common response echoed in current times about the beaching method of ship recycling is that it is the most dangerous recycling method to the environment and yard workers. Moreover, low labour wages and poor environmental compliance costs are the reasons why South Asian yards offer higher prices on end-of-life ships and more than 90% of end-of-life vessels thus end up in these countries. Accordingly, we present the following assessment!

Quality Vs. Cost:

A typical 10,000 Light Displacement Tonnage (LDT) container vessel will have about 5% weight loss due to corrosion, loss during recycling, and wear and tear over the operational lifecycle of the vessel. In addition, nearly 0.5% non-ferrous, 4% machineries, and 0.5% reusables (such as furniture and fixtures) are recovered during the recycling process. The remaining 90% is ferrous. In the case of South Asian countries, nearly 75% of the remaining 90% of ferrous gets routed to re-rolling mills as steel plates, including direct use of steel plates to make flanges, girders, and pipes. 15% of the remaining 90% heads for melting, which includes irregular size scrap. In the case of Turkey and other EU recycling yards, most of the remaining 90% ferrous heads directly for melting and only a fraction of it is sent to the re-rolling mills.

Comparison of Labour and Hazardous Waste(s) Management Costs for EU Approved recycling yards (for example, in Turkey) and India when recycling a 10,000 LDT Container vessel is as follows:

The daily wages paid to laborers are prescribed by the respective recycling nation, considering its domestic socio- economic conditions. The prescribed wages in South Asian countries for unskilled labor are between US\$ 4 to US\$ 6 per day. In comparison, wages for unskilled Turkish laborers are about US\$ 16 to US\$ 17 per day. The difference of US\$ 12 per day equates to US\$ 36,000 per month (considering 100 workers per yard with paid leave). The recycling duration of such a vessel at a Turkish yard (which typically takes about 4 months to complete), adds up to US\$ 144,000 or an additional US\$ 15 per LDT cost on wages when compared to sub-continent recycling countries.

When evaluating the environmental cost, the removal and disposal of each ton of Asbestos is about US\$ 800 in Turkey. In contrast, it costs a mere US\$ 300 per ton in India, given that the Government of Gujarat owns the waste disposal facility. Presuming about 10 tons of Asbestos for a given vessel (higher value), it costs about US\$ 8,000 for disposal in Turkey. Disposal of paint chips generated during the recycling costs about US\$ 500 per ton in Turkey, whereas it is comparatively cheaper (US\$ 200 per ton in India).

In summary, it would be safe to presume about US\$ 150,000 as environmental / waste management costs in Turkey for all types of wastes identified in an Inventory of hazardous materials developed as per the IMO's Resolution MEPC.269(68) guidelines and adds an additional US\$ 15 per LDT for hazardous waste management if recycled in Turkey as compared to India.

It is to be noted that the higher cost of wages and hazardous waste management cannot be associated with a higher quality of work. For example, heavy metal contamination levels at the coast of Aliaga's ship recycling zone exceed the prescribed limits and is considered heavily polluted (Source: Heavy metals contamination levels at the coast of Aliaga ship recycling zone, Marine Pollution Bulletin 64(4):8827 published in March 2012). Including labor and hazardous waste management costs, Turkey should offer US\$ 30 – US\$ 35 per LDT less than the prices offered in India (or any South Asian recycling Country). However, the fact is that Turkey consistently offers US\$ 90 to US\$ 160 per LDT less than India (or any South Asian recycling Country) as the domestic value of steel generated from recycling is less when compared with South Asian countries. The EU-list of ship recycling yards even offers US\$ 200 – US\$ 300 less per LDT than the sub- continent.

All of the above factors should serve as an eye-opener for those who believe that ship recycling yards in South Asia offer higher prices due to the implementation of poor/inferior recycling practices aimed at cost-cutting. The significant improvements undertaken by the South Asian ship recycling facilities within the last few years must be acknowledged and appreciated by the global maritime community, rather than criticized and ignored because of the use of beaching as a method for docking/grounding/landing ships for recycling. The contribution of the ship recycling industry towards sustainability is immense. It also helps to decarbonize the atmosphere in the wake of issues such as global warming, depletion of the ozone layer and climate change.

In conclusion, irresponsible recycling is possible in all methods of recycling. However, associating such practices only to a particular geographical region or a specific recycling method is a fallacy. The landing method practiced in Turkey is, in fact, no different from the beaching method practiced in South Asian countries. What should truly matter is how a ship is recycled safely and environmentally soundly after beaching or landing. A bilateral agreement between India and the EU should take place at the earliest and yards in India should be included in EU-list of approved ship recycling yards. In any event, even without EU-flagged vessels, South Asian yards will survive, but effective implementation of EUSRR becomes questionable.

What do you think? Is EUSRR an inhibitor or catalyst for safe and environmentally ship recycling?

Source: GMS

Inséré 04/03/22 HISTORIEK HISTORIQUE Enlevé 04/04/22

Petite histoire du pavillon suisse de haute mer

Introduction

Durant les jours sombres de la seconde guerre mondiale, la Suisse fut contrainte de constituer, dans les pires circonstances, sa propre flotte de haute mer. Cette histoire est pratiquement inconnue du grand public. Il fallut alors, de toute urgence, légiférer sur la navigation de haute mer, condition indispensable pour créer une petite flotte. Ce ne fut qu'un épisode secondaire de la seconde guerre mondiale, à peine remarqué par la

population de notre pays enclavé. C'était le combat d'une petite nation pour survivre dans une période turbulente et tumultueuse, face à une catastrophe que le monde n'avait jamais connue. Ce récit est donc loin d'être exhaustif, mais il éclaire certains aspects d'une histoire complexe.

*** Tentatives précédentes**

Au XIXe siècle, notre gouvernement avait reçu de nombreuses propositions et requêtes exigeant de la Confédération qu'elle introduise officiellement le pavillon suisse de haute mer. Elles émanaient surtout de négociants ou de sociétés de commerce suisses qui avaient créé des filiales ou des entreprises dans des villes portuaires d'Europe ou d'outre-mer. Certaines avaient leurs propres navires battant pavillon de leur résidence à l'étranger. Quelques industriels et sociétés commerciales en Suisse avaient aussi des navires de haute mer arborant des pavillons étrangers

D'autres exigeaient d'acheminer les Suisses, de plus en plus nombreux, à vouloir partir pour l'Amérique du Nord, dans des navires sous pavillon suisse afin de leur épargner les affres du trajet sur les bateaux d'émigrants. Il y avait aussi un grand nombre de Suisses enrôlés sur des navires étrangers, certains ayant le grade d'officier, voire de capitaine.

Tous ces groupes justifient leurs demandes par le fait que la Suisse aurait, grâce à son pavillon, un meilleur contrôle sur ces navires – ce qui était vrai, dans une certaine mesure. Mais cela n'aurait été possible que si un droit maritime internationalement reconnu garantissait la sécurité des navires d'une nation dépourvue de façade maritime. Malheureusement, une législation de ce genre n'existait pas à l'époque et n'était d'ailleurs pas même prévue. Chaque pays doté d'une flotte avait ses propres lois maritimes et les utilisait à son avantage.

C'était certainement la principale raison pour laquelle le gouvernement suisse ne montrait guère d'intérêt à légiférer. Il exigea cependant que divers ambassades et consulats situés dans des pays dotés d'une flotte lui fournissent un rapport sur la possibilité d'enregistrer et faire circuler des navires sous pavillon suisse. Une demande similaire fut adressée aux ministres des affaires étrangères de 17 nations maritimes. Les rapports des ambassades et des consulats étaient surtout sceptiques. Notre consul au Havre s'exprima en termes très explicites, trouvant cette idée ridicule. Les ministres de la plupart des pays s'abstinrent, attendant la réaction de la France, pour vraisemblablement s'aligner dessus. Finalement, Berne abandonna lui-même cette idée.

*** La première guerre mondiale**

Durant la première guerre mondiale, la Suisse était entourée de pays belligérants et donc isolée. Notre pays, privé de matières premières notables, était tributaire de ses importations. Les livraisons en provenance d'Europe centrale étaient interrompues par le blocus des alliés et par la guerre dans les Balkans. La nécessité d'importer des marchandises d'outre-mer s'imposait, mais les tonnages se réduisaient à cause des attaques sous-marines, faisant grimper les taux d'affrètement et les prix des marchandises importées.

Le gouvernement suisse et quelques entrepreneurs privés essayèrent d'affréter des capacités et d'acquérir des navires sous pavillon neutre. La flotte marchande mondiale était en grande partie sous le contrôle d'Interallied Chartering Executive à Londres. Après des négociations longues et difficiles, on proposa à la Suisse un contrat pour utiliser 12 navires, affichant en moyenne les 5000 tjb. Mais cette offre était, d'emblée, largement théorique, car en automne 1917, la Suisse ne disposait plus que de 30 000 tjb et encore : certains navires lui étaient retirés au dernier moment pour être affectés à des transports militaires !

En mars 1917, le gouvernement suisse créa un office central, appelé FERO, pour régler les problèmes d'import/export. La principale tâche du FERO consistait à organiser le transport

et l'importation de denrées alimentaires et d'autres biens vitaux pour le pays. Le FERO a pu passer un contrat de livraison des céréales avec le bureau US War Transport Office. Ces céréales furent acheminées vers des ports européens neutres grâce à des navires américains, parfois même des voiliers. Ces navires devaient hisser sur leur mât avant un drapeau suisse tendu et sur leur coque, on avait peint en grosses lettres le mot SUISSE. On espérait naïvement éviter par là une attaque de sous-marins allemands. Un peu plus tard, lorsque les Etats-Unis entrèrent en guerre, ce contrat était devenu caduc.

La situation devint alors des plus critiques et diverses délégations suisses à Londres et à Paris essayèrent désespérément d'obtenir des tonnages maritimes. Ces négociations n'aboutirent malheureusement pas, on expliqua aux Suisses qu'ils devaient se débrouiller seuls. Il y eut d'autres tentatives comme de fonder une société d'armement néerlandois-suisse qui utiliserait les navires hollandais échoués dans les ports américains. Mais ce plan ne peut pas non plus être mis en œuvre car une fois entrés en guerre, les Etats-Unis confisquèrent ces navires en vertu des Angary Rules.

Déjà que la Suisse manquait de biens vitaux, ces échecs en matière de capacités maritimes lui assenèrent le coup de grâce : le pays était en état d'alerte, paniqué par sa propre vulnérabilité. Tout effort pour améliorer la situation, quels que soient les dangers encourus, semblait justifié. Et c'est aussi pour cette raison qu'on échafauda un projet nommé Société suisse des transports maritimes. Une flotte de 28 navires - dont certains n'étaient pas même construits - devait être affrétée par une société d'armement belge. Les frais auraient été partagés entre le gouvernement suisse et quelques entreprises privées. Après de longs atermoiements, un tiers environ de la flotte fut mis en service au printemps 1919 et le reste fin 1919. Mais comme la guerre se termina en novembre 1918, il y eut un excédent de capacités maritimes. Les taux d'affrètement qui avaient précédemment grimpé en flèche connurent une chute tout aussi spectaculaire. L'entreprise helvético-belge s'effondra elle aussi et fut liquidée en 1921.

*** L'entre deux guerres**

Les expériences de la 1ère guerre mondiale avaient clairement montré qu'il fallait à la Suisse une petite flotte marchande sous son propre pavillon. Toutefois notre pays suivit l'opinion dominante à l'Ouest, selon laquelle commençait enfin une ère nouvelle, celle de la paix éternelle. La Suisse réduisit alors son armée à un strict minimum. Ainsi on abandonna pour toujours, semble-t-il, l'idée d'une flotte de haute mer suisse. C'était compréhensible, même si cela s'avéra naïf et à courte vue. En mars 1933, la NSDAP accéda au pouvoir en Allemagne; le programme d'armement massif et la politique étrangère agressive d'Hitler entraînèrent de gros remous en Europe. Pour les observateurs critiques et avisés, il était déjà clair que la guerre n'allait pas tarder à éclater. Le gouvernement suisse était décidé à ne pas répéter les erreurs commises pendant la 1ère guerre et il dressa en cachette des plans pour trouver les moyens de survivre à une nouvelle guerre.

Il mena des discussions avec les gouvernements des pays voisins pour qu'ils permettent aux navires acheminant des biens vers la Suisse d'utiliser leurs ports. Après de longues et difficiles tractations, notre pays obtint certains résultats probants. D'autres discussions concernaient les problèmes de transport terrestre entre ces ports et la Suisse. En temps de paix, une grande partie des importations, notamment les marchandises en vrac, étaient acheminées par navires fluviaux, partant d'Anvers, Rotterdam et Amsterdam pour remonter le Rhin jusqu'à Bâle. En outre, l'Allemagne nous fournissait en matières premières (engrais, carburants liquides, charbon, etc.). Et ces marchandises étaient elles aussi acheminées principalement par navires, sur le Rhin. Il était fort improbable que la navigation rhénane jusqu'à Bâle puisse être autorisée en temps de guerre aussi. Et effectivement, dès le début des hostilités, les Allemands fermèrent le Rhin à la navigation marchande.

*** La seconde guerre mondiale**

Alors le 1er avril 1939, le gouvernement ordonna à Berne le stockage de céréales. Lorsque l'Allemagne envahit la Pologne, le 1er septembre, avec l'aval de l'Union soviétique, on mit en œuvre certains plans préparés. Outre la mobilisation générale, une autorité spéciale, chargée de l'économie de guerre, commença ses activités le 4 septembre. Une de ses subdivisions était l'OGT soit l'Office de guerre pour les transports (sic).

Comme nous l'avons déjà signalé, la Suisse n'a pas de matières premières, elle ne dispose que de l'énergie hydraulique pour fabriquer de l'électricité. Elle doit donc importer tous les biens requis pour faire tourner son économie et son industrie. Le pays, avec ses 4 millions d'habitants, était densément peuplé pour l'époque et ne pouvait pas nourrir sa population. F.T. Wahlen, professeur d'agriculture à l'EPFZ, fut chargé par le Conseil fédéral de trouver des solutions au problème alimentaire. Il montra que l'on pouvait nourrir bien plus de personnes si elles mangeaient directement des produits céréaliers (comme le pain), au lieu de donner ces céréales au bétail ou à la volaille qui fourniraient ensuite de la viande à la population. Les conséquences étaient limpides et la Suisse se lança vite dans la bataille des champs. Le cheptel se réduisit de façon drastique et chaque lopin de terre devait être planté de céréales, pommes de terre et légumes.

Simultanément on introduisit un rationnement strict, pas seulement pour les aliments mais pour d'autres biens comme le cuir, les textiles, les métaux, les combustibles liquides de tout genre, le charbon, les engrais, etc. Comme on ne trouvait plus de cuivre, on fabriquait les conducteurs électriques en aluminium qui s'avérait cassant, difficile à souder et en outre cher. Les automobiles privées devinrent très rares, la plupart avait été réquisitionnées par l'armée qui manquait cruellement de moyens de transport. Les particuliers n'obtenaient pratiquement pas d'essence et les véhicules de livraison et les bus fonctionnaient au carbure ou avaient des carburateurs à bois. Le rationnement alimentaire s'appliquait aussi aux œufs et à la fin, on ne recevait qu'un œuf par personne et par mois. Le pain contenait près de 50 % de fécule de pommes de terre et ne devait être vendu que deux jours après cuisson. En 1944, les rations furent réduites au strict minimum, soit nettement moins de 2000 calories par jour, mais personne ne se plaignait. Le rationnement a duré même après la guerre : il ne fut supprimé que le 1er juillet 1948.

Toutes ces mesures ne suffisaient pas pour s'approvisionner. Le gouvernement suisse avait vite réalisé qu'il lui fallait une petite flotte de navires marchands pour transporter des aliments et des matières premières d'outre-mer vers la Suisse. Seuls les navires arborant le pavillon de « nations neutres en permanence » entraient toutefois en ligne de compte. Le 15 septembre 1939, le gouvernement put signer à Londres un contrat d'affrètement à temps avec la société d'armement grecque Rethymnis & Kulukundis Ltd. Cela signifiait que la Suisse disposerait, à compter du printemps 1940, de 15 navires sous pavillon grec jusqu'à la fin de la guerre.

Du 1er septembre 1939 à mai 1940, les relations entre la Suisse et le troisième Reich étaient étonnamment calmes. Cela permit à notre pays d'accroître ses importations et de constituer des stocks de nombreux biens requis. L'industrie d'armement suisse faisait des heures supplémentaires pour honorer les commandes des alliés, car elle pouvait encore faire acheminer les armes par la France. L'Allemagne ne passant pas de commande d'armes, le reste était pour l'armée suisse. Au début de la guerre, notre armée était mal équipée, ses armes provenant de la première guerre voire du siècle précédent. De nos jours, il semble paradoxal que nos importations d'acier, de charbon et autre en provenance d'Allemagne permettaient alors d'honorer les commandes des alliés.

Une fois que l'Allemagne eut envahi les Pays-Bas, la Belgique, le Luxembourg et la France en mai 1940, la Suisse s'est retrouvée totalement encerclée par les puissances de l'Axe. La position de l'Allemagne changea immédiatement et les dépêches de Berlin à Berne furent de plus en plus glaciales, voire menaçantes. La mission commerciale suisse à Berlin fut confrontée à des exigences dures et irréalistes. Berlin savait pertinemment que la Suisse ne pouvait s'approvisionner en matières premières vitales qu'à une seule source, l'Allemagne. Comme semonce, le troisième Reich stoppa toutes ses livraisons de charbon à la Suisse et exigea qu'elle lui remette le matériel de guerre commandé par les alliés.

Werner Rings, historien suisse (1910 - 1998) écrivit « Le troisième Reich était capable d'étrangler la Suisse sans tirer la moindre cartouche » (sic). Les négociations pour obtenir les diverses autorisations de transit requises pour les navires ainsi que les autorisations pour importer des marchandises d'Allemagne devinrent de jour en jour plus difficiles. Il fallut faire des concessions dont l'une était le black-out du pays pour compliquer la navigation des avions alliés.

Il était inévitable que les quelques pays neutres d'Europe s'attirent la méfiance et la suspicion des deux camps pendant le conflit. Les alliés comme les Allemands reprochaient constamment aux Suisses d'appuyer leurs ennemis. C'était un cas classique où l'on se retrouvait « entre le marteau et l'enclume ». Toutefois, certains alliés se montrèrent moins sévères, comme Churchill dans ses mémoires.

Lorsqu'en juin 1940, l'Italie déclara la guerre à la France et à l'Angleterre, l'accès des navires suisses à la Méditerranée fut coupé. La Grèce exigea de la Suisse qu'elle lui rende les navires affrétés. Finalement, elle accepta de lui en laisser 10. L'Angleterre arrêta cependant dans des ports à l'ouest de Gibraltar tous les navires, quel que soit leur pavillon, transportant des marchandises pour la Suisse. Au bout de sept mois, elle les autorisa à décharger leur cargaison dans des ports ibériques (surtout à Lisbonne). Les pertes financières pour la Suisse et les armateurs impliqués avoisinèrent les millions. Au début, la cargaison fut acheminée vers Gênes ou Marseille par de petits caboteurs portugais. Plus tard, on organisa des transports par voie terrestre, avec des centaines de wagons espagnols et suisses, mais aussi des convois de camions. Comme l'écartement des voies ferrées espagnoles est supérieur à celui des autres pays d'Europe occidentale, il fallait transborder les marchandises à la frontière ibéro-française. L'Italie, qui occupait l'Albanie depuis le 7 avril 1939, envahit la Grèce le 28 octobre 1940. De ce fait, les ports italiens furent définitivement fermés aux navires sous pavillon grec. Comme la guerre sous-marine s'était accrue dans l'Atlantique Nord, il y avait une pénurie de tonnages maritimes. Ainsi, il devint de plus en plus dur d'importer en Suisse des aliments et d'autres biens vitaux.

*** Un nouveau drapeau sur les mers**

En été 1940, la Compagnie suisse de navigation SA avait déjà acheté deux cargos, CALANDA et MALOJA arborant le pavillon panaméen. La maison André & Co. à Lausanne (ou plutôt sa filiale Suisse Atlantique SA), important négociant en céréales, acheta le vapeur ST. CERGUE, lui aussi enregistré au Panama. Ces deux sociétés demandèrent au gouvernement fédéral de les enregistrer sous pavillon suisse, ce qui leur fut refusé. L'argument avancé était qu'il n'y avait pas de nécessité immédiate et que les coûts administratifs et financiers auraient été disproportionnés pour une si petite flotte. Du reste, il n'existait toujours pas, à l'époque, de législation relative à la navigation maritime.

Les menaces militaires et les évolutions politiques en Europe entraînaient toutefois un revirement de pensée. En janvier 1941, le Conseil fédéral chargea Robert Haab, un professeur bâlois, de mettre au point un projet de loi maritime. Monsieur Haab étudiait depuis 1922 la législation maritime de divers pays importants et était considéré comme un expert en la matière. Grâce à son savoir et son expérience, il réussit à rédiger une ordonnance en 30 jours environ. L'arrêté du Conseil fédéral sur la navigation maritime sous pavillon suisse fut approuvé et mis en vigueur le 9 avril 1941.

Il ne restait plus qu'un problème à régler : très peu de navires étaient à vendre sur le marché. Le plus souvent, ils étaient vieux au point de n'être parfois que des épaves flottantes. Et pourtant, ils étaient horriblement chers, coûtant 10 à 20 fois plus qu'avant la guerre. La Suisse n'avait toutefois pas d'autre choix que d'acheter les « meilleurs » pour les réparer, les rééquiper et les remettre en état de naviguer. Les coûts impliqués étaient énormes, mais ils étaient justifiés par l'urgence.

Au début 1941, les navires grecs affrétés par la Suisse furent confisqués par la Grande-Bretagne sous prétexte que notre pays pourrait obtenir plus tard des tonnages sur les

navires de lignes réguliers. On lui suggéra aussi de réduire son style de vie et d'adapter son économie au niveau de celle des belligérants. Finalement, Londres accepta de laisser à la Suisse dix navires grecs à condition qu'ils ne passent pas le détroit de Gibraltar et n'accèdent pas à la Méditerranée. Apparemment, cette règle s'appliquait à tous les navires neutres en mains privées. De ce fait, Conseil fédéral décida de devenir lui-même armateur via l'Office de guerre pour les transports (OGT). L'OGT put acheter quatre navires, soit un total de 27 230 tonnes tpl, et les enregistra sous pavillon suisse pour les exploiter. Ces navires furent aussi utilisés pour acheminer des paquets de la Croix rouge britannique et américaine ainsi que du courrier pour les prisonniers de guerre. Comme les volumes transportés pour la Croix rouge n'arrêtaient pas d'augmenter, il restait de moins de moins de place pour la cargaison initialement prévue pour ces navires. Dès lors, le Comité international de la croix rouge (CICR) à Genève décida d'acheter ses propres bateaux. Via une fondation du CICR créée tout spécialement à Bâle, trois navires furent achetés, enregistrés sous pavillon suisse et exploités par la Compagnie suisse de navigation SA. L'histoire complexe des navires de l'OGT et du CICR ne peut être racontée ici, par manque de place. Disons simplement qu'une fois la guerre terminée, l'OGT vendit ses navires à des armateurs suisses privés et que le CICR rendit les siens aux sociétés d'armement qui les détenaient auparavant.

Liste des navires achetés par la Suisse pendant la guerre et exploités sous pavillon suisse :

n° de registre	nom du navire / armateur, opérateur	année de construction	tpl / vendu ou perdu (coulé)	année d'achat / de vente ou perte

1	s/s CALANDA Compagnie suisse de navigation, Bâle	1913	7400 vendu	24.4.1941 12.11. 1946
2	s/s MALOJA Compagnie suisse de navigation, Bâle	1906	<u>2750</u> <u>perte</u> <u>totale</u>	24.4.1941 19.4.1944
3	s/s ST. GOTTHARD OGT, Berne / Nautilus AG, Glarus	1911	8339 vendu	6.5.1941 29.7.1954
4	s/s GENEROSO Maritime Suisse SA, Bâle	1896	<u>2150</u> <u>perte</u> <u>totale</u>	29.5.1941 29.3.1946
5	s/s ST. CERGUE Suisse Atlantique SA, Lausanne	1937	7600 vendu	10.7.1941 17.3.1952
6	s/s CHASSERAL OGT, Berne / Nautilus SA, Glarus	1897	4064 vendu	17.7.1941 8.10.1951
7	m/s SAENTIS OGT, Berne / Nautilus SA, Glarus	1915	6690 vendu	12.12.1941 30.9.1963
8	s/s EIGER , après CRISTALLINA OGT, Berne, Cie suisse de navig., Bâle	1929	8137 vendu	30.12.1941 7.1.1949
9	s/s ALBULA Compagnie suisse de navigation, Bâle	1910	2030 vendu	26.2.1942 18.12.1945
10	s/s LUGANO Nautilus SA, Glarus	1898	9200 vendu	29.4.1942 13.4.1948
11	s/s CARITAS I Fondation CICR, Bâle*	1903	3950 rendu**	5.5.1942 2.6.1945

12	s/s <u>ZUERICH</u> Maritime Suisse SA, Bâle	1893	<u>2800</u> <u>perte</u> <u>totale</u>	30.3.1943 16.12.1946
13	s/s <u>CARITAS II</u> Fondation CICR, Bâle*	1929	3950 rendu**	17.3.1944 2.6.1945
14	s/s <u>HENRY DUNANT</u> Fondation CICR, Bâle*	1910	8500 rendu**	28.9.1944 24.10.1945

* fondation du Comité international de la croix rouge, Bâle

** navires rendus à leur précédent propriétaire

Selon le droit international, chaque navire doit avoir un port d'attache ou d'enregistrement dans le pays dont il arbore le pavillon. Ainsi Bâle devint le port d'origine de tous les navires suisses et le siège de l'Office suisse de la navigation maritime et du registre suisse des navires de haute mer. La loi suisse sur la navigation définit des règles claires pour inscrire un bateau dans le registre des navires de haute mer : le propriétaire, l'exploitant et le personnel habitant en Suisse doivent être de nationalité suisse ; tous les actionnaires doivent être suisses et au moins $\frac{3}{4}$ des actions et du capital doivent appartenir à des citoyens suisses vivant en Suisse.

LISTE DE NAVIRES AFFRÉTÉ

* Le problème de l'équipage

Il y avait un problème évident, l'équipage des navires pendant la guerre. Théoriquement, on ne pouvait embaucher que des ressortissants de pays neutres. A bord des navires, on comptait un grand nombre de Portugais, mais aussi des Belges, Danois, Hollandais, Estoniens, Grecs, Norvégiens, Pologne, Espagnols, Suédois, Suisses et des Russes blancs. Ces derniers constituaient un problème spécial car ils s'étaient réfugiés en France bien avant l'occupation allemande. Ils étaient apatrides et n'avaient pour la plupart que des passeports Nansen, voire aucuns papiers. C'est pour cette raison qu'on leur interdisait le plus souvent de descendre à terre lorsque les navires faisaient escale.

Les Suisses pouvaient trouver divers emplois sur ces navires, certains étaient officiers du pont, officiers-mécaniciens, d'autres matelots, stewards, cuisiniers, chauffeurs ou graisseurs. Toutefois à cette époque, il n'y avait qu'un seul capitaine suisse. Il s'agissait de Fritz Gerber, né en 1895, qui s'était enrôlé à 18 ans sur un voilier à Brême. Il navigua pendant 10 ans sur des grands voiliers, suivant la route traditionnelle entre l'Europe et l'Australie qui passe par le cap de Bonne Espérance et le cap Horn. Ensuite, il fut pendant 11 ans capitaine chez Lloyd d'Allemagne septentrionale (Brême), sur des lignes allant vers l'Extrême Orient et la Sibérie. Les 5 dernières années, Gerber avait été capitaine d'un baleinier allemand dans l'Antarctique. Lorsque la 2de guerre mondiale éclata, il fut d'abord capitaine sur le vapeur ST. CERGUE, puis l'EIGER, qui fut ensuite rebaptisé CRISTALLINA. En 1948, Gerber reprit l'ASCONA, navigant sous le pavillon d'Honduras puis en 1952, il prit le commandement du GENERAL DUFOR. Malheureusement, la même année, il mourut d'un infarctus dans le port de Taltal au Chili.

Les seuls spécialistes à recevoir une formation complète en Suisse furent les opérateurs radio. Le poste d'opérateur radio à bord d'un navire était considéré comme très important et on entreprit tous les efforts imaginables pour placer des opérateurs radio suisses sur nos navires. Leur formation était assurée par Radio Suisse SA à Berne, l'ancêtre de

Swisscom. Une « station radio côtière » suisse, avec l'indicatif d'appel HBZ, fut installée à l'aéroport militaire à Dübendorf, près de Zurich. En 1949, cette station fut transférée au nouvel aéroport civil de Zurich-Kloten avec l'indicatif HEZ. En 1963, la station côtière fut encore déplacée, sur Berne, avec l'indicatif HEB. Cette station était aussi équipée d'une radio à ondes courtes pour les avions (LDOC = Long Distance Operational Control).

*** L'exploitation des navires**

Ce qui posait des problèmes, ce n'était pas seulement l'équipage, mais aussi les réparations et l'approvisionnement en vivres, pièces de rechange et matériaux consommables. Il était difficile, sinon impossible, d'exploiter des navires en période de guerre. Les deux camps organisaient des blocus maritimes. Outre les documents usuels des navires, chaque bâtiment sous pavillon suisse devait avoir une énorme quantité d'autorisations, documents et certificats (Ship Warrants, Navicerts, etc.), émis pour un voyage. Et chaque trajet devait être précisément déclaré aux alliés et aux autorités allemandes.

Les navires portaient sur sa coque, des deux côtés, le mot SWITZERLAND en grandes lettres blanches, bien éclairées de nuit. Le drapeau suisse était peint sur la superstructure partout où c'était possible. Les alliés et les Allemands avaient établi divers points de contrôle pour arrêter et contrôler les navires. Beaucoup de règles et consignes restrictives étaient en vigueur. Les membres de l'équipage n'avaient pas le droit d'avoir des carnets de notes, journaux intimes, croquis, aliments, cigarettes, appareils photo, etc. Si ces articles étaient découverts, ils étaient confisqués.

Une histoire illustre bien ces contrôles, celle de Jakob Wismer et Ernst Wyler, deux opérateurs radio qui partirent de Bâle en janvier 1944 pour être enrôlés à Lisbonne. Ils durent prendre un train de la Wehrmacht, seuls civils parmi des centaines d'officiers et soldats allemands. Jusqu'à la frontière franco-espagnole, ils durent rester assis dans un compartiment à éclairage camouflé alors que le trajet jusqu'à Irun durait 65 heures à l'époque. Ernst Wyler avait trois manuels avec quelques notes manuscrites sur les appareils radio maritimes. Pour les prendre avec lui, il avait dû demander une autorisation à l'ambassade allemande mentionnant : « contenu vérifié : objet anodin mais utile, peut être emporté personnellement jusqu'au Portugal le 3 janvier 1944. Vu l'urgence du voyage, plus possible de l'expédier par la poste », signé « Berne, le 31 décembre 1943, la légation allemande ».

*** Pertes de navires**

La guerre maritime ne pouvait épargner les navires opérant pour la Suisse. Malgré le petit nombre de cargos, toutes les mesures de précautions et les marquages, les navires furent attaqués par voie maritime ou aérienne. Et ils n'étaient jamais à l'abri d'une mine.

Le vapeur grec MOUNT LYCABETTUS, affrété par la Suisse, quitta Baltimore le 11 mars 1942 en direction de Leixoes au Portugal, où il n'arriva jamais. Ce navire disparut avec son équipage sans laisser de trace et toutes les recherches restèrent vaines. On suppose qu'un U-373 coula le vapeur le 17 mars 1942.

Un autre navire grec, l'HADIOTIS, s'échoua le 15 février 1941 près de Leixoes, au Portugal. L'épave fut rachetée par l'OGT, renflouée et réparée. Ce navire fut mis en service en automne 1942, sous le nom d'EIGER et sous pavillon suisse.

Le MALOJA fut coulé – officiellement par mégarde – le 7 septembre 1943, par des avions anglais près de la Corse. Trois marins périrent.

Le CHASSERAL fut attaqué en Méditerranée par des avions anglais. Un marin fut tué, quatre autres gravement blessés. Le vapeur, fortement endommagé, fut remorqué jusqu'à Sète pour y être réparé.

Le vapeur ALBULA mouilla à Marseille le 21 juillet 1944, peu avant la libération de la ville par les troupes alliées. Le navire devait embarquer des marchandises bloquées à Marseille pour les transporter dans un port sûr, comme Barcelone. En outre, on devait effectuer de grosses réparations. Dans la nuit du 20 au 21 août 1944, les troupes allemandes qui se retiraient firent exploser le mur du quai, ce qui endommagea fortement le vapeur qui coula. En outre, une grande grue portuaire tomba sur l'ALBULA, aggravant les dégâts. L'équipage avait été évacué avant les explosions dans une école située à 4 kilomètres. En février 1945, l'épave fut remontée et remorquée jusqu'à Lisbonne pour y être vendue.

Le 14 septembre 1944, des unités de la marine française et américaine étaient en train de draguer des mines dans le port de Marseille. On avait alors avisé le capitaine Gouretzky de déplacer son vapeur, le GENEROSO, de quelques centaines de mètres dans le bassin portuaire pour le mettre en lieu sûr. Pendant la manœuvre, le navire passa sur une mine. L'explosion, très forte, eut lieu au milieu du navire si bien que le capitaine et le radio Christian Schaaf, qui étaient sur le pont, furent projetés dans l'eau. Le capitaine fut tué et le radio, grièvement blessé, en réchappa. Le navire sombra, en perte totale.

Parmi les aspects positifs, on peut noter que les navires suisses ont pu sauver des survivants de bateaux torpillés et coulés. Pendant la guerre, le ST. CERGUE a ainsi, sous la direction avisée du capitaine Gerber, sauvé la vie de plusieurs centaines de personnes.

Un épisode typique se déroula en juin 1942, alors que le ST. CERGUE – parti de New York pour Gênes – put sauver 214 survivants du vapeur hollandais JAGERSFONTAIN, coulé à l'Ouest de l'Atlantique nord. Parmi les rescapés se trouvaient des officiers des forces armées américaines et le capitaine Gerber avait peur qu'ils ne soient découverts si l'équipage d'un sous-marin allemand devait fouiller le navire. Il leur ordonna donc de jeter par dessus bord leurs casques en acier trop voyants et de rester tout le temps sous le pont. Une heure et demie plus tard, le ST. CERGUE était stoppé par un sous-marin allemand, qui avait fait le tour du vapeur puis s'était présenté parallèlement à la coque. Le commandant allemand demanda si tout allait bien et pourquoi le navire avait dévié de son cap. Le capitaine Gerber put dissimuler son inquiétude et répondit calmement que son navire avait rencontré des courants transversaux inattendus. Satisfait de cette explication, le commandant allemand n'insista pas pour fouiller le navire et l'autorisa à poursuivre sa route.

*** Après-guerre, période transitoire**

Bien avant la fin de la 2e guerre mondiale, les milieux intéressés discutèrent avec ardeur en Suisse pour savoir si le pays devait avoir ou non sa propre flotte de haute mer en temps de paix. Dès 1943, l'association des transitaires suisses refusa violemment car elle craignait de perdre alors des taux de fret fixés à long terme et avantageux. L'association des armateurs suisses était, à l'opposé, convaincue qu'elle devait poursuivre ses activités après guerre. Le gouvernement fédéral appuyait l'opinion des armateurs, vu que l'avenir politique et militaire de l'Europe semblait des plus incertains.

Comme on pouvait s'y attendre, l'armistice du 8 mai 1945 n'apporta aucune amélioration immédiate des conditions de navigation en haute mer. Lisbonne et les ports français de Méditerranée restèrent les principaux lieux de transbordement pour les marchandises destinées à la Suisse. En automne 1945, les ports d'Anvers, Savone et Gênes, dûment déblayés et déminés, reprirent leurs activités. En août 1945, les alliés avaient créé un pool de navigation maritime, nommé United Maritime Authority (UMA). Il visait surtout à rapatrier en bon ordre le personnel et le matériel militaire stationnés en Europe. A cette époque, l'intérêt principal des alliés, notamment des Américains, s'était déplacé vers le Pacifique, afin de mettre fin au plus vite aux hostilités. Les navires de l'UMA étaient donc en ballast à leur retour vers l'Europe. Ces tonnages disponibles furent proposés aux gouvernements européens à des prix avantageux. On attribua dix navires à la Suisse pour qu'elle couvre ses besoins les plus urgents. Ainsi charbon, coton, bauxite, aluminium, soufre, acier, cuivre, céréales, sucre et autres furent acheminés vers Gênes, Savone et Anvers.

Les navires de l'UMA comblèrent largement le manque de tonnages qui avait marqué en permanence l'époque de la guerre. Toutefois, dans le chaos de l'après-guerre, le plus dur était d'acheminer la cargaison entre les ports maritimes et la Suisse. Non seulement les ports ne fonctionnaient pas à plein régime, mais la plupart des liaisons ferroviaires et routières en Europe étaient soit détruites, soit fortement endommagées et donc le plus souvent inutilisables. En outre, les moyens de transport manquaient cruellement. Heureusement, la navigation fut rouverte sur le Rhin en février 1946 et on pouvait éviter les mauvaises routes et voies ferrées défectueuses. En transbordant directement les marchandises des navires maritimes sur les navires fluviaux dans les ports de Rotterdam et d'Anvers, par exemple, on réduisit aussi la pression sur les installations portuaires.

En mars 1946, l'UMA fut dissoute. Lentement, la situation se normalisait dans les transports maritimes. La Suisse pouvait enfin liquider les dépôts de carburants qu'elle avait constitués dans les ports de Lisbonne, Las Palmas et Funchal. Entre février et avril, l'OGT vendit aussi ses quatre navires à des armateurs suisses (cf. tableau p. 6). Les affrètements à temps des navires grecs furent peu à peu résiliés et ces navires retournèrent à leurs propriétaires.

*** Evolution et consolidation**

Le gouvernement fédéral et les armateurs convinrent que deux tâches étaient prioritaires : premièrement, il fallait moderniser la flotte et deuxièmement, il fallait augmenter les tonnages. Presque tous les navires achetés pendant la guerre étaient vieux, lents, petits et peu efficaces, donc chers à exploiter. Leur consommation de carburant était très élevée et totalement disproportionnée vu leur allure. De plus, ils n'étaient pas fiables, tombant souvent en panne, ce qui entraînait des pertes de temps, des coûts supplémentaires et parfois des situations dangereuses.

Lorsqu'en juin 1950, la guerre éclata en Corée, les taux d'affrètement pour le vrac grimpèrent de 100 % voire plus. Si la guerre devait se propager, la Suisse ne pourrait à nouveau compter que sur sa propre flotte pour transporter des matières premières. Toutefois, cette flotte était trop petite vu qu'elle ne comptait que dix vieux navires pouvant transporter 70 000 tonnes environ. L'association des armateurs suisses élaborait un plan pour accroître de 60 000 tonnes ces capacités de chargement. Le gouvernement fédéral décida de créer une subvention unique, sous forme de crédits avantageux sur le long terme. Ces crédits couvraient près de 75 % des frais de construction ou du prix d'achat des navires, mais les conditions étaient très strictes. On ne pouvait pas revendre ces navires pendant dix ans, sauf autorisation étatique. Le type de navires à acheter était clairement défini : ils devaient être de conception moderne, faire au moins 12 nœuds et être maintenus dans un état impeccable tant qu'ils naviguaient sous pavillon suisse. En deux étapes, on put construire et acheter 12 navires pour 78,2 millions de francs suisses. Leur capacité de chargement avoisinait les 100 000 tonnes. D'autres navires furent achetés ou commandés avec des fonds privés. Au 31 décembre 1952, la flotte sous pavillon suisse comptait 36 unités, d'une capacité totale de 207 291 tonnes et de 13 ans en moyenne.

Il fallut naturellement redéfinir le rôle d'une flotte marchande moderne en temps de paix. Le gouvernement fédéral considérait toujours que les cargos constituaient une sorte d'assurance, au cas où un conflit armé devait éclater. Mais on ne pouvait aucunement prévoir quand et où un événement de ce genre aurait lieu, ce qui compliquait tous les plans détaillés. D'une part, on visait à conserver une flotte avec un minimum de capacité dont on disposerait à tout moment pour approvisionner le pays. D'autre part, on voulait pouvoir compter sur du personnel de bord suisse en cas de guerre. On lista tous les marins suisses qui avaient acquis une expérience suffisante. Cette liste était tenue par l'Office suisse de la navigation maritime, avec l'aval des autorités militaires. En cas de mobilisation, toutes les personnes inscrites sur cette liste auraient été exemptées du service militaire pour être mutées sur nos navires.

Comme la situation s'était normalisée et que le commerce mondial avait bien repris à la fin des années quarante, les navires suisses n'étaient plus tenus de garantir

l'approvisionnement du pays. Nos armateurs durent faire évoluer leurs navires sur le marché libre. Dans un cas, deux vraquiers furent affectés, quelques années à un service pour ainsi dire de navette entre l'Australie et le Japon. D'autres navires furent confiés, via des affrètements à long terme, à de grandes compagnies d'armement en Europe et dans les pays d'Outre-mer, par exemple Hapag-Lloyd en Allemagne ou Saguenay Terminals (ALCAN) au Canada. Keller Shipping, à Bâle, créa ses propres services de ligne entre l'Europe, l'Afrique de l'Ouest et les ports de Méditerranée. Cette société représente aussi Lloyds of London en Suisse. Le BASILEA de la Compagnie suisse de navigation SA navigua sous un contrat à long terme, pour Rickmers à Brême, intégrant son service de ligne entre l'Europe et la Chine.

A cette époque, les conditions du commerce mondial étaient favorables et toutes les nations traditionnellement maritimes pouvaient développer et étoffer leur flotte. Les exploitants de la flotte suisse s'efforcèrent, eux aussi, de le faire, mais ils visaient surtout à augmenter les tonnages (plus gros navires). Le nombre d'unités oscilla légèrement, mais les tonnages augmentèrent régulièrement. Le 31 décembre 1974, la flotte suisse comptait 26 navires d'une capacité totale de 308 425 tonnes. En avril 1986, on comptait 34 navires qui totalisaient les 580 965 tonnes et avaient 9,5 ans en moyenne et le 12 février 1998, il n'y avait plus que 20 unités dans les statistiques officielles, mais les tonnages avaient grimpé à 769 745 tonnes. L'âge moyen des navires était de 10 ans.

En 1965, les Suisses à bord des navires marchands suisses constituaient 62 % de l'équipage, un record. En 1997, on comptait 393 personnes à bord de 19 navires, mais 11,7 % seulement avaient la nationalité suisse et six d'entre elles étaient capitaines. Le reste de l'équipage provenait des pays suivants : Allemagne (1 capitaine), Chili, Indonésie, Italie, Yougoslavie, Bosnie, Croatie, Philippines, Pologne, Slovaquie, Slovénie, Espagne et Ukraine. Après l'enregistrement du vraquier VINDONISSA de 45 527 tonnes tjb en février 1998, ces chiffres changèrent légèrement.

Fait étonnant, le Lloyd's Maritime Directory recensait, en 1997, 27 compagnies d'armement enregistrées en Suisse. Elles possédaient ou exploitaient au total 277 (actuellement 278) navires de haute mer. A part les 20 sous pavillon suisse, ces navires étaient majoritairement enregistrés sous pavillon bon marché.

*** Dernières remarques**

La détérioration longue mais constante des conditions de la navigation internationale ces dernières décennies a touché aussi la petite flotte suisse de haute mer. Certains armateurs ont abandonné leurs activités, d'autres ont mis leurs navires sous pavillon bon marché et ont donc cessé d'exister officiellement en Suisse. La victime la plus connue de ce développement fut la Compagnie suisse de navigation, autrefois en tête. Cette entreprise existe encore mais elle concentre ses activités sur la navigation rhénane, traditionnelle, mais modernisée.

Lorsque Noel Mostert publia en 1974 son livre Supership, le lecteur avait l'impression que la situation ne pouvait guère empirer. Mais il y eut peu d'évolution, la situation étant aujourd'hui parfois pire qu'en 1974. Bien sûr, il y a toujours eu des armateurs qui s'efforçaient d'avoir les plus hauts standards de qualité et de sécurité, des sociétés suisses étant encore dans cette catégorie. Il est difficile de dire de quoi sera fait l'avenir de la flotte suisse, on ne peut qu'espérer qu'elle ne va pas totalement disparaître.

H.

Walser

Cet article a été publié en anglais dans le SHIP'S MONTHLY d'avril 1999.

De la fondation Swiss-Ships, nous aimerions ajouter la remarque suivante :

Le GENEROSO fut coulé dans le port de Marseille par une mine flottante le 19.09.1944.

Comme confirmé par le OFAE (Office fédéral pour l'approvisionnement économique du pays) à Berne, le MOUNT LYCABETTUS appareilla de Baltimore le 11.03.1942 et disparu le 17.03.1942. D'après www.uboaat.net, le vapeur quitta Baltimore le 13.03.1942 et fut

rapporté disparu le 14.03.1942, probablement torpillé par le sous-marin U-373. L'ALBULA devait, avec le GENEROSO, amener des marchandises de Marseille à Barcelone en sécurité pour la Suisse.

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How Ardmore Shipping approaches decarbonisation

Ardmore Shipping, a product and chemical tanker operator based in Cork, Ireland, has looked hard at the most cost efficient way to decarbonise. CEO Anthony Gurnee, and COO Mark Cameron, shared what they have learned

Anthony Gurnee, CEO and president of Ardmore Shipping, a product and chemical tanker operator based in Cork, Ireland, believes that "every ship in the world should have a propeller boss cap fin."

Ardmore has a fleet of 25 MR product and chemical tankers, on average 8 years old.

The propeller boss cap fin is a small device with static fins, which sits on the back of a propeller. The "boss cap" is a unit which holds the propeller in place, hence the name.

The technical explanation for how it works is that the device "disrupts the vortex" of the flow coming off the propeller. It is not the most intuitive energy saving device to understand.

But data shows that it improves fuel efficiency by 3-4 per cent, Mr Gurnee says. That typically works out at a 50-75 per cent return on investment in a simple retrofit, depending on the vessel's remaining life.

The company has worked out how it can be retrofitted without a drydocking, using divers, without the time and operational complexity of "tipping up the stern".

Mr Gurnee's second piece of advice is to carefully manage load on the engine. Ardmore uses a digital system from the company Lean Marine. It finds the return on investment works out similar to the propeller boss cap fin, and the improvements on efficiency also 3-4 per cent.

While 3-4 per cent may not seem like much, by doing both of these, you are improving at least 6 per cent. "Quickly these things add," he says.

The third recommendation is "high quality hull coatings, along with measures to minimise fouling on the hull."

On one ship, Ardmore put different coatings on each side of the ship, to compare them. The impact on vessel performance cannot be compared in this way, but you can compare how fast the coatings became fouled from a visual inspection. Crucially, you can solve the argument of which coatings perform better under a truly normalized set of environmental considerations.

Minimising fouling on the propeller is also worthwhile. "If you're able to find ways to keep the propeller clean constantly, you're in a much better spot," says Mark Cameron, COO of Ardmore. "We know very often that if you have a 6 month interval between when you clean, there's a degradation over time."

A fourth recommendation is to give crew tools to adjust the trim, and see what difference it makes. The trim of a ship is the difference between the forward and aft draft. It can be adjusted by pumping water into and out of the vessel ballast tanks at different locations throughout ship.

"The way we approach trim optimisation, we let the crew experiment with trim. It's in the hands of the crew, they develop and share their experience and understanding of what works and what doesn't for a particular set of conditions including the weather and swell

at a given time. We have a system onboard, we collect all the data. It gives us very accurate information on draft, weather conditions, what's the optimal trim," Mr Gurnee says.

"We think there's a lot of low hanging fruits in terms of efficiency improvements. Individually these things may not seem to be very impactful, [but] when you add them together - they can make a big impact. When you apply across a global fleet, there's an ability to have a meaningful impact, it could be 10-15 per cent improvement.

"That doesn't get us to 2050 [but] it can get us on the trajectory very quickly."

"There's a fascinating range of things that can be done, a lot technical, a lot operational, a lot is logistics."

There is some scope for further improvement based on understanding how these systems work together, he says. For example, if you can find the optimum speed taking into account that you have a propeller boss cap fin, the engine load is managed, the hull is in good condition, and you have the optimum trim.

There would also be scope for further improvement in ROI if there was a carbon price, or other tax on fuel consumption, because this would mean more returns on the same investment in different technologies. Otherwise, the commercial benefit is limited to direct savings in fuel consumption, he says.

Wind power is not presently under serious consideration, for reasons including that rotor sails would not easily fit on the deck of a medium range chemical tanker, with so many pipelines. However, it is an area of close scrutiny, in time it may very well become an important opportunity to improve cost effectively improve performance Data gathering.

A critical factor in reducing emissions is to have good systems for data gathering, visualisation and interpretation, so you know what is working and what isn't, Ardmore believes.

"By having simple information that's presented in a way that we have, the guys on the ship can make instant decisions," says Mark Cameron, COO. It's not telling people what they should have done 6 hours, 6 weeks ago."

"I don't think many ships have systems onboard that enable them to measure very small increments in performance to validate the effectiveness. We've had a system out there for 10 years. We can evaluate incremental efficiency gains," Mr Gurnee adds.

This approach can work much better than what he calls the big data approach, "when you analyse onshore and tell the crew what to do."

"We don't think that's effective," he says.

Ardmore does have mass spectrometer flowmeters fitted on its vessels, an investment some shipowners find too expensive, but which provides accurate granular information about fuel consumption. Many shipping companies are still only requiring tank level readings once a day for the noon day report.

The performance management system the company uses is one developed by SkySails, a company based in Hamburg whose main business is providing sails for ships. It also provides software, called V-PER, through its SkySails Marine Performance division.

This software collects and analyses data from onboard vessels to provide relevant, reliable information to decision makers onboard and onshore, displaying all factors influencing fuel consumption on one screen.

Ardmore first heard about this technology at a conference in 2011 where SkySails gave a presentation. "They had a really interesting onboard performance measurement system to prove the kite worked. We said, we're interested [but] not so much in the kite," Mr Gurnee said.

Philosophy

Ardmore has had a focus on fuel efficiency since it was started in 2010, initially purely for saving money on fuel.

"What's good for fuel efficiency is good for business," Mr Gurnee says. "It is easy to get caught in the trap that fuel efficiency is one dimension [by itself]."

"One of the great things time has taught me, nothing beats a good, well run, [inexpensive] ship. If you generate value - you've got a better well round performing asset. "

"Our investment thesis has been to buy the right ships at the right price.

"We've been very specific about looking at the ships that we've bought, and where we find a bit of secret sauce we buy more of those types of ships. There are differences between ship yards, we can see that and prove that.

"Being able to measure what we do is pretty essential. People can make great claims on any given day. Making the claims stand up is often something I find lacking."

"When we want to invest in something, we'll invest in singular technology first. We've looked at a really wide range of technologies, mostly in the retrofit space."

"We'll measure it in ways we think are probably fairly unique in the industry, to make sure the measurements are accurate and we can exclude the white noise."

"We can look at the trends we expect and see if that's a good investment for us."

In the short term, by making a number of small changes to the fleet, it will be possible to keep vessels with existing fuels and designs in operation, rather than committing, at this point in time, to build new vessels running different fuels.

"In the newbuild stages you can plan a lot more into the design of the ship. We take the [shipyard's] designs and add extras on."

People

One of the most important aspects of a decarbonisation strategy, also perhaps not intuitive, is the people side of it.

It can be a great help "just bringing people together into a room, who understand the various technologies, to talk to each other, Mr Gurnee says.

Investing in people can actually be more important than investing in technology, adds Mr Cameron. This includes engaging people in efforts to decarbonise, making effort to retain crew, and rewarding them.

"We've built a level of commercial understanding in our staff which is a little unique in the business," he says.

It's good "when you get the guys onboard to care about what we care about," he says. "Safety remains paramount, [but then] we make sure they understand what makes good business."

It's about "bringing them into the fold with more information about how the business operates, and why we choose to take certain specific approaches and explaining the rationale to them. Making sure they understand there's a bigger issue. Time spent in that area is time well spent on performance."

Although the crew are provided by crewing agencies, including a ship management joint venture with Anglo Eastern (Anglo Ardmore) some of them have worked continuously with Ardmore for over 10 years, he says.

Decarbonisation could also happen through better collaboration with customers, the cargo owners. Consider that a "third of the world's container ships are sitting idle at the moment waiting to discharge. That's not very efficient."

"I always like to say, obviously big data and IT is really important, [but] when we think about it, we've got dozens of supercomputers in the company, that's our staff," Mr Gurnee concludes.

Inséré 06/03/22 NIEUWS NOUVELLES Enlevé 06/04/22

ROG, your partner for dockside and on-site services

'Goed nieuws voor alle zeevarenden en hun families'

Op 30 november heeft de Eerste Kamer ingestemd met een reparatiewet voor de Wet ter Bescherming Koopvaardij, beter bekend als de antipiraterijwet. Deze wet staat onder voorwaarden particuliere gewapende beveiliging toe op zeeschepen onder Nederlandse vlag. Niets staat inwerkingtreding per 1 januari 2022 in de weg. Minister Grapperhaus moet de wet nog wel tijdig in de Staatscourant publiceren. De maritieme sector is zeer verheugd dat zeevarenden op Nederlandse zeeschepen nu te allen tijde kunnen worden beveiligd in wateren die door piraten worden geteisterd. "Ruim tien jaar hebben wij samen met de kapiteinsvereniging NVKK, vakbond Nautilus International en de Vereniging Maritiem Gezinskontakt gestreden voor dergelijke wetgeving", zegt KVNR-directeur Annet Koster. "Eindelijk is het zover en kunnen onze schepen en mensen beveiligd door gevaarlijke wateren varen, óók als de inzet vanuit Defensie niet mogelijk is. Nederland loopt bovendien niet langer uit de pas in vergelijking met andere Europese maritieme landen."



Golf van Aden

Van de Wet ter Bescherming Koopvaardij mag alleen gebruik worden gemaakt in vaargebieden die door de Nederlandse overheid worden aangewezen. Op dit moment betreft dit de zogeheten High Risk Area bij de Golf van Aden. Belangrijk voor de reders en zeevarenden is dat van beveiliging aan boord een preventieve afschrikwekkende werking uit gaat. Nu Nederlandse schepen altijd beveiligd zijn, zullen ze minder snel aantrekkelijk zijn als doelwit, vrewacht de KVNR. Wordt een schip toch aangevallen, dan is de

noodzakelijke professionele en gecertificeerde beveiliging aanwezig om schip en bemanning adequaat te beschermen.

“Het heeft lang geduurd, maar dit is uiteindelijk wel heel goed nieuws voor alle zeevarenden”, zo zegt voorzitter Marcel van den Broek van Nautilus International. “In dat goede nieuws delen ook hun families”, vult voorzitter Loes Hermanns van de Vereniging Maritiem Gezinskontakt aan.

Toezicht en handhaving

Vanaf 1 januari 2022 kunnen particuliere beveiligingsbedrijven worden gecertificeerd door de Nederlandse overheid om deze diensten aan boord van schepen te mogen verlenen. Na afloop van de inzet van een particulier beveiligingsteam moet verslag worden uitgebracht aan de Inspectie Leefomgeving en Transport. Naast schriftelijke verslaglegging wordt ook gebruik gemaakt van helmcamera's. Mocht tijdens de inzet geweld worden toegepast, dan volgt onderzoek door het Openbaar Ministerie. “Voor kapiteins is deze verslagverplichting geruststellend om aan te kunnen tonen dat ze juist hebben gehandeld”, zegt NVKK-voorzitter Leen van den Ende.

Publicatie in Staatscourant

De Wet ter Bescherming Koopvaardij werd ingediend in september 2016 als initiatiefwetsvoorstel van de toenmalige Tweede Kamerleden Han ten Broeke (VVD) en Raymond Knops (CDA). De wet regelt dat particuliere gewapende beveiliging aan boord van schepen onder Nederlandse vlag wordt toegestaan zodra het niet mogelijk is dat een militair team van Defensie dit verzorgt. In 2018 en 2019 stemden de Tweede resp. Eerste Kamer al in met de wet. Sindsdien moest de wet worden gerepareerd en in lagere regelgeving worden verwerkt. Het is nu nog slechts een kwestie van wachten op tijdige publicatie in de Staatscourant. Daarvoor is demissionair minister Grapperhaus van Justitie en Veiligheid aan zet

Inséré 07/03/22 NIEUWS NOUVELLES Enlevé 07/04/22

Turkey Closes The Dardanelles And Bosphorus for Warships

By : Tayfun Ozberk

Turkey's Foreign Minister, Mevlut Cavusoglu, revealed that all countries have been warned not to transit warships through the straits. The decision which was made during a Turkish cabinet meeting closes the Dardanelles and Bosphorus straits to all military vessels...

Turkey's Foreign Minister, Mevlut Cavusoglu, made significant remarks to the press following the cabinet meeting held on 28 February evening. The primary topic of his announcement was Turkey's course of action about the measures over the passing regime across the straits under the Montreux Convention.

He stated that the Turkish government has warned all countries (whether bordering the Black Sea or not) not to send warships via the straits to the Black Sea during the Russia-Ukraine war. He emphasized that no such attempt has occurred thus far. “When Turkey is not a belligerent in the conflict, it has the authority to restrict the passage of the warring states' warships across the straits. If the warship is returning to its base in the Black Sea, the passage is not closed. We adhere to the Montreux rules. All governments, riparian and non-riparian, were warned not to send warships across the straits.”The Minister also stated that the Russian government had previously questioned if Turkey would implement

Montreux rules when necessary and that the Turkish government had assured them that Turkey would strictly stick to the terms of the agreement.

Turkish President, Recep Tayyip Erdogan, confirmed the statements of Cavusoglu by stating the importance of Montreux rules to avoid escalation in the region. He also underlined that Turkey has strictly fulfilled its responsibilities within the framework of the institutions and alliances with which it is involved, especially the UN, NATO, and the EU, and defined Russia's invasion as "unacceptable". "Turkiye will use its authority over the Turkish Straits under the 1936 Montreux Convention to prevent the Russia-Ukraine "crisis" from further escalating"

In an interview with CNN Turk on February 27, Mevlut Cavusoglu revealed the first hints of this decision, stating that they consider the conflict between the two countries to be a full-fledged war. He referred to Article 19 of the Montreux Convention, emphasizing Turkey's control over the straits during warfare.

Article 19 of the convention is as follows:

In a time of war, Turkey not being belligerent, warships shall enjoy complete freedom of transit and navigation through the Straits under the same conditions as those laid down in Articles 10 to 18 (the articles regulate tonnage limitations and passing rules). Vessels of war belonging to belligerent Powers shall not, however, pass through the Straits except in cases arising out of the application of Article 25 of the present Convention, and in cases of assistance rendered to a State victim of aggression in virtue of a treaty of mutual assistance binding Turkey, concluded within the framework of the Covenant of the League of Nations, and registered and published in accordance with the provisions of Article 18 of the Covenant.

In the exceptional cases provided for in the preceding paragraph, the limitations laid down in Articles 10 to 18 of the present Convention shall not be applicable.

Notwithstanding the prohibition of passage laid down in paragraph 2 above, vessels of war belonging to belligerent Powers, whether they are Black Sea Powers or not, which have become separated from their bases, may return thereto.

Vessels of war belonging to belligerent Powers shall not make any capture, exercise the right of visit and search, or carry out any hostile act in the Straits.

Despite the fact that the Turkish minister stated Article 19, this article prohibits warships from the warring states. As a result, the Turkish government appears to have exercised its rights under Article 21, which states that passage of warships should be wholly at the discretion of the Turkish Government when it feels itself to be threatened with imminent danger of war.

Article 21: Should Turkey consider herself to be threatened with imminent danger of war she shall have the right to apply the provisions of Article 20 [In time of war, Turkey being belligerent, the provisions of Articles 10 to 18 shall not be applicable; the passage of warships shall be left entirely to the discretion of the Turkish Government.] of the present Convention. Turkish minister's statements are considered as an official declaration of the Turkish government regarding the passing regime over the straits.

Source : Naval News

Inséré 08/03/22 DOSSIER Enlevé 08/04/22

How green corridors can enable the transition to zero-emission



*The 2015 New Times Shipbuilding built **8800 TEU MSC ANZU***

The decarbonization of shipping – responsible for 3% of global greenhouse gas (GHG) emissions but more than 80% of global trade – is rapidly moving up the agenda, for policymakers and industry alike. Last autumn more than 200 organizations from the maritime ecosystem signed the Getting to Zero Coalition’s Call to Action for Shipping Decarbonization, urging the adoption of a sector-wide goal of zero emissions by 2050 and the commercial deployment of zero-emission vessels by 2030.

The good news is that the technologies to produce zero-emission fuels and vessels are nearly market ready. Pilots and demonstrations of zero-emission vessels are underway, and the key technologies for the largest ships should be available by the end of 2024. Yet deploying these solutions globally at scale, is complex: the shipping industry is diverse, disaggregated, and globally regulated by the International Maritime Organization (IMO) in the interests of 174 member countries. While global action will be crucial in the long run, it is just as crucial to start somewhere.

How green corridors could work in principle

The creation of green corridors – specific trade routes between major port hubs where zero-emission solutions are supported and demonstrated – can cut through this complexity. Essentially, the idea is to shrink the challenge of coordination between fuel infrastructure and vessels, in the value chain and between countries, down to a more manageable size, while still retaining the scale necessary to create impact.

Along a green corridor, policymakers can put in place enabling ecosystems with targeted regulatory measures, financial incentives, and safety regulations, that enable a subset of the industry to take its first steps. Industry can choose a fuel pathway and create systems for mobilizing demand and sharing costs and benefits among a more limited set of actors, with a high degree of trust and confidence. And these corridors can have “spill-over effects” that can result in the reduction of shipping emissions on other corridors.

In our report *The Next Wave: Green Corridors*, we test these hypotheses by examining two potential green corridors, both of which could serve as high-impact catalysts for the transition to zero-emission shipping globally.

The Australia-Japan iron-ore corridor

The 65 million tonnes of iron ore exported annually from Australia to Japan, make this one of the largest dry-bulk trade routes in the world. As a potential first mover corridor, the route benefits from favourable production conditions for green hydrogen production, with companies active in Australia already having announced plans to build approximately 30GW of hydrogen electrolyser capacity by 2030, with much of this capacity located near

to the centres of iron ore production and ports from which it is shipped. Given that zero-emission shipping fuels are likely to be derivatives of green hydrogen, investors in zero-emission ships on this route could potentially benefit from security of supply and cost advantages. Nonetheless, zero-emission ships here as everywhere will be more expensive to operate than fossil-fuelled vessels – we estimate a 50-65% increase in the total cost of ownership for vessel operators in 2030. The cost gap can be reduced, however, by forming joint ventures and/or utilising innovative mechanisms to share costs and emission reductions among the relatively few companies in the value chain along this route. Additionally, policy mechanisms such as contracts for difference can also be used to bridge the cost gap. If such a mechanism specifically targeted this route, it could bridge the entire cost gap at an annual cost of \$250-350 million.



Exmar's 2014 built 38000 cubic meters Liquid Gas LPG tanker [WAREGEM](#) enroute from Caojing in China to Ras Al Khair

The Asia-Europe container corridor

Among the largest shipping lanes in the world, the Asia-Europe container route is responsible for generating more GHG emissions than any other single global trading route. Despite its size and the comparatively large number of companies with a stake in its operation, it too is a promising candidate for developing a green corridor.

The route has multiple potential bunkering (e.g. refuelling) ports, so that fuel supply could originate from Europe, the Middle East or Australia (transported to relevant Asian ports). Given the announced hydrogen electrolyser capacity by 2030 across the three regions have already exceeded 60GW, fuel supply is likely to be available for initial decarbonization efforts on the route. Additionally, there is growing demand for decarbonization across the route's value chain, including cargo owners. Moreover, the characteristics of a significant part of the freight shipped on the route can allow cargo owners to share costs with end consumers without significant increases in retail prices.

Even with the assumption that zero-emission fuel supply for the route will be sourced from low-cost locations such as the Middle East or Australia, a 35-45% increase in total cost of ownership is expected for vessel operators in 2030. Given the expected demand from cargo owners – recently evidenced by the coZEV 2040 Ambition Statement – mechanisms such as targeted demand coalitions and a corridor specific book-and-claim system could enable sharing of the additional cost across the value chain. While such mechanisms are complex to develop and implement globally, a set of corridor-specific agreements between

companies with a shared interest in greening the corridor could lower the threshold for action and help set a template for a global solution.

Policy can also play a significant role – while the corridor touches more countries than the iron ore route, the implementation of the EU's Fit for 55 package alone could reduce the cost gap by 25%, or if revenues from the corridor were recycled to support zero emissions ships, eliminate it completely.

The two corridors explored in depth the report are not the only options: indeed, our analysis suggests that a number of feasible alternatives exist. But these two examples provide important lessons for the industry's transition. In order to draw those lessons as clearly as possible, we have even proposed a roadmap for building these corridors, plotting the steps needed to overcome initial barriers and enable a meaningful roll-out of the corridors by 2030.

A global transition to zero-emission shipping will be complex for everyone: the IMO, national governments, and the maritime industry. But if the best way to eat an elephant is one bite at a time, green corridors may be the right size for this moment: big enough for the industry to sink its teeth into, but not too big to swallow. Our work suggests that feasible, high-impact opportunities to build green corridors exist, and that these could do a great deal to generate momentum towards zero-emission shipping.

Source: World Economic Forum

Inséré 08/03/21 BOEKEN LIVRES BOOKS Enlevé 08/04/22

“Slavernij: een geschiedenis”

BOEKBESPREKING door : Frank NEYTS

Bij uitgeverij Walburg Pers verscheen het interessante boek **“Slavernij: een geschiedenis”**. Dirk J. Tang tekende als auteur.

Hoe kan het dat de Republiek der Zeven Verenigde Nederlanden, die zo hartstochtelijk vechten tegen de Spaanse overheersing en voor de vrijheid, mee gaat doen aan de internationale slavenhandel?

Hoe sussen kooplieden, huisvrouwen en dominees hun geweten tijdens de kerkdienst op zondag? Was Nederland de grootste en wreedste slavenhandelaar van het westelijk halfmond?

Het zijn vragen die in talloze variaties worden gesteld wanneer het Nederlandse slavernijverleden ter sprake komt. Deze geactualiseerde editie beschrijft de lange wordingsgeschiedenis van slavernij en slavenhandel. **“Slavernij: een geschiedenis”** (ISBN 9 789462 496811) telt 247 pagina's, werd als softback uitgegeven en is rijkelijk geïllustreerd. Het boek kost 29,99 euro.

Aankopen kan via de boekhandel of rechtstreeks bij Uitgeversmaatschappij Walburg Pers, Postbus 4159, 7200BD Zutphen. Tel. +32(0)575.510522. Bestellen kan via de Walburg Pers website. In België wordt het boek verdeeld door Agora Uitgeverscentrum, Aalst/Erembodegem. Tel. 0032(0)53.78.87.00, Fax 0032(0)53.78.26.91, www.boekenbank.be, E-mail: admin@agorabooks.com.

Inséré 10/03/22 NIEUWS NOUVELLES Enlevé 10/04/22

More carriers eye scrubber installation as price gap between fuels gets wider

By Mike Wackett

As the price gap between low-sulphur fuel oil (LSFO) and heavy fuel oil (HFO) widens, almost 30% of the global containership fleet capacity is now equipped with scrubber technology, according to an Alphaliner survey.

The consultant said the number of container vessels fitted with scrubbers increased by 150 last year, to 850 ships for 7.52m teu of capacity, with MSC continuing to lead the pack with nearly half its 640-strong fleet able to bunker with the cheaper HFO. By comparison, Maersk, now the equal top-ranked carrier with its 2M partner, has 35% of its 736-vessel fleet capacity scrubber-fitted.

Other scrubber advocates include Evergreen, with 69% of 204 ships (1.48m teu capacity), and HMM with 83% of a fleet of just 75 vessels (820,000 teu) fitted out with an exhaust gas cleaning system. At the other end of the scale, Japanese carrier ONE has scrubbers installed on just 18% of its 210-ship, 1.54m teu, fleet and Hapag-Lloyd, a long-time sceptic, has 17% of its 252-ship, 1.75m teu, fleet equipped with scrubbers. According to Ship & Bunker's G20 index, which tracks the average bunker price at 20 major ports, the average price for LSFO leapt 46% last year, to \$544 per tonne, and although HFO prices rose 53%, to \$433 per tonne, the spread between the two fuels widened by 92% over the year. "The good news for owners of scrubber-equipped tonnage is that the LSFO/HFO spread ended the year at a high of \$153, having started the year at \$79," said Ship & Bunker.

A carrier source told The Loadstar recently that the only thing stopping his line from ordering more scrubber retrofits on its fleet was the down time in the shipyard.



*The scrubber equipped **MSC LETIZIA** westbound navigating the Singapore Strait*
"We cannot afford to have a single ship out of service at the moment, but if things quieten down a bit later in the year, we will be first in the queue as the potential cost savings are massive," he said. «But we have several [vessel] surveys coming up that we cannot postpone any longer, so we might be able to fit in the installations at the same time, when the ship is in dry dock, and we are checking this at the moment with our own ships as well as the chartered tonnage," he added.

Notwithstanding that many ports around the world have banned the use of open loop scrubbers that discharge wash water back into the sea in their controlled areas, the savings of \$150 per tonne on a ship burning 75 tonnes a day at sea are substantial when multiplied across a line's fleet. Carriers are also being encouraged by the seeming lack of appetite by IMO states to introduce tougher regulations on the use of scrubbers.

Source : the loadstar

Inséré 12/03/22 NIEUWS NOUVELLES Enlevé 12/04/22

BV to deliver independent certification to the first floating wind project in the Celtic

Paris-La Défense, France - January 19th, 2022: Bureau Veritas (BV), a world leader in testing, inspection and certification, has been selected to undertake the project certification of Erebus, the first offshore windfarm in the Celtic Sea, in Wales (UK) and one of the largest floating offshore wind projects in the world.

Located 44km from the Pembrokeshire coastline in up to 75m water depth, the Erebus project aims to be fully operational by 2026 and will deliver up to 100MW of clean energy, powering 93,000 homes per year.

The Erebus project is the result of TotalEnergies teaming up with Simply Blue Group in a Joint Venture named Blue Gem Wind. Principle Power Inc. will design the floating platforms, based on the latest generation of their Windfloat® technology. This floater concept received an "Approval in Principle" from BV in 2016. The ballasted, semi-submersible platform supports latest generation multi-megawatt wind turbine generators. The three-column platform is moored with a five-line catenary mooring system and is equipped with a closed-loop ballast system to compensate for changes in mean wind velocity and direction.



BV will be providing independent verification and project certification in line with regulatory requirements. The scope of the evaluation includes all the design phases: site condition assessment, design basis evaluation, integrated load analysis and detailed design evaluation for all the components of the floating wind turbines, including the inter-array cables. To support the design documentation review, BV will provide independent analysis leveraging its integrated modeling tool Opera – which accounts for all components of a floating asset or wind turbine, covering everything from mooring systems to blades. Opera addresses the complex physics of aero-hydro couplings and multibody interactions and manages sea-keeping and station-keeping for floating structures.

BV's certification scope is planned to include all post-design phases from manufacturing to operations, including Transportation & Installation (T&I) and commissioning. For this purpose, Blue Gem Wind can rely on Bureau Veritas' worldwide network of surveyors, present in 140 countries, to provide local support to fabrication and operations activities,

wherever they are required. Paul Shrieve, Vice President Global Services at Bureau Veritas Marine & Offshore, commented: "We are honoured to be part of this new venture in the Celtic sea, which is essential in meeting the UK 2050 Net-Zero target to mitigate global warming. Supporting new low carbon supply chain opportunities and creating long-term value for the region is at the core of our mission at Bureau Veritas. It is good to see we continue to grow our local engineering and certification capability here in the UK. I am also proud to see our continued leadership in mitigating risks in Marine Renewable Energy, through our expertise and tools such as Opera, giving our clients the peace of mind they need when de-risking these complex projects. We enable innovative projects to evolve rapidly towards go-to-market solutions, which is very rewarding". Igor Maere, Hull & Mooring Manager at Blue Gem Wind, added: "Achieving independent verification and certification is an essential part of developing Erebus and we are delighted to be working with BV on this important work scope." Bureau Veritas can support all stages of the renewable and alternative energy production chain. Over the last two decades, it has dedicated significant efforts to developing one-stop-shop solutions related to renewable energies, including design verification of offshore wind farms, supply chain quality assurance for solar photovoltaic panels, and project and construction management support for onshore wind developments

Inséré 14/03/22 HISTORIEK HISTORIQUE Enlevé 14/04/22

De scheepswerf John Cockerill in oorlogstijd

■

Na de angst, woede en het verdriet over de verliezen aan mensenlevens en goederen, rees er op de dag na de capitulatie bij alle werknemers de beklemmende vraag; wat nu met ons werk?

De verwarde toestand duurde maar heel kort . De industrie hervatte de werkzaamheden in de mate van het mogelijke en de leidende industriëlen hadden daarvoor ernstige argumenten .De duizenden arbeiders en bedienden kon men niet zomaar zonder inkomen zetten en aan hun lot overlaten . Men zou dus de productie hernemen met inachtnaam van de voorschriften van de internationale Conventie van Den Haag, dit om te beletten dat er al dan niet onder druk van de Duitse bezetter wapens of munitie zou geproduceerd worden om die te gebruiken tegen onze geallieerden .

Verder beriep men zich op een toespraak van onze koning Leopold 111 voor de capitulatie (28 mei 1940):" Morgen zullen we weer aan het werk gaan, om ons land uit zijn puinen te doen herrijzen."Ten slotte was er ook het akkoord van de machtige Soci t  G n rale een patronale organisatie, die bijna de hele Belgische industrie vertegenwoordigde. Kortom, al deze argumenten zorgden ervoor dat de doorsnee Belg niet wakker lag van het feit dat zijn arbeid, net als die in de andere landen, ook gedeeltelijk de vijand zou ten goede komen.

Waarom kon op de scheepswerf Cockerill gewerkt worden?

Zo waren er de schepen die er lagen voor het uitbreken van de oorlog. Twee van 3000 ton, besteld door Zegluga Polska van Gdynia. Ook 2 van 11000 ton, voor die tijd al heel grote vrachtschepen, besteld door de Compagnie Maritime Belge .Al deze schepen, samen met nog een paar andere, werden door de Duitsers onmiddellijk als oorlogsbuit beschouwd en in beslag genomen. De 2 oorspronkelijke Poolse schepen moesten omgebouwd worden tot "U-bootbegleitschiffe", d.w.z. schepen die op zee onderzeeers voorzien van brandstof, water en proviand, zodat die niet telkens de gevaarlijke reis heen en weer naar de thuisbasis moesten ondernemen. In verhouding tot de productiviteit van de werf was dit

maar een kleine opdracht, maar ze kwam van de Deutsche Kriegsmarine en zou dus onder supervisie staan van de Oberwerftstab te Zeist (Nederland)

Vanaf dat ogenblik verschenen er mannen in uniform op de werf, alle overtuigd van de voor de deur staande capitulatie van Engeland en laaiend enthousiast over de Führer. Meestal waren het controleurs, die erop toezagen of de uit Duitsland geleverde apparatuur door de Belgische arbeiders nauwkeurig ingebouwd werd. Er kwam zelfs een "Baubelehrung" een compagnie mariniers, die les kregen over de bouw van het schip, waarmee ze later zouden varen. Voor al dit Duitse personeel werd er direct voor de werf een degelijke schuilkelder gebouwd, zoals niemand in Hoboken er één had.

Hoe ging het eigenlijk met de menselijke en organisatorische betrekkingen tussen de bezetter en het Belgische personeel?

In grote trekken verklaarde het Duitse (militaire) bestuur de Belgische arbeidswetgeving voor geldig. Wel werd het aantal werkuren verhoogd, opslag moest beperkt blijven tot de periodieke opslag, het betaald verlof bleef bestaan, minderjarigen konden niet tot arbeid verplicht worden en alle jongeren mochten hun schooltijd of hogere studies afmaken. De schandelijke opeisingen en verplaatsingen kwamen pas later. Iedereen moest aan het werk. De mensen kregen een arbeidskaart, die nodig moest voorgelegd worden voor het ontvangen van een rantsoenkaart Deze kaart moest iedereen op zak hebben, want ze vermeldde ook de geldigheidsdatum. Was die vervallen, dan kwam de betrokkene in aanmerking voor het transport naar Duitsland.

Tot wrijvingen met het Duitse bestuur is het bij Cockerill niet gekomen. De werknemers beseften dat het geen zin had machines te saboteren, brand te stichten, werktuigen te doen verdwijnen e.d.; het zou spoedig ontdekt worden zijn evenals de daders en de betrekkingen zouden dan verzuurd zijn. Integendeel, de verhouding was goed, zodat een afgevaardigde bediende bijna elke dag met de Duitse ambtenaren kon onderhandelen bv. over de toelating tot aanwerving van een reeks nieuwe werknemers(heel belangrijk voor de Hobokenaren), de overschakeling van een beroep(waarvoor weldra geen werk meer was) naar een ander met betere vooruitzichten. Door onderhandeling verkreeg men zelfs de toekenning van "spitsverlof", zodat iedereen in de loop van het voorjaar 6 halve dagen zijn tuintje mocht bewerken. Wie kent er nog fabrieken waar dit mogelijk was en is?

Syndicale activiteit was verboden, maar toch werd getolereerd dat afgevaardigden van het werkliedenpersoneel, de zgn. délégués, om de maand met de bedrijfsleider konden vergaderen en daar over materiële dingen konden praten. De werf organiseerde ook een soepbedeling, voor elke werknemer van hoog tot laag en volgens het aantal personen in het gezin. Het ging hier niet om een watersoep, maar om een voedzame minestrone, wat onmogelijk was zonder toevoeging van ingrediënten gekocht op de zwarte markt Blijkbaar liet men dit toe van hogerhand. De kleine man, die op straat met enkele kilo's aardappelen door een Vlaamse wachter aangesproken werd, was er aan voor de moeite en kreeg nog een boete.

Vele lezers zullen zich afvragen hoe het kwam dat werknemers van Cockerill zoveel gunsten genoten, daar waar het leven op een klein bedrijfje of voor een alleenstaande ondernemer of voor mensen in rijksdienst of gemeentelijke administratie zoveel moeilijker was. De diplomatieke kwaliteiten van de Cockerill-onderhandelaars verdienen alle lof, maar er was nog een andere reden. Het werktempo was super laag. Denk nu niet dat de bedienden een babbeltje sloegen van een half uur of dat de arbeiders in een schemerige hoek op een schip zaten te kaarten. zoiets gebeurde niet. Men haastte zich doodeenvoudig niet. Dit was het geheime wapen waarmee men de vijand beter kon treffen dan sabotage. De werkdruk werd nooit systematisch verhoogd. Vele Duitsers zagen in 1943 en '44 in, dat zij er alle belang bij hadden, de termijnen niet strikt in het oog te houden, dat zij beter de oorlog in een Antwerps bureau konden doorbrengen dan naar één of andere marinebasis in het barre Noorwegen of in het gevaarlijke Joegoeslavië. Dus ook aan Duitse zijde werd het tempo niet opgedreven. Het omgekeerde zou ook weinig gebaat hebben. Ook de directie van de werf spande zich helemaal niet in om het tempo te verhogen. Een bewijs

hiervoor logt men in het volgend feit. De huidbeplating en de opstaande delen van een schip werden toen zoals overal "geklonken", d.w.z. met klinkbouten in voorgeboorde gaten bevestigd. Dit is een arbeidsintensief procédé dat nu nog nauwelijks toegepast wordt, omdat men nu elektrisch last. Op de werf was er een chronisch tekort aan goede lassers, maar toch deed de directie niets om er zelf op te leiden. Was dit toeval of toeleg?

De Belgen op de werf stonden soms verbluft door de naïviteit van de bezetter. Begin 1943- de twee U-bootbegleitschiffe zijn nog verre van afgewerkt- besteld de Duitse regering een reeks van 6 koopvaardischepen. Het hele carrousel van bestellingen van platen en profielen, pijpen en kranen herbegint. Maar de materialen komen met mondjesmaat toe wegens gebrek aan grondstoffen en wegens voortdurende bombardementen op het Duitse spoorwegnet. Er werd dus op de werf hard gelachen toen de eerste kisten voor deze bestelling toekwamen. Ze bevatten nl. Scheepsvlaggen en wimpels. In februari 1944 wordt alle hens aan dek geroepen voor de bouw van 5 of 6 "Stopi-fdhren" d.w.z. snelboten voor Soszpionieren, gespecialiseerde geniesoldaten, die met deze bootjes de brede Russische rivieren Don en Dnjester kunnen oversteken, een bepaald doel vernietigen en snel naar de Duitse kant terugkeren. Wegens gebrek aan passend materiaal zijn die nooit klaargekomen! Eigenlijk hebben heel weinig schepen in de oorlog de scheepswerf verlaten. Vaak was hun lot al bezegeld, wanneer ze in de Boordzee kwamen. Zo vernamen we dat het MS "Florifa", bouwnummer 691, besteld voor de rederij HSDG even voorbij de Hoek van Holland door een geallieerde vliegtuigbom getroffen werd en naar de dieperik ging. Was het bericht juist? Middelen om het na te trekken waren er niet. Maar het deed velen van de werf pijn aan het hart, want het was een mooi schip. Voor de afwerking van de kajuiten hadden de Duitsers diep doen grijpen in onze reserves van duur Congolees hout.

Van 1943 af beginnen de oorlogsgebeurtenissen zich te voelen. Op zekere dag was de Belgische commandant van een Engels bombardementsvliegtuig op de terugtocht van Duitsland van de koers afgeweken en naar Schelle gevlogen waar hij een voltreffer liet vallen op de elektriciteitscentrale. Op slag viel alles, maar ook alles wat met elektriciteit te maken had uit en iedereen vroeg zich een beetje angstig af, wat er gebeurd was. Korte tijd nadien wist het iedereen en overal glunderende gezichten van bedienden en arbeiders op de werf waar ze rustig rondkuieren. De panne heeft uren geduurd. Voor de industrie langs de Schelde een verlies, maar ook een zware dobber voor de Duitsers.

Luchtalarm werd er niet gegeven. Dat moest telefonisch van een Duitse commandopost komen in Antwerpen, die waren blijkbaar doof. Op een zekere dag hoorden we gegrom van Amerikaanse vliegtuigen, die laag in oostelijke richting vlogen. Enkele minuten later landde op de werf een parachutist. Gelukkig voor hem kwam hij op een stapel hout terecht, zodat hij zich nauwelijks kwetste. Het was een Amerikaanse piloot, wiens toestel neergeschoten was en die zich door zijn springstoel had kunnen redden. De ovatie die hij op de werf kende, zal hij zijn hele leven niet vergeten. Honderden verdrongen zich om hem te zien, aan te raken, bemoedigende woorden te zeggen. De Duitsers waren razend. Ze geraakten er zelfs niet bij hem gevangen te nemen.

Een paar uur later werd de vreugde getemperd door het bericht dat Mortsel zwaar gebombardeerd was. Kort daarop werden alle ambulanciers en Rode Kruisassistenten van Cockerill opgeroepen en vertrokken met al het materiaal naar Mortsel. Het verhaal van de vreselijke gebeurtenis van 5 april 1943 kregen we pas de volgende dag te horen. De volgende dagen werd er dan toch terug luchtalarm gegeven en kon iedereen de werf uitlopen. Wat hadden we ook kunnen doen? In die enge en veel te zwakke schuilkelders? Als een wilde horde stormde iedereen naar buiten. De enige kelder met beton en metselwerk was voor de Wehrmacht.

De laatste keer dat Duitse militairen een voet op de werf gezet hebben, was de nacht van 3 september 1944. Met een snelle vedette is er een commando uit de stad gekomen. Ze bestormden het staketsel, drongen de werf binnen, overmeesterden de nachtwakers, die ze dwongen 2 bakken met springstof te dragen. Daarna drong de groep binnen in 2 schepen oorspronkelijk van de CMB, plaatsten hun lading, gingen weer aan boord en bliezen de lading op. De knallen waren zo vreselijk, dat alle Hobokenaren uit hun bed vlogen. De schade was beperkt: in de zijwand onderaan was een gat geslagen van ca. één meter.

Langs daar stroomde het water binnen. De volgende morgen lagen de schepen scheefgezakt in de Schelde.

Het duurde nog een hele tijd eer het noorden van de stad vrij was en alle dokken bruikbaar. Vanuit Nederland begon dan de Luftwaffe raketten af te schieten. Ook de Cockerillwerf kreeg zijn deel. Een VI plofte neer achter de pijpfitterij op een zaterdagmiddag, één kwartier nadat de arbeiders de werf verlaten hadden. Een onhoorbare VII-raket sloeg in vlak naast de kaaimuur in de Schelde. Het laatste glas vloog uit de vensters, maar er waren gelukkig geen mensenlevens te betreuren.

Voor zover mijn geheugen mag steunen op wat ikzelf gezien en beleefd heb en voor wat anderen me verteld hebben, was er bij Cockerill steeds een familiale sfeer, een teamgeest, die in vele dingen tot uiting kwam; in de sport bv. Er was een officiële voetbalploeg, een kanoclub met eigen clubhuis, een tennisclub, een harmonie. Al voor de oorlog had de werf een eigen ziekteverzekering opgericht, die financieel wat steun gaf aan wie lang ziek was en er bestond zelfs een ziektebezoeker. Toen kort na de bevrijding te weinig cashgeld voorhanden was om iedereen uit te betalen, maakte de directie onmiddellijk coupons van 50 en 100F met het verzoek aan alle handelaars deze aan te nemen en nadien op de werf om te wisselen. Overal werden deze coupons aanvaard. Het is weer een bewijs voor het prestige dat de werf genoot. Veel was te danken aan de persoonlijkheid van de directeur Ir.L. Bosschart. Niemand heeft ooit geweten wie deze Nederlander, die slecht Frans sprak, de leiding van de scheepswerf toevertrouwd had hij was een sympathieke, nederige man, altijd vriendelijk en opgeruimd en ook wel eens autoritair als het erop aankwam. Hij was een overtuigd antinazi, die toch elke aanvaring met de Duitsers heeft kunnen vermijden.

De zware sirene bromt niet meer over de daken. Het oorverdovende geratel van de klinkhamers is verstomd evenals het gefluit van de stoomkranen en het gedreun van de plaatslagerij. De symbolen van vroeger, de grote bik, de bouwkransen en de monumentale portaalkraan, ze zijn allemaal verdwenen. Hier en daar vaart nog een oud schip over de wereldzeeën met aan de voet van de mast een koperen plaat met de tekst: "This ship was built at the shipyard John Cockerill at Hoboken Belgium"

Wij, die het lezen, voelen dan een vleugje trots en opkomende weemoed.

Jos Privé-secretaris van de Directie van Cockerill Cort Hoboken
September 1942 tot 10 oktober 1945.

Inséré 15/03/22 DOSSIER Enlevé 15/04/22

Using AI and machine learning to optimise vessel health

Seattle-based ioCurrents is pioneering a new artificially intelligent (AI) platform that combines digitalisation and machine learning in real-time to provide actionable insights on ship performance optimisation. Digital Ship caught up with Cosmo King, co-founder and CIO to find out more.

Thanks to advancing technology, greater and more accurate data on vessel performance is available to shipping companies looking to better understand performance of their ships. However, translating raw data into useful, actionable insights is still a challenge. ioCurrents has developed an AI-based platform, MarineInsight, that uses data from a vessel's sensors to provide a complete and accurate picture of a vessel's performance and the overall health of its systems. The solution recommends when, where and why each asset onboard a vessel needs attention, providing key information needed to predict failures, optimise fuel consumption, and drive more efficient maintenance.

Making sense of data

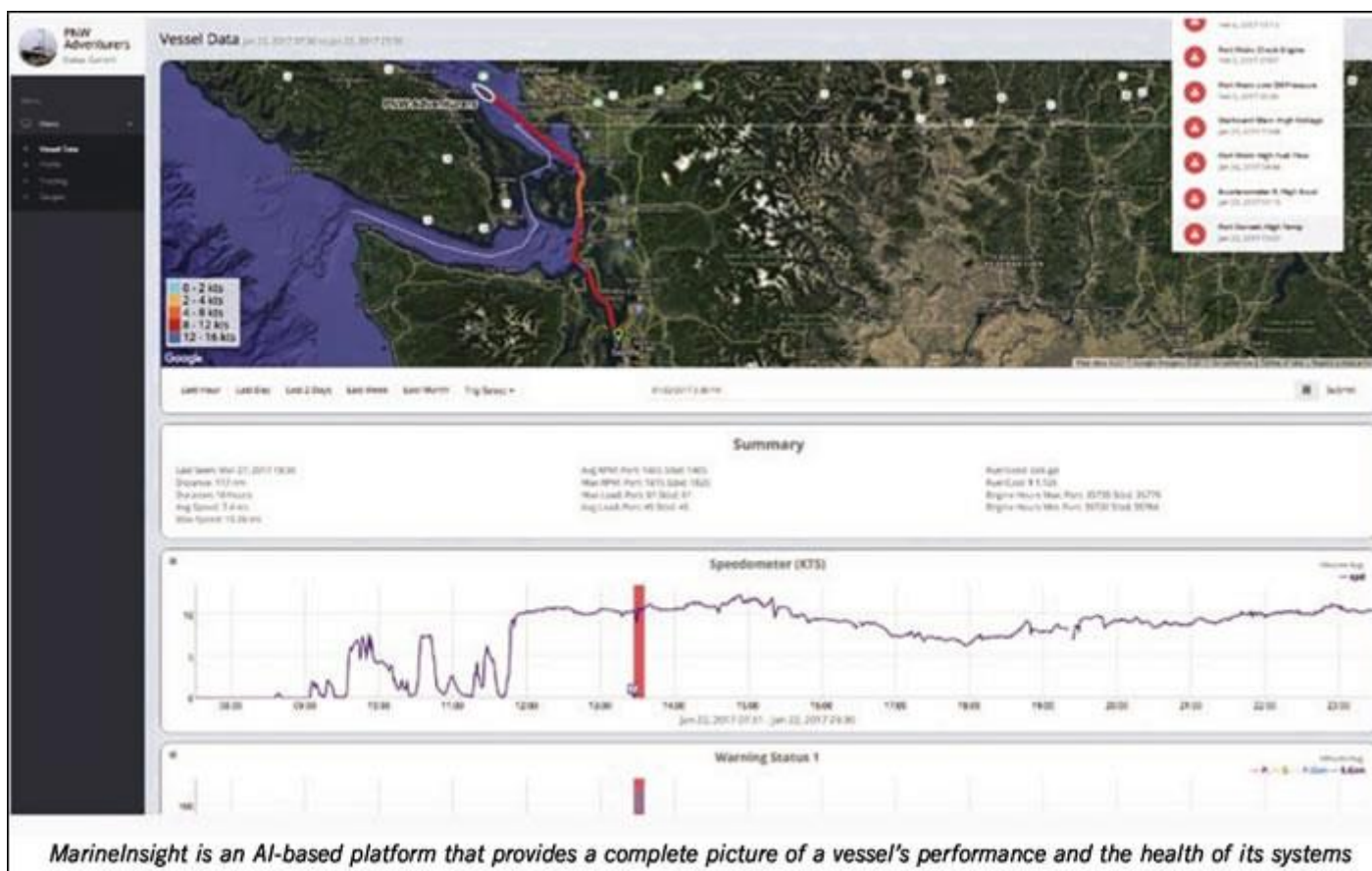
Spending much of his childhood on an old steamboat-turned-restaurant in Chesapeake Bay, Virginia, Cosmo King grew up with a close connection to the maritime environment. His personal interest in computers and technology led him to eventually join tech company SpaceCurve where he met Bhaskar Bhattacharyya, who would become his cofounder of ioCurrents. Eight years ago, Mr King and Mr Bhattacharyya were building high-scale databases for processing geospatial IoT and sensor data and realised discussions on IoT were not transferring to the maritime industry.

They saw that data was being collected but analysis was lacking and believed IoT could be better applied to ships to optimise fuel consumption and drive better maintenance strategies.

“No one wants to be barraged by millions of records of meaningless and contextless data and have to try to figure out how to make sense of it,” Mr King told Digital Ship. “Analysis is needed, and artificial intelligence and machine learning can provide the ability to automatically analyse data in a way that gives you answers that are more meaningful,” he said. “This will ultimately help to solve problems in maritime that we thought were never possible.”

Mr Bhattacharyya and Mr King decided to use their experience in data science and machine learning to launch software company ioCurrents, which helps shipping companies to make better sense of their data through an intelligent and scalable platform called MarineInsight. MarineInsight takes data already collected by sensors onboard ships and turns this into a Digital Twin to characterise and understand a vessel’s operations. Data can be collated from sensors and the cloud, and analysed to deliver real-time information on the performance efficiency of any vessel and its assets.

MarineInsight analyses a variety of ship components including engines, generators, Z-drives, transmissions, fuel and water tanks, winches, PLCs, or custom sensors for parameters like temperature or vibration. The tool can be used to determine how efficiently an engine is running, how much fuel is being consumed and the emissions it is producing. In the event of a ship having difficulty running a certain type of fuel, a common scenario where fuel has recently been switched from high-sulphur to low-sulphur to meet regulation, MarineInsight generates a smart alert before any propulsion issues arise. Using AI and machine learning, MarineInsight predicts when equipment is likely to fail to enable condition-based maintenance, improving the lifespan of equipment and reducing vessel downtime, while minimising maintenance costs.



MarineInsight focuses on analysing data from the core systems of the vessel to determine its overall health. “We know that data from engines and from generators and from GPS navigation systems is very useful because if any of these fail it could be catastrophic,” Mr King explained. Once this data is analysed and given to the operators, anyone within that organisation as well as permitted stakeholders on ship or on shore can access the data in real-time. The overall goal is to bridge the gap between ship and shore by providing real-time vessel analytics to personnel wherever they are located. Within the MarineInsight portal is a key feature called the InsightHub, where users can access real-time automated reports, showing information that can be provided to the IMO or other regulatory bodies to prove compliance in various areas. The reports are automatically generated, eliminating the need for crew to manually complete them to reduce administrative burden and enhance report accuracy. The reports and charts can be customised to zoom in on any area of a vessel’s operation. For those just starting out on their digitalisation journey and striving to keep costs low, individual reports can be purchased as and when required for a few hundred dollars.

In addition to providing information on the health of a vessel, MarineInsight provides real-time insight on fuel performance and indicates how current fuel consumption compares to a vessel’s previous voyages. Using data collected from a vessel over a one-month period, MarineInsight establishes a baseline and uses self-learning algorithms to identify whether the current voyage is less or more fuel efficient than similar previous voyages.

Voyage optimisation

ioCurrents is planning to launch its voyage efficiency optimisation tool with AI during 2021. “The tool will enable you to get recommendations on the optimal speed for the vessel based on what AI has learned about the equipment's most efficient mode of running,” Mr King explained. “We’re not telling you where to go but we’re saying speed up or slow down throughout your voyage, at times that the captain might not have expected to make a change. Over the course of the voyage, this is going to give you the most efficient total run. We've seen substantial improvements in performance while still arriving on time using

this method and I think this will help companies to save money as they take on more expensive types of fuel to meet environmental initiatives.”

Installation and integration

The MarineInsight platform consists of two key components. The DataHub, a mini-computer that collects and analyses data locally and is stored onboard the vessel. The second component is the remote analytics cloud platform, which continually receives data that is uploaded via a cellular or satellite connection.

MarineInsight can be integrated with data from other solutions that are stored on the cloud. For more rich and real-time solutions, the system can also be integrated with other onboard systems. “We have APIs on our software that can communicate with other software that already exists onboard the vessel. Some of that data never needs to be uploaded to the cloud, it can be acted on immediately onboard the vessel, even if connectivity is poor,” Mr King explained.

MarineInsight is quick to install and begins collecting and analysing data immediately. For the first couple of months, the platform uses this data to build a model to understand the vessel’s performance. After a few months of use, MarineInsight is able to apply higher levels of machine learning and AI to carry out predictive analysis and efficiency optimisation.

While the pandemic has affected physical movement and installation of solutions onboard vessels, ioCurrents saw this an opportunity to develop a self-installation kit. The small equipment package can be shipped anywhere in the world and installed by crew members without a high degree of technical knowledge.

Customers and partners

MarineInsight was first introduced to fishing vessel customers based in Washington State but operating out of one of the largest American fishing ports, Dutch harbour in Alaska. For ioCurrents this was the perfect opportunity to trial the technology onboard small vessels operating in treacherous waters. According to Mr King, many fisherman he spoke with were keen to resolve safety issues they were facing as well as showing motivation to tackle environmental challenges. Following successful roll out to the fishing sector, ioCurrents moved on to the tug and barge industry. “We were keen to scale up the technology and we saw from these operators that there was a lot of motivation to improve navigational safety. If the main engines fail on a tugboat and it’s moving between here and Alaska, pulling a two thousand tonne barge behind them, it’s going to be really bad if they lose the ability to navigate in waters with swift flowing currents. Not only is this a risk to their life, but it could also be an environmental disaster,” Mr King said.

Today MarineInsight is used onboard commercial and passenger vessels including tankers and bulk carriers.

ioCurrents is currently working with top maritime security technology groups to provide third party verification.

ioCurrents is also partnering with various companies to expand its solution. A partnership with KVH is enabling ioCurrents to offer KVH Watch connectivity as part of its maritime services. KVH Watch’s dedicated connectivity enables ioCurrents to use real-time data to provide customers with actionable insights and engage in real-time video troubleshooting sessions during a voyage.

In May this year, Danelec Marine announced it was connecting its shipboard data to the ioCurrents platform. This partnership will enable owners and operators to access even greater data on vessel performance without the need to install any additional hardware from ioCurrents.

Most recently, Kongsberg Digital announced that it was adding software solutions from MarineInsight to its Kognifai Marketplace. This will enable its Vessel Insight users to access automated reports on vessel health and fuel consumption based on automated data analysis as well as ioCurrent’s more advanced AI driven machine learning models to predict

failures and dynamically optimise voyages. This is all available without the installation of additional hardware.

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Inséré 16/03/22 DOSSIER Enlevé 16/04/22

INVESTIGATION: How an expected billion-dollar, trouble-plagued ship salvage may have also undermined federal disaster response laws

Saturday's oil spill is just the latest in a string of setbacks for the snakebit Golden Ray, now on track to be the most expensive ship salvage operation in history.

Author: Anne Schindler

Almost every day for the past two years, Captain Andy Jones has gone searching for something he hopes he doesn't find. The 8th generation St. Simons Island native has been documenting the cargo ship disaster from the morning it capsized Sept. 8, 2019. As the sun broke over the horizon, he piloted his boat, the **MINORCAN MULLET**, into the sound. "We rounded the corner, and yeah: There was a ship on its side," he recalls. "It was a bit shocking, especially to understand there were people trapped in there. «The rescue effort that followed seemed almost miraculous -- all 24 people aboard survived. But the subsequent salvage operation hasn't been so fortunate. During the nearly two years the ship has languished off the Georgia coast, it has been plagued by oil leaks, one massive fire and multiple equipment failures. It's also been delayed by COVID, hurricane season and what the U.S. Coast Guard gently dubbed "engineering problems." The result is a project that is more than a year behind its original completion date and months behind even recalculated deadlines. It's also hundreds of millions of dollars over budget, according to industry experts, and is now on track to be the most expensive ship salvage operation in history.

What happened?

The trajectory of the **GOLDEN RAY** from the time it left the Port of Brunswick to the present day is so multilayered it might be called the **Golden Ray Experience**.

The initial catastrophe was caused by teetering instability, a combination of ballast discharge at sea and cargo shift in port. The blame for that has yet to be assigned – the Coast Guard and the National Transportation Safety Board have yet to issue formal findings. But the outcome was pretty clear: The two-year-old ship and its 4,200 vehicles were a total loss. St. Simons residents don't need binoculars to see the results. And they've largely learned to live around the wreck. There's even a cottage industry of T-shirts, featuring the beached craft and the words, "Ship Happens." But that doesn't make the reality of the rusting, polluting shipwreck palatable. When the plan to cut the ship into eight pieces was announced in February 2020, the Unified Command – composed of the Coast Guard, the Georgia Department of Natural Resources and the "Responsible Party" (ship owner Hyundai Glovis and its insurer, North of England P&I Club) -- said it would be completed before hurricane season, in June 2020. Cutting didn't begin until November 2020, but even then, the Unified Command said it would still take just eight weeks to complete. Twenty-four hours for each cut. Done before New Year's Day.

The Coast Guard and the salvage company, T&T Salvage, now acknowledge the 24-hour estimate was – well, optimistic. Some cuts have taken months to complete. But maritime salvage experts contend the original estimate was unrealistic from the start. “It’s just completely implausible,” says Paul Hankins, director of operations for the Navy Sea Systems Command’s Supervisor of Salvage & Diving, and former VP of Salvage for Donjon-SMIT. “Now, everybody now knows that it was ridiculous because everybody has seen what happens when you try to do these chain cuts. But back then, certainly all the salvors knew that that was ridiculous.”

It was, paradoxically, the promise of speedy completion that was the reason the original salvage contractor, Donjon-SMIT, was ultimately replaced by T&T Salvage.

The decision to change contractors midstream has been the source of enormous controversy in the maritime world. Opening the project to bidders arguably delayed the process, as the contract was negotiated and the new salvage machinery brought on site. But it was the precedent set by the change that most worries some observers. Captain John Konrad, a master mariner, author and founder of the maritime blog GCaptain.com, says by allowing the ship owner and insurer to re-bid the contract, the Coast Guard undermined the Oil Pollution Act of 1990. “OPA 90” as it’s known in the salvage world, is the federal law created following the Exxon Valdez disaster in 1989. It requires, among other things, that all vessels operating in U.S. waters have an emergency responder under contract in the event of an accident.

The reason is simple, Konrad says. The same reason cities don’t wait for buildings to burn before they hire firefighters. “It’s an emergency.” Donjon-SMIT was that emergency contractor for the **GOLDEN RAY**. And their early work was a success. Staff was on site within two hours, and crews began working to extinguish an on-board fire soon after that. It was Donjon-SMIT employees, with Coast Guard oversight and help from other crews that ultimately rescued four trapped crew members, cutting through the hull to deliver food, water -- and eventually a ladder -- to the men inside.

“SMIT is probably the best salvage company in the world,” Konrad says. He notes it was the contractor summoned to the Suez Canal in March to unstick the **EVER GIVEN** – a container ship twice as big as the Golden Ray. “They needed the best,” he says. “They got the best.” Konrad says changing salvage companies midstream is irregular and “pretty much illegal” under OPA 90. “But the Coast Guard has overriding authority,” he says, “and somehow they got an exception to this rule.” After Donjon-SMIT was replaced, the company sued the Coast Guard in February 2020, alleging the agency was “in direct violation of the OPA 90 ... [in] permitting an extremely high-risk salvage plan.” The complaint continued, “the whole point [of the law is] ...to prevent having to put everything on hold... while the salvors negotiate a contract.” In response, the Coast Guard said it lawfully deviated from OPA 90 because they have the discretion to “authorize deviation ... where exceptional circumstances exist.” Those “exceptional circumstances, according to the Coast Guard’s filing, were threefold: The vessel is very large (656 feet in length) and in very close proximity to a navigable channel that is the sole access route to the one of the busiest ports in United States -- the Port of Brunswick The vessel is grounded in an environmentally sensitive area that includes prime shrimping grounds and a significant roosting area for migratory birds The vessel is aground in close proximity to the major tourist destinations of Saint Simons and Jekyll Islands The court rejected Donjon-SMIT’s request for an injunction to stop the bidding process and the company ultimately abandoned the lawsuit. Konrad says it was a seminal moment in the **GOLDEN RAY** saga. “They were allowed to accept the other bids, the bids came out with this dangerous plan that T&T Salvage is doing now, it was approved -- and right away, it was a huge delay factor,” he says. “And you got to understand the longer it’s there, the harder it gets. Things rust, things fall apart, machinery breaks, it sinks down deeper. So just the delay made it a lot harder.”



*The bow section of the vehicle carrier **GOLDEN RAY**, with some of the 4,000 vehicles onboard, waits to be towed to a scrap yard, Tuesday, Dec. 1, 2020, in Brunswick, Ga. The salvage operation uses a heavy lift twin gantries with a chain to cut the vessel into seven pieces before they are lifted onto a barge and scrapped.*

Who Knew?

The choice to go with T&T Salvage was based on the company's plan for a "large section removal." This approach involved using a steel chain to slice the ship into sections and hoist each one onto a barge for removal. According to the ship owner and its insurance company, large section removal was the "preferred option," since they believed it could be accomplished quickly. It's an approach Donjon-SMIT considered, but rejected. According to Hankins, they knew better. "We tried that method, and it failed," he explains. The company attempted large scale removal in two earlier car carrier salvage projects – the Tricolor and the Baltic Ace. Because cargo ships have limited interior structural integrity – Hankins compares them to a floating parking garage – they eventually fell apart. "There's so little structural integrity inside these ships. It's essentially a big shoe box. And when you cut the ends off, which is where the strength of the ship is, the tendency was for the middle of the ship basically to collapse."

The other reason they disliked that approach, he says, was the pollution risk.

"The whole reason for doing this was to prevent pollution from entering St. Simons Sound," he says. "As soon as you cut into that hull with a chain, any pollution that's inside that hole is going to leak out." Donjon-SMIT favored a small-scale removal. They proposed removing ship's starboard side – essentially the "top" of the downed vessel – then gutting its interior, removing the vehicles inside in small sections while leaving the hull intact.

"It's essentially a bathtub," Hankins explains. "Everything inside is contained." The large-scale removal plan included an environmental barrier built around the wreck to contain pollution and debris. In theory, it would contain the impacts of sawing the ship into pieces. In practice, the barrier has not prevented quantities of heavy oil and debris as large as tires and bumpers from routinely washing up on nearby beaches. Just last weekend, removal of the sixth section generated the third "significant" oil discharge, creating a veritable river from ship to shore, blackening the famed Golden Isles and tainting more than two miles of Brunswick area beaches. You don't have to be a maritime ship expert to realize that this plan is terrible." Konrad says. "This was a car carrier! They're cutting

through cars, through gas tanks, antifreeze lines, hydraulic lines, it's a conglomeration of all the sh*t that you're putting into a car." "I use this analogy of a washing machine," he says. "You have this high flow going through. So any transmission fluid oil, piece of the cars, whatever: If it gets in that current, it's going to get entrained. And when you entrain oil and water, that means it's not floating on top, it's just all mixed up. And it goes out into the water column." T&T Salvage referred questions about the project to the Unified Command under the Coast Guard.



Oil blackens the famed Golden Isles following the July 31, 2021 spill during the ship's sixth cut.

The ship's insurer, the North P&I Club, said that its role in the salvage operation – including the contractor and the removal method selected -- is limited. A representative told First Coast News, "Most of what is happening is being dictated by the Coast Guard," adding, "the ultimate decision makers are the federal and state authorities." Coast Guard spokesman and Petty Officer 2nd Class Michael Himes says large section removal "fit the safety, environmental protection and port functionality priorities" of the project, and says environmental barrier has been shown to work. As for any delays the bid process may have caused, he says it was just one of myriad delays the project has encountered, and hardly the most consequential. "To suggest that a faster way was possible AND fit our priorities is speculation at best."

How Much?

The Costa Concordia disaster was costly in ways that cannot be measured.

Thirty-two people died after the cruise ship's captain crashed into rocks off the west coast of Italy, causing it to capsize and sink.

But aside from the human toll, it was also the single most expensive ship salvage operation in history.

Until now.

According to industry publication The Insurer, in February 2021, the price tag for the Golden Ray salvage stood at \$800 million – and that was before the substantial cost of fighting the conflagration in May. The project is now expected to top \$1 billion – the Costa Concordia's price tag.

Tow boats sail past the Costa Concordia ship as it lies on its side near the Tuscan Island of Giglio, Italy, Sunday, Sept. 15, 2013. An international team of engineers is expected on Monday, Sept. 16 a to try a never-before attempted strategy to right the luxury liner, which capsized after striking a reef in 2012 killing 32 people.

The Golden Ray's primary insurer is North of England P&I Club, one of 13 "Protection & Indemnity" clubs, which cover liability for about 90 percent of the world's ships. The P&I clubs will collectively shoulder monumental cost of the Golden Ray, not taxpayers.

But it's not just the price tag that is eye-popping, it's the degree of miscalculation. According to sources familiar with the bid process, Donjon-SMIT and T&T Salvage each proposed project costs between \$100 million and \$200 million. Though some cost overruns attach to the chosen project – the fire, broken cutting chains – it's impossible to extricate those early estimates from the delays that have plagued the project, including storms and the pandemic. Coast Guard spokesman Himes says, "it makes me a little skeptical that some people try to paint an alternative reality. To say that was a better faster way to do this that would have fit all the priorities -- that's not the world we are in. It's almost like a thought experiment."

Hankins contends the project should have been done long ago, but agrees there is nowhere to go but forward. "You can't put the genie back in the bottle at this point." Ray McKelvey, the project's Environmental Response manager, says given the many challenges, things are going as well as could be expected. "It's a tough job," he says. "I think with this the size, and the fact that nobody's ever done a project like this before I really feel that we're, in my opinion, keeping them moving along safely and doing the best we can to prevent a bigger catastrophe." With hurricane season underway, that goal is something on which everyone agrees. "We just want them to finish," says Capt. Andy Jones. "The best-case scenario we can hope for now is for the ship is removed as quickly as safety will allow."

Source: firstcoastnews

Inséré 18/03/22 NIEUWS NOUVELLES Enlevé 18/04/22

BELGIAN SHIPPING APPLAUDS THE FIRST EUROPEAN MARITIME TRANSPORT ENVIRONMENTAL REPORT

The Royal Belgian Shipowners' Association says the EMTER report provides a useful overview on the current status quo for the sector to move forward towards Europe's carbon neutrality ambition.

Launched on 1 September by the EEA and EMSA, the EMTER report acknowledges that maritime transport is an essential vector for European trade and a driver of economic growth. While maritime transport accounts less (13.5%) for GHG emissions than road transport (71%) and civil aviation (14.4%), the industry is determined to effectively transform itself to help achieve the EU's goal of climate neutrality by 2050.

While the report touched on several aspects of environmental impact, some significant figures were mentioned in the areas of Greenhouse Gas (GHG), air pollution, underwater noise pollution.



"60% of GHG emissions come from voyages in and out of Europe and 40% come from intra-Europe voyages."

In terms of GHG emissions, shipping is currently the most effective form of transport for the international and intra-EU transport of goods and raw material, compared to road and aviation. The continuous use of maritime transport is thus necessary to prevent further increase of GHG levels.

Today, the low to zero carbon alternative fuels, nor the engine to burn them, are on the market yet, in the quality and quantity needed by the shipping industry. Notwithstanding, Belgian shipowners are investing in the future by eg exploring the use of hydrogen or by ordering ammonia-ready new-builds (meaning, once the engine and fuels are available on the market, the ships can be retrofitted to burn e.g. ammonia) Belgian shipowners are looking at medium-term as well as long-term energy transition solutions that are both viable and scalable. Recent milestones by Belgian shipowners include:

- Exmar: Partnership with Nutrien to building a vessel powered by **low-carbon ammonia**.
- Euronav: Launched a Joint Development Programme (JDP) to accelerate the development of **dual-fuel ammonia** (NH₃) fitted VLCC and Suezmax vessels.
- CMB: Built the world's first multimodal **green hydrogen** refuelling station in Antwerp.
- DEME Group: A partner in the PosHYdon project to work on the world's first **offshore green hydrogen** pilot on a working platform.

"In 2018, the maritime transport sector produced 24% of all NO_x emissions, 24% of all SO_x emissions and 9% of all PM_{2.5} emissions, as a proportion of national EU emissions from all economic sectors."

Until new fuels are commercially available and financially viable, shipping needs to ensure that the air pollutants emitted by current fuels should be kept to a minimum, both at sea and at berth. As such, Belgian shipowners strongly encourage the use of MDO and VLSFO, instead of HFO with EGCS installations, so that air pollution is not turned into water pollution. **More notably, the RBSA supports the strict legislations regarding SO_x and NO_x at both EU and IMO levels.**

"It is estimated that between 2014 and 2019, the total accumulated underwater radiated noise more than doubled in EU waters."

Together with the Belgian Federal Department for Health, Food Chain Safety and Environment and the Federal Department for mobility and transport, the RBSA published a report on the *"Reduction of emissions and underwater radiated noise for the Belgian shipping sector"*. The report identified the various options for noise mitigation in ship design and operation. Belgian shipowners consider the inclusion of the mitigation of underwater noise pollution in their vision of sustainable maritime transport. **Optimizing the vessel's**

speed /engine power limitation can reduce emissions as well as URN, and the RBSA is in favour of this measure, despite the lack of support at the IMO.

Inséré 18/03/21 BOEKEN LIVRES BOOKS Enlevé 18/04/22

IAPH presents guidelines for LNG-powered vessels during port calls

The International Association of Ports and Harbors (IAPH) – which promotes the interest of some 200 ports worldwide – has presented guidelines for the safe handling of LNG-powered vessels at port terminals. These guidelines not only describe the required procedures and operational actions; they also set out how to maintain safety during the ship-to-ship bunkering of LNG-powered vessels.

The new guidelines are in line with IAPH's policy of equipping port authorities with the necessary instruments to safely organise bunkering in their ports, which receive a growing number of calls from LNG-powered new build vessels and ships that have been converted to LNG. The guidelines come out of the efforts of the IAPH Clean Marine Fuels (CMF) working group, which includes representatives of 13 IAPH member ports including Amsterdam, Antwerp and Rotterdam. The working group has translated the concepts of system safety, allocation of space and operational safety into practical instruments.

Inséré 20/03/22 DOSSIER Enlevé 20/04/22

How China's Expanding Fishing Fleet Is Depleting the World's Oceans

After exhausting areas close to home, China's vast fishing fleet has moved into the waters of other nations, depleting fish stocks. More than seafood is at stake, as China looks to assert itself on the seas and further its geo-political ambitions, from East Asia to Latin America.

BY

IAN

URBINA

For years, no one knew why dozens of battered wooden "ghost boats" — often along with corpses of North Korean fishermen whose starved bodies were reduced to skeletons — were routinely washing ashore along the coast of Japan.



*The Chinese flagged fishing vessel **FU YUAN YU 8682** transiting the Singapore Strait in the Westbound direction*

A recent investigation I did for NBC News, based on new satellite data, has revealed, however, what marine researchers now say is the most likely explanation: China is sending a previously invisible armada of industrial boats to illegally fish in North Korean waters, forcing out smaller North Korean boats and leading to a decline in once-abundant squid stocks of more than 70 percent. The North Korean fishermen washing up in Japan apparently ventured too far from shore in a vain search for squid and perished.

The Chinese vessels — more than 700 of them last year — appear to be in violation of United Nations sanctions that prohibit foreign fishing in North Korean waters. The sanctions, imposed in 2017 in response to the country's nuclear tests, were aimed at punishing North Korea by not allowing it to sell fishing rights in its waters in exchange for valuable foreign currency.

The new revelations cast new light on the dire lack of governance of the world's oceans and raise thorny questions about the consequences of China's ever-expanding role at sea and how it is connected to the nation's geopolitical aspirations.

Most Chinese ships are so large that they scoop up as many fish in a week as a local boat might catch in a year. Estimates of the total size of China's global fishing fleet vary widely. By some calculations, China has anywhere from 200,000 to 800,000 fishing boats, accounting for nearly half of the world's fishing activity. The Chinese government says its distant-water fishing fleet, or those vessels that travel far from China's coast, numbers roughly 2,600, but other research, such as this study by the Overseas Development Institute (ODI), puts this number closer to 17,000, with many of these ships being invisible like those that satellite data discovered in North Korean waters. By comparison, the United States' distant water fishing fleet has fewer than 300 vessels.

China is not only the world's biggest seafood exporter, the country's population also accounts for more than a third of all fish consumption worldwide. Having depleted the seas close to home, the Chinese fishing fleet has been sailing farther afield in recent years to exploit the waters of other countries, including those in West Africa and Latin America, where enforcement tends to be weaker as local governments lack the resources or inclination to police their waters. Most Chinese distant-water ships are so large that they scoop up as many fish in one week as local boats from Senegal or Mexico might catch in a year.

Many of the Chinese ships combing Latin American waters target forage fish, which are ground into fishmeal, a protein-rich pelletized supplement fed to aquaculture fish. The Chinese fleet has also focused on shrimp and now endangered totoaba fish, which are much prized in Asia for the alleged medicinal properties of their bladders, which can sell for between \$1,400 and \$4,000 each.

Nowhere at sea is China more dominant than in squid fishing, as the country's fleet accounts for 50 to 70 percent of the squid caught in international waters, effectively

controlling the global supply of the popular seafood. At least half of the squid landed by Chinese fishermen pulled from the high seas is exported to Europe, north Asia and the United States.

To catch squid, the Chinese typically use trawling nets stretched between two vessels, a practice widely criticized by conservationists because it results in a lot of fish inadvertently and wastefully killed. Critics also accuse China of keeping high-quality squid for domestic consumption and exporting lower-quality products at higher prices. In addition, critics say, China overwhelms vessels from other countries in major squid breeding grounds and is in a position to influence international negotiations about conservation and distribution of global squid resources for its own interests.

China's global fishing fleet did not grow into a modern behemoth on its own. The government has robustly subsidized the industry, spending billions of yuan annually. Chinese boats can travel so far partly because of a tenfold increase in diesel fuel subsidies between 2006 and 2011 (Beijing stopped releasing statistics after 2011, according to a Greenpeace study). For over a decade, the Chinese government has helped pay to construct bigger, more advanced steel-hulled trawlers, even sending medical ships to fishing grounds to enable the fleet to stay at sea longer. The Chinese government supports the squid fleet in particular by providing it with an informational forecast of where to find the most lucrative squid stocks, using data gleaned from satellites and research vessels. Our reporting team was forced to divert course to avoid a collision when a Chinese ship suddenly swerved toward our boat. On its own, distant-water squid fishing is a money-losing business, according to research by Enric Sala, founder and leader of the National Geographic Society's Pristine Seas project. The sale price of squid typically does not come close to covering the cost of the fuel required to catch the fish, Sala found.

Still, China is hardly the worst offender when it comes to such subsidies, which conservationists say, along with over- capacity of fishing vessels and illegal fishing, is a major reason that the oceans are rapidly running out of fish. The countries that provide the largest subsidies to their high-seas fishing fleets are Japan (20 percent of the global subsidies) and Spain (14 percent), followed by China, South Korea, and the U.S., according to Sala's research.

More recently, the Chinese government has stopped calling for an expansion of its distant-water fishing fleet and released a five-year plan in 2017 that restricts the total number of offshore fishing vessels to under 3,000 by 2021. Daniel Pauly, a marine biologist and principal investigator for The Sea Around Us Project at The University of British Columbia, said he believes that the Chinese government is serious in wanting to restrict its distant-water fleet. "Whether they can enforce the planned restrictions onto their fleet is another question," he added.

Other attempts to rein in China's fishing fleet, however, have been slow. Imposing reforms and policing them is difficult partly because laws are lax, much of the workforce on vessels is illiterate, many ships are unlicensed or lack unique names or the identifying numbers needed for tracking, and the country's fishery research institutions often refuse to standardize or share information domestically or abroad.

Still, more than seafood is at stake in the present size and ambition of China's fishing fleet. Against the backdrop of China's larger geo-political aspirations, the country's commercial fishermen often serve as de-facto paramilitary personnel whose activities the Chinese government can frame as private actions. Under a civilian guise, this ostensibly private armada helps assert territorial domination, especially pushing back fishermen or governments that challenge China's sovereignty claims that encompass nearly all of the South China Sea.

"What China is doing is putting both hands behind its back and using its big belly to push you out, to dare you to hit first," said Huang Jing, former director of the Center on Asia and Globalization at the Lee Kuan Yew School of Public Policy in Singapore. Chinese fishing boats are notoriously aggressive and often shadowed, even on the high seas or in other countries' national waters, by armed Chinese Coast Guard vessels. While reporting at sea, my photographer and I filmed 10 illegal Chinese squid ships crossing into North Korean

waters. Our reporting team was forced to divert its course to avoid a dangerous collision after one of the Chinese fishing captains suddenly swerved toward the team's boat, coming within 10 meters, likely intending to ward off the boat. From the waters of North Korea to Mexico, incursions by Chinese fishing ships are becoming more frequent and aggressive.

China has sought to extend its maritime reach through more traditional means, too. The government has, for example, expanded its naval force faster than any other country, with at least three fleets of naval ships believed to be under construction, while also dispatching at least a dozen advanced research vessels that prospect for minerals, oil, and other natural resources.

But the more aggressive and ubiquitous blue-water presence globally is China's fishing fleet. These vessels are routinely cast by Western military analysts as a vanguard "civilian militia" that functions as "a nonuniformed, unprofessional force without proper training and outside of the frameworks of international maritime law, the military rules of engagement, or the multilateral mechanisms set up to prevent unsafe incidents at sea," as Greg Poling wrote recently in *Foreign Policy*.

Nowhere is China's fishing fleet more omnipresent than in the South China Sea, which is among the most hotly contested regions in the world, with competing historical, territorial and even moral claims from China, Vietnam, Philippines, Malaysia, Brunei, Taiwan, and Indonesia. Aside from fishing rights, the interests in these waters stem from a tangled morass of national pride, lucrative subsea oil and gas deposits, and a political desire for control over a region through which a third of the world's maritime trade flows.

In the South China Sea, the Spratly islands have attracted most attention as the Chinese government has built artificial islands on reefs and shoals in these waters, militarizing them with aircraft strips, harbors, and radar facilities. Chinese fishing boats bolster the effort by swarming the zone, crowding and intimidating potential competitors, as they did in 2018, suddenly dispatching more than 90 fishing ships to drop anchor within several miles of Philippines-held Thitu Island immediately after the Philippine government began modest upgrades on the island's infrastructure.

In justifying its rights over the region, Beijing usually makes a so-called "nine-dash line" argument, which relies on maps of historic fishing grounds that feature a line made of nine dashes encompassing most of the South China Sea as belonging to China. Partly because China ignores most of the criticism, and partly because China is economically and otherwise dominant on the global stage, there is a tendency in Western media to lay blame on China for many of the same actions of which the U.S. and Europe have been guilty — in the past or presently. And while defining what is true or fair in the South China Sea may be no easier than it has proven to be in places like the Middle East, most legal scholars and historians say the nine-dash line argument has no basis under international law, and it was found to be invalid in a 2016 international court ruling.

Clashes over fishing grounds involving the Chinese are not limited to the South China Sea. Japan and China are at odds over the Senkaku Islands, known in Chinese as the Diaoyu or "fishing" islands. Elsewhere, an Argentine Coast Guard vessel fired a warning shot to halt a Chinese ship's escape to international waters in March, 2016. When the Chinese ship, the *Lu Yan Yuan Yu*, responded by trying to ram the Argentine vessel, the Coast Guard ship capsized the fishing vessel. Some of the Chinese crew escaped by swimming out to other Chinese vessels, while others were rescued by the Coast Guard.

From the waters of North Korea to Mexico to Indonesia, incursions by Chinese fishing ships are becoming more frequent, brazen and aggressive. It hardly takes a great feat of imagination to picture how a seemingly civilian clash could rapidly escalate into a bigger military conflict. Such confrontations also raise humanitarian concerns about fishermen becoming collateral damage, and environmental questions about the government policies accelerating ocean depletion. But above all, the reach and repercussions of China's at-sea ambitions highlight anew that the real price of fish is rarely what appears on the menu.

This article was produced in collaboration between The Outlaw Ocean Project and Yaleenvironment 360.

Inséré 22/03/22 NIEUWS NOUVELLES Enlevé 22/04/22

Europe Is Desperate for LNG While Asia Has More Than It Needs

Asia's relentless buying of liquefied natural gas earlier this year has left the region so well stocked for winter that spot shipments are being diverted to energy-hungry Europe. Multiple vessels are now being diverted from Asia after prices in Europe traded at a rare premium, traders with knowledge of the matter said. A looming LNG wave will bring much needed supplies just as temperatures are dropping fast and is helping push European gas prices down from record-highs last week. Energy prices soared in Asia earlier this year as China stockpiled everything from coal to fertilizers ahead of the winter. Now that a mild start to winter has ensued in Northeast Asia, buyers from Japanese utilities to Chinese factories are sated, while spot inquiries for cargoes have dropped to a whimper last week, said traders.



The 2016 Hyundai Samho built **174000 cubic meters Liquid Gas** tanker **MARAN GAS ACHILLES** spotted Westbound transiting the Singapore Strait. In Europe however, buyers are struggling to replenish inventories amid uncertainty over the startup of the Nord Stream 2 pipeline from Russia. From Italy to Poland, the continent has started to bid up the market to secure cargoes, although at prices surpassing those seen at the peak of last winter. "Europe is simply bidding gas away from Asia to not run out of electricity," Goldman Sachs analyst Damien Courvalin said in a call with reporters Friday. Temperatures are plunging while it's been a relatively mild winter so far in Asia, he said. Sellers have begun diverting cargoes away from Asia to take advantage of the spread, which may only accelerate over the next weeks. Traders are watching for any signs on whether economics would shift to make it profitable to send supplies to Europe directly from production facilities in the Pacific region. Typically, Europe is supplied from the Atlantic basin producers such as the U.S., northern Russia or Nigeria, or the Middle East. Supplies not limited by destination restrictions can head where the best market is.

Cargo Diversions

Prices in Europe are so high that some Asian countries may even choose to re-export LNG they imported for their own consumption. But this rare move is unlikely at the moment because LNG cargoes from the U.S. and Western Africa are much preferred due to the time traveled, Mathew Ang, an analyst at Kpler, said.

The **MINERVA CHIOS** vessel was sailing from the U.S. to Asia when it U-turned around December 15 and is heading toward the Red Sea, according to Bloomberg shipping data. The lngships Manhattan, which was originally heading to China, is on its way to North Europe from the U.S., Kpler's Ang said. More shipments could follow suit although they aren't likely to be cheap. "Continued normal weather conditions across Northeast Asia will minimize the need for prompt spot purchasing, leaving the high-priced cargoes for the European market," said Felix Booth, head of LNG at energy-intelligence firm Vortexa Ltd. To be sure, chillier weather could raise demand in January and see a return of Asian buyers to the market, traders said. A cold snap in China's east and central regions over the past weekend was expected to drop temperatures by 6 to 10 degrees Celsius, according to the country's meteorological administration. For now, extra supplies for Europe would be welcome as storage levels are less than two-thirds full before the worst of the winter has started. The European gas benchmark in the Netherlands fell 4.1% on Friday but is up about 600% this year.

Source : Bloomberg

Inséré 23/03/22 NIEUWS NOUVELLES Enlevé 23/04/22

Port of Rotterdam Authority raising land level for 'green' companies



At Maasvlakte 2, 55ha of land is being raised for companies that make renewable fuels and chemical products. Marine engineering company Van Oord has recently started with the project. Finnish company UPM is making plans to establish its business here, and the Port Authority wants to make space available to other companies that make products from residual materials. Concentrating these types of companies brings about a cluster of companies that can use the same infrastructure, including pipelines.

Van Oord is delivering a total of 5 million m³ of sand onto the southern part of Prinses Alexiahaven. In anticipation of specific plans for the area, this part of Maasvlakte 2 had not been raised yet. The new land will be raised to six metres above New Amsterdam Water Level (NAP). Van Oord expects the work will be completed in July. Next, the sand will have to settle for half a year before it can be built on. A layer of clay will be placed on top, after which grass will be sown to prevent the sand from being blown away.

Preparation of the site followed the Finnish company UPM's recent announcement that it is now only looking at Rotterdam as a location for establishing its new biorefinery in Rotterdam. Thus, it could be the first company of the new cluster for producing renewable fuels and chemicals. The site of this cluster is expected to measure approximately 90ha in size. UPM's decision on the new plant is not expected to be made before the end of this year. The Port Authority handles the port space with the utmost care. At Maasvlakte 2, there is still space for expanding container handling and activities that fit in with the transition strategy of the port, such as green hydrogen production, landing of offshore wind power, and the production of renewable fuels. Space is available elsewhere in the port area, but these are mainly smaller sites. Additionally, various sites will be redeveloped in the course of time.

Inséré 24/03/22 HISTORIEK HISTORIQUE Enlevé 24/04/22

Voyage à la Côte d'Afrique, au Portugal et en Espagne d'Eustache de la Fosse, bourgeois de la ville de Tournai (1479-1480)

Par Jean Dams

«Pour vous advertir de la vraye vérité, moy, Eustace de la Fosse «natif de la bonne ville et cité de Tournay, ay fait en ma jonessee «la pluspart de che volage contenu dans che

presentent libre. Et l'an «de Nostre Seigneur MCCCCLXXIX que je partys de la bonne ville de «Bruges, et arrivay à Lescluse pour la veille de la Pentecouste; et «incontinent que je eus disné, nous monstasmes en la mer et partismes pour tirer en Espagne...».

C'est ainsi que commence ce manuscrit conservé à la Bibliothèque de Valenciennes (1). Eustache de la Fosse, natif de Tournai, au service d'un marchand de Bruges, raconte son voyage qui était en fait une expédition purement commerciale, destinée à faire du trafic sur la Côte Occidentale d'Afrique. Les aventures de notre voyageur s'étaient déroulées en 1479-1480. Ce n'est pourtant que quarante ans plus tard qu'il le mit par écrit (2). Une deuxième précision. Ce travail a été facilité par le fait que ce texte a été édité en 1897 dans la Revue Hispanique par Raymond Foutché-Delbose, fondateur de ce périodique. Nous croyons cependant légitime de donner à partir de cette édition une présentation simple de ce récit de voyage. Il fourmille, comme on le verra, de notations curieuses.

Eustache s'embarque donc au port de l'Ecluse la veille de la Pentecôte 1479; il débarque le samedi suivant à Laredo sur la côte cantabrique. De là il se rend à Burgos où il passe trois mois à régler certaines affaires de son maire. Burgos, qui était déjà une ville importante, allait devenir la grande place du commerce international de la laine. En passant par Tolède et Cordoue il arrive à Séville. Le facteur dans cette ville du marchand brugeois avait affrété une caravelle à bord de laquelle il avait fait charger les marchandises venues directement de Flandre, destinées à la Mina de Oro, sur la Côte de l'Or. Cet endroit s'appelait encore Elmina dans l'ancienne Gold Coast britannique.

A bord de la caravelle, Eustache de la Fosse passe de Sanlucar de Barrameda à un port du comté de Niebla (3), vraisemblablement Palos à la recherche d'un pilote expérimenté.

Il faut dire ici quelques mots sur la situation politique et commerciale existant en cette fin du XV^e siècle sur la partie de la Côte d'Afrique où Eustache devait se rendre. Par lettres patentes datées de Séville, 4 mars 1478, les Rois Catholiques avaient autorisé les marins de Palos à commercer librement par mer et par terre avec la Mine d'Or.

Cependant cette concession constituait un acte d'agression contre le Portugal par suite de l'état de guerre existant alors entre les deux pays (guerre dite de Succession de Castille) depuis 1475, et auquel avait mis fin le traité d'Alcaçovas conclu le 4 septembre 1479; l'une des clauses de ce traité stipulait que le commerce et la navigation de la Guinée et de la Mine d'Or appartiendraient aux Portugais. Ce sont ces dispositions qui valurent à Eustache de la Fosse les épreuves qu'il eut à traverser.

Mais revenons aux aventures de notre voyageur. La caravelle reprit la mer, fit escale à Cadix, à Safi sur la côte marocaine, à Lanzarote et à Hierro, deux des Iles Canaries; puis au Cap Blanc où antérieurement avait fait naufrage un autre facteur de Bruges, tué par les Mores sans avoir pu recevoir le secours des pêcheurs canariens. La caravelle sévillane subit les tempêtes, les calmes et les vicissitudes de la mer, mais arriva au Cap Vert et se joignit à deux autres caravelles de Cadix. Ensemble elles poursuivirent leur navigation jusqu'à la Sierra Leone, aux Bancs de Santa Ana et à la Mina de Oro où les trois caravelles arrivèrent le 17 décembre 1479.

Les opérations mercantiles avaient déjà commencé depuis la Sierra Leone; on pratiquait le troc des marchandises importées de Flandre.

Eustache de la Fosse ne donne pas beaucoup de détails sur la nature de ces marchandises: il fait seulement état de plats, de bassins et d'anneaux de cuivre, il devait sans doute y avoir aussi de la verroterie et des tissus bon marché. Les indigènes donnaient en échange de la graine de paradys ou maniguette (le poivre de Guinée), des esclaves, de la poudre d'or. Ce commerce était éminemment profitable aux aventuriers qui le pratiquaient. En voici un exemple selon ce qu'en écrit Eustache lui-même: «et aussi ils nous amenaient des femmes et des enfants à vendre que nous «achetâmes, et puis les revendîmes là où nous les trouvâmes à revendre et nous «coûtaient la mère et l'enfant un bassin de barbier et trois ou quatres grands «anneaux de laiton d'achat. Nous les revendîmes bien 12 ou 14 poix d'or, et chaque «poix est 3 estrelins d'or qui est un bien grand gain.

Tout ira bien jusqu'à l'apparition la nuit des Rois, c'est-à-dire la veille de l'Épiphanie (5 janvier 1480) de quatre navires portugais qui se firent connaître par leur artillerie et prirent les caravelles, traitant les prisonniers avec dureté après les avoir dépouillés de tout ce qu'ils avaient. Comme cette capture leur laissait trop de monde sur les bras, les Portugais donnèrent l'une des caravelles de prise aux «maronniers et povres compaignons» avec de l'eau, du biscuit, une voile et une ancre, et les renvoyèrent, selon l'expression d'Eustache, «au Père et au Fils», et ainsi ils retournèrent en Espagne. Les Portugais gardèrent prisonniers les gens les plus importants, pour les mener au Roi, et les obligèrent à vendre leurs propres marchandises pour le compte de leurs vainqueurs, répartissant les captifs sur les différents navires.

Eustache fut mis d'abord avec un bon chevalier nommé Fernand de Les Vaux, qui le traita honorablement, mais ensuite il passa sur le navire d'un nommé Diego Cam, par qui il fut beaucoup moins bien traité. Cela dura jusqu'au temps du Carême; après avoir bien exercé leur trafic sur la Côte d'Afrique jusqu'au delà du Cap des Trois-Pointes, tout le monde reprit la mer pour rentrer au Portugal.

Pendant la navigation, Eustache se mit bien avec le pilote qui lui montra les choses qu'il fallait savoir pour naviguer et mener un navire en mer, à «compasser la carte* pour aller d'un pays dans un autre, savoir bien faire le compte des lunes, prévoir quand tombera le carême, et les Pâques, enfin le comput.

On arriva aux Iles du Cap Vert où, disait-on, les lépreux étaient guéris en l'espace de deux ans, simplement en se nourrissant de la chair et de la graisse de certaines tortues qui étaient nombreuses dans ces îles, et en s'oignant de leur sang; au bout de deux ans ceux qui suivaient ce traitement étaient guéris. C'était du moins ce qu'on prétendait. Eustache raconte que, bien plus tard, après son retour, il avait rencontré à Gand Jean de Luxembourg qui l'avait questionné sur le pouvoir merveilleux des tortues des Iles du Cap Vert; il s'y rendit ensuite, se tint pendant deux ans dans l'île de Saint Jacques et y fut guéri. Toutefois la «maladye de la mort» le prit avant son retour, et c'est par le serviteur de Jean de Luxembourg qu'Eustache apprit que ce malade était mort guéri.

Beaucoup d'anciens récits de voyages font une part importante au merveilleux; Eustache de la Fosse n'y fait pas exception.

Pendant la traversée de retour on vit voler quelques oiseaux qui, selon ce qu'assuraient les marins portugais, venaient des îles enchantées: ces îles n'apparaissaient point parce qu'un évêque du Portugal s'y était réfugié avec tous ceux qui voulurent le suivre. Les marins racontaient que plusieurs navires arrivèrent dans ces îles. Cela se passait au temps de Charlemagne, quand les Sarrasins conquièrent Grenade, l'Aragon, le Portugal et la Galice. Cet évêque qui était très versé dans les arts magiques, enchantait ces îles, de sorte que personne ne les avait retrouvées et ne les retrouverait jusqu'à ce que toute l'Espagne revienne à la foi catholique. Souvent les marins qui naviguaient dans ces parages voyaient les oiseaux de ces îles, mais les îles jamais.

Eustache ajoute que, en revenant de ce voyage, donc en 1480 alors que la reconquête de Grenade n'avait pas encore été entreprise par les Rois Catholiques, lui et ses compagnons, alors qu'ils n'étaient d'aucun côté près de la terre virent en mer des oiseaux voler: c'est pourquoi les marins disaient que c'étaient des oiseaux des îles enchantées. Et les navires pouvaient bien être à 200 lieues de toute terre et de toute île.

Ces îles enchantées sont sans doute les Açores, dont la plus proche, Santa Maria, se trouve à 875 milles nautiques (1.620 km) de Cabo da Roca, au Portugal, le point le plus occidental d'Europe. L'archipel comprend 9 îles; on y trouve beaucoup d'oiseaux, notamment des buses (acores en portugais).

D'après Gaspar Fructioso, le plus ancien chroniqueur qui ait écrit sur l'île de São Miguel, la plus importante de l'archipel, une vallée appelée Caldeira das Sete Cidades (la Chaudière des Sept Cités) daterait de la formidable éruption de 1445, qui aurait provoqué à l'ouest de l'île la disparition d'un haut sommet servant de repère aux premiers navigateurs portugais des Açores. Selon l'une des nombreuses légendes locales, les sept cités fabuleuses de l'Antillia, dans cette même île de São Miguel, fondées par sept évêques qui

s'étaient enfuis du Portugal, seraient ensevelies au fond du cratère, lequel mesure 5 km de diamètre.

Après plusieurs journées en mer, la flottille arriva au Portugal la veille de la Pentecôte et on jeta les ancrs devant Cascais à l'embouchure du Tage. Le lendemain un courrier fut envoyé au roi pour lui faire savoir que les navires de la Mine d'Or étaient arrivés; et comme il y avait la peste à Lisbonne on se rendit dans un port voisin, qui devait être Setubal. Là, les commissaires du roi vinrent visiter les navires, examiner ce qu'ils avaient rapporté, et aussi quel butin on pouvait avoir fait sur les prisonniers. Après avoir reçu le tout, lesdits commissaires restèrent à bord des navires, les prisonniers furent amenés à la ville par le capitaine, livrés à la justice, enchaînés et jetés en prison. Quinze ou vingt jours plus tard, vinrent d'autres commissaires qui les emmenèrent l'un après l'autre à leur logis. Eustache eut la faveur particulière d'être invité à dîner avec eux. Malgré cela les captifs ne s'étaient jamais trouvés dans une situation aussi périlleuse, car les commissaires vinrent très vite leur notifier qu'ils étaient condamnés à être pendus, pour la cause qu'ils avaient été à ladite Mine d'Or sans le congé du roi, sentence de laquelle ils firent appel. Revenus en prison, ils y restèrent, toujours enchaînés, jusqu'à peu avant le

15

août.

Entretiens, Eustache et ses compagnons s'arrangèrent si bien avec leur gardien que celui-ci les aida à s'évader, la nuit du samedi, avant-veille du 15 août, sur la promesse d'une somme de 200 ducats qui devait lui être remise à Séville. Après avoir défermé les captifs, il leur ouvrit les portes de la prison, et toute la compagnie gagna la campagne.

De nombreuses péripéties émaillent le récit de l'évasion qu'en donne Eustache de la Fosse. La première nuit, tombant de fatigue, il doit laisser partir ses compagnons dont il ne veut pas compromettre les chances de salut. Il se débrouillera désormais tout seul. Mourant de soif, il va demander à boire à des muletiers de rencontre, qui lui disent aussitôt: .tu es l'un de ceux qui se sont échappés, mais il feint de ne pas comprendre. Il les entendit dire cependant que le gardien de la prison, qui s'était échappé lui aussi, avait été repris et était prisonnier à une demi lieue de là. Un muletier demande à Eustache s'il voulait lui donner ses chausses et qu'en échange il lui donnerait des conseils pour brûler la politesse à ceux qui le recherchaient Eustache lui donna non seulement ses chausses mais aussi son manteau.

Il suivit les conseils du muletier, marchant prudemment la nuit dans la direction qu'il lui avait indiquée, se cachant dans les buissons le jour, ou s'il faisait clair de lune, passa près de la maison où le gardien était prisonnier. Plus loin des bergers lui indiquèrent une maison où on vendait du vin; il était si faible qu'il s'y rendit. Arrivèrent deux hommes qui parlaient un très mauvais portugais; l'un deux lui dit: «vous êtes l'un des prisonniers qui se sont échappés. Après avoir fait semblant de ne pas comprendre. Eustache leur dit qu'il était de Rome, que son navire avait fait naufrage et qu'il s'était sauvé à la nage. L'un de ces hommes était de Dordrecht, l'autre était écossais; ils allaient en pèlerinage à Sainte Marie de Guadalupe, où Eustache avait lui aussi fait vœu de se rendre. Le Hollandais reprit: «je pensais bien que vous étiez l'un des prisonniers, car vous avez envoyé vos lettres à la National de Flandre à Lisbonne afin de demander votre grâce au roi pour votre délivrance.. Eustache lui dit : «j'ai encore un florin, tant qu'il durera nous ferons bonne chère.. Et ainsi ils cheminèrent ensemble pendant huit jours, et quand ils furent en Espagne Eustache les laissa. Mais les deux pèlerins lui avaient fait très bonne compagnie pendant la dernière partie du voyage, lui avaient rendu grand service en l'aidant à sortir du Portugal et à parvenir en toute sûreté en pays d'Espagne. Seulement, Eustache était maintenant démuné de tout : il avait dépensé son dernier florin avec ses deux compagnons, il avait donné ses chausses et son manteau au muletier. Ce fut donc en demandant l'aumône et en vivant la plupart du temps de pain et d'eau qu'il poursuivit son chemin, mais tout de même le cœur plus léger.

Parfois des gens secourables, touchés de compassion devant son aspect si misérable, lui apportaient un réconfort qui contribua à lui sauver la vie. Traversant un village un certain matin, il entendit sonner la messe ; il se rendit à l'église pour entendre l'office, ce qu'il n'avait pas pu faire depuis son départ d'Espagne. Le prêtre lui donna l'un des pains qu'il

avait eus à l'offrande, puis Eustache achète un verre de vin pour un dernier et ce fut son dîner. Plus loin, un laboureur dans un autre village l'hébergea et le réconforta en lui faisant partager son repas ; le lendemain matin il emplit sa gourde de vin, lui donna un pain et des figues bien mûres pour la route ; et Eustache reprit son chemin vers Notre Dame de Guadalupe.

Après avoir cheminé plusieurs jours, mendiant pour sa subsistance et vivant de pain et d'eau, Eustache arriva à Guadalupe; avant d'entrer dans le village il rencontra un jeune garçon, un de ces «pícaros qui ont inspiré une abondante littérature en Espagne à cette époque. Ce garçon fit semblant de l'assister en ce qu'il pouvait mais il lui déroba un petit sac de cuir de Cordoue qui contenait ses écritures, deux chemises et le peu de choses qu'il avait pu sauver.

Eustache n'alla pas loger chez l'hôtesse où il avait été les autres fois parce que, bien sûr, il n'avait pas le moyen de la payer. Mais comme c'était la coutume dans les lieux de pèlerinage importants, il alla dormir toutes les nuits dans l'église, car il comptait rester quelques jours à Guadalupe pour accomplir son pèlerinage et aussi se reposer. Le religieux auquel il eut affaire lui fit donner «un petit gris mantele et une paire de souliers neufs. Puis il se décida à partir pour Tolède où il espérait trouver quelque secours.

Il y arriva le samedi après la Notre-Dame de septembre (qui est le 8 septembre) et se rendit au logis où il avait séjourné les autres fois : l'hôte le reconnut et lui propose de l'héberger pendant quelques jours: il ajouta: »il y a ici un bon flamand qui est vendeur de livres mollez; il a ici deux mules». Il finit donc par rencontrer ce marchand de livres à la bourse des marchands ; mais laissons Eustache raconter lui-même les retrouvailles avec son compatriote: «et incontinent qu'il m'eult perçupt il me fit l'ambraschade à la mode du pays et ches marchants de la bourse bien esmervêillez à voir un homme bien acoustré embrascher un mal acoustré comme j'estois, et tous à luy demander quy j'estoy. Il leur dist que j'estois un grand marchand de Flandres et que j'avois esté prins des Portugalloys à la minne d'or, et tous à luy dire: »pour Dieu aydès le et le racoustrez honnestement; et incontinent il m'aschapota un manteau à la mode d'Espagne, des chausses, tellement que je me trouway le lendemain bien habillet, et sy me bailla une de ses mulles et sy vint avec moy à Burgos plus de 40 lieues de la, ou nostre facteur le paya tout à son plaisir, et puis revins à la foire de Medina del Campo.....

Eustache dut encore aller à Séville pour retrouver le double de ses écritures qu'il y avait laissées pour aller à la Mine d'Or, puisque les exemplaires qu'il avait emportés lui avaient été dérobés à Tolède. Il voulait aussi tenir sa promesse de payer et contenter le gardien auquel tous les évadés avaient promis 200 ducats, dont il fit le complément.

Après tout cela, il se mit en chemin pour revenir par-deçà en compagnie d'un marchand de Bruges qui désirait aller à Saint Jacques de Galice, pour faire ensemble une partie de la route. Quand ils durent se séparer à Villafranca del Bierzo, l'autre commença à pleurer, disant que si Eustache l'abandonnait il mourrait par les champs, qu'il ne savait pas l'espagnol, et le supplia de l'accompagner jusqu'à Saint Jacques de Compostelle, où ils arrivèrent six jours après Noël. Ils y restèrent quatre ou cinq jours et se rendirent à La Corogne où ils arrivèrent la veille des Rois. Ils trouvèrent là des navires chargés de toutes sortes de vins et de fruits de carême, qui désiraient aller en Flandre et n'attendaient que le bon vent ; ce bon vent n'arriva qu'au bout de quatre semaines. Après une traversée sans trop de problèmes, ils arrivèrent à l'Ecluse. Le lendemain à Bruges tous les amis d'Eustache le congratulaient pour avoir échappé à un si périlleux voyage. Car s'il avait perdu tous ses biens et ceux de son maître, il avait au moins conservé la vie, ce qui en ces temps-là, et même en ceux qui courent aujourd'hui, est tout de même quelque chose pour quoi il pouvait dire Deo gratias. Il vaut la peine de revenir en terminant sur ce «bon flamand vendeur de livres qui sauva notre héros de la misère lorsqu'il le rencontra à la bourse de Tolède. Il vendait, nous dit-on, des livres mollez, c'est-à-dire "moulés".. Que signifie cette expression ? On la rencontre beaucoup plus tôt et - chose frappante - dans des textes relatifs à Bruges, tout au moins sous la forme «jetés en moulé». C'est ainsi que dans les Mémoires de Jean Le Robert, abbé de Saint-Aubert à Cambrai on trouve sous la date de 1445 et de 1451 la mention

d'achats de Doctrinaux (traités de morale) «Jetés en moule». Voici le texte de 1455 :
»Item pour I doctrinal getté en molle, envoyet quérir à Bruges par Marquat "écrivain à Valencienne".

Cette mention, remarquons-le, est antérieure à la production de Gutenberg dont la Bible sortit en 1455. De quel genre d'imprimerie s'agit-il alors ?

Lucien Febvre et Henri Martin dans leur ouvrage *L'Apparition du Livre*, Paris, 1958, p. 67, avancent à ce sujet deux hypothèses. Ou bien il s'agit de simples xylographes c'est-à-dire de livres imprimés selon la technique de la gravure sur bois : chaque page (texte et image) était gravée dans le bois et imprimée ensuite par ce moyen : ou bien cette expression vise une des premières recherches précisément faites en Hollande en vue d'arriver à l'imprimerie mécanique : chaque page était peut-être coulée d'un seul bloc en métal dans une matrice préparée à l'avance et cette composition servait ensuite à l'imprimerie. Telles sont les deux hypothèses de Lucien Febvre et Henri Martin, mais il faut bien voir qu'elles visent un texte de 1445, antérieur à Gutenberg.

Notre information au contraire se situe en 1480 une date où l'imprimerie classique s'était déjà largement répandue en Europe et avait déjà pénétré en Hollande (1471-1474) et en Belgique (1474). Il pourrait fort bien se faire que, à la suite d'une évolution, l'expression "jeté en molle" c'est-à-dire «fondu en moule ait fini par désigner un livre imprimé à l'aide de caractères fondus, c'est-à-dire en somme un livre classique. C'est l'interprétation de Léon de Laborde dans son *Glossaire français du Moyen-Âge*, Paris, 1872, p. 395. Il donne sous le mot molle une quantité de textes (dont celui de 1445 déjà cité) auxquels il donne cette interprétation. En voici un qui ne permet pas le doute. Sur un livre imprimé à Paris en 1502 intitulé *Livret de consolation* on lit au verso du titre «Priez pour celui qui a translaté ce présent traité de latin en français et la fait mettre en moule pour le salut des âmes». Sur la foi d'un texte aussi clair on peut donc admettre que les livres mol-lez (ou moulés) vendus par ce «bon Flamand» en 1480 sur la place de Tolède sont bien des livres imprimés selon la technique de Gutenberg.

Cette brève information jette aussi un peu de lumière sur le commerce international du livre. Les premiers imprimés demeuraient malgré tout des produits chers et les imprimeurs étaient dépourvus de tout réseau commercial pour écouler leurs exemplaires. En conséquence ils utilisaient des «facteurs» comme notre bon flamand qui allaient prospecter la clientèle et fréquentaient les grandes villes et les foires L'indication d'Eustache de la Fosse s'accorde parfaitement avec le tableau que Lucien Febvre et Henri Martin ont fait de ce trafic (pp. 341 et suivantes).

Une constatation toute différente, c'est la dureté de cette époque où on n'hésitait pas à condamner à mort des gens qui avaient enfreint des règlements économiques. Sans doute, ni Eustache ni son maître ne devaient ignorer les risques d'une telle expédition sur la côte d'Afrique à ce moment-là, mais l'espérance d'un gain considérable devait être bien forte. D'autre part nous devons constater la remarquable présence «flamande» - entendons par là de gens des Pays-Bas dans leur ensemble - dans la Péninsule Ibérique, déjà en cette fin du XV^e siècle. De toute évidence. Eustache connaît très bien l'Espagne, il y a beaucoup de relations, la firme brugeoise qui l'emploie y est solidement implantée : elle a un facteur à Séville, un autre à Burgos, un autre à Medina del Campo. Les relations diplomatiques sont plus contestables : Eustache a douté visiblement du succès de son intervention auprès de la Nation de Flandre à Lisbonne; l'efficacité de son recours en appel lui paraît bien aléatoire: il a très bien fait de jouer quitte ou double, et en fin de compte de miser davantage sur le secours de ses jambes que sur la justice des hommes.

Il y a enfin la question des îles enchantées. Notre auteur déclare que cet enchantement magique aurait été l'œuvre d'un évêque fuyant le Portugal au moment de l'invasion arabe (donc après 711). Le chroniqueur que nous avons cité parle de son côté d'une éruption volcanique qui a fait disparaître une montagne et l'ayant remplacée par un immense cratère. Il n'est pas impossible que cette catastrophe naturelle ait permis aux souvenirs liés à l'invasion musulmane de se fixer sur ce lieu.

1. Ms. n° 493.
2. On le sait par un emprunt qu'il fit à l'ouvrage d'Americ Vespuce Le Nouveau Monde et navigations faites par Emeric Vespuce, Florentyn... translate de italien en langue françoysse par Mathurin de Redover, Paris, 1519. Le récit qui nous occupe a donc été écrit après 1519.
3. Aujour'd'hui: Province de Huelva.

Inséré 26/03/21 BOEKEN LIVRES BOOKS Enlevé 26/04/22

Het tij hoog, de maan blauw

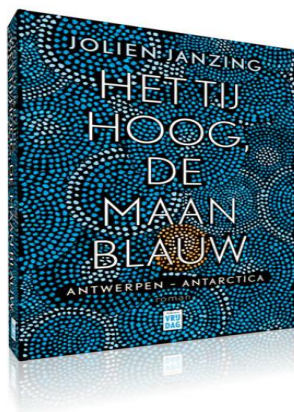
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Aantal [1 V]

Auteur: Jolien

Janzing

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Antwerpen, eind 19de eeuw. Léonie Osterrieth, een elegante weduwe, organiseert culturele salons in haar stadspaleis aan de Meir. Musici, schrijvers en kunstenaars zijn bij haar te gast, maar Léonie heeft vooral een zwak voor ontdekkingsreizigers. Het liefst zou ze zelf naar verre continenten reizen, maar ondanks haar fortuin voelt ze zich als vrouw beteugeld door de conventies van haar tijd. Als de jonge Adrien de Gerlache haar vertelt over de expeditie die hij naar Antarctica wil maken, besluit

ze hem te helpen. Er bloeit een warme genegenheid tussen hen. Adrien is de commandant van een internationale bemanning, onder wie Roald Amundsen. Later komt ook Frederick Cook aan boord. De driemaster de Belgica vertrekt uit de haven van Antwerpen. Het wordt een wervelende reis, maar aan de Zuidpool loopt het mis. Als er geen nieuws komt van de Belgica, vreest Léonie het ergste.

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okt.

2020 08:00

Op donderdag 8 oktober stelde Jolien Janzing haar nieuwe roman Het tij hoog, de maan blauw voor in De Steenschuit. Uitgever Rudy Vanschoonbeek verzorgde een inleiding en Eveline Janssens van This is how we read interviewde Jolien Janzing. Muzikale omlijsting door Jan Matthé (cello) en Luk Callens (hobo). Met eregast Annick De Ridder, Vlaams volksvertegenwoordiger en Antwerps Schepen bevoegd voor haven.

Inséré 26/03/22 DOSSIER Enlevé 26/04/22

Container shipping equities: Industry braces for higher cost



The 2017 built 1730 TEU MCC MEDAN anchored off Singapore for Hull cleaning

Despite booming stocks and rising profitability not everything is hunky dory for container shipping lines. The sector is either already facing or about to face higher costs as highlighted below.

1. Decarbonisation

Apart from their individual R&D and capex decisions, carriers are likely to face new expenses related to the wider shipping industry's efforts to decarbonise operations. The European Commission has chalked out a strategy for decarbonising shipping. In pursuant to this, the commission announced on 14 July 2021 its proposal to gradually introduce shipping into its Emissions Trading System (ETS), a carbon market that operates in all EU countries with the aim of achieving climate neutrality in the EU by 2050. The system operates under a 'cap and trade' principle that currently applies to GHG and CO2 emissions. It works by capping overall GHG emissions of all participants in the system which is then reduced over time. Carbon emitters are obligated to pay for each tonne of CO2 they generate using EU allowances (EUAs). Such allowances are described as rights to emit GHG emissions equivalent to the global warming potential of 1 tonne of CO2 equivalent. The level of the cap determines the total number of allowances available in the whole system which can be traded among ship owners. To this respect, starting in 2023, 100% shipping emissions from intra-EU voyages and 50% of carbon emissions on a voyage to or from a port in the EU will be included in the ETS. The first year in which shipping companies will be liable for their emissions will be 2023. Thereafter shipping companies will be liable for 45% emissions in 2024, 70% in 2025 and 100% in 2026, and every subsequent year. Such a system will enable ship owners to take early steps to reduce their GHG emissions, meaning they will have allowances left to sell in the market. If their emissions exceed their allowances, they will face hefty fines, currently set at EUR 100 per kg of excess CO2 emitted, unless they purchase additional allowances from the market. According to our calculations, companies such as Maersk, Hapag-Lloyd and CMA CGM could

face an annual cost burden of at least 8-10% of their EBIT from 2023 assuming there are no carbon allowances. Note that the cost burden for carriers as percent of EBIT could rise even further when ship owners must surrender enough CO2 permits to cover 45% of their emissions in 2024, 70% in 2025 and 100% in 2026 and thereafter.



*The 1997 built **1295 TEU ISEACO GENESIS** awaiting berthing anchored at the Western Anchorage in Singapore*

2. Fuel prices
Fuel prices in 2020 were quite volatile due to the pandemic. VLSFO prices started the year at USD 533 per tonne (Rotterdam), almost twice the HFO prices. However, the difference narrowed to less than USD 42 per tonne in April 2020 when the effects of the crisis kicked in and the price of VLSFO dropped to below USD 200 per tonne. However, with prices recovering and reaching USD 516 per tonne in June this year, the price gap increased with HFO reaching USD 112 per tonne. This is still lower than what carriers accounted for when they decided whether or not to install scrubbers. As oil prices move up again with recovery in the global economy, average bunker costs are set to rise by as much as 50% in 2021. However, due to the time lag in applying these changes to freight costs, Drewry expects the effects to be phased over 2021-22.



The **NYK NEBULA** outbound from Antwerp navigating the Westerschelde

3.Container charter rates

Recently, Seaspan entered into a long-term charter agreement of 10 LNG dual-fuel container vessels (7,000 teu). ZIM will pay approximately USD 1.5bn in total with the delivery of the Post-Panamax vessels expected to start from 4Q23 through the full-year 2024. This charter agreement comes after another deal between ZIM and Seaspan in February when the two companies announced a long-term chartering agreement for ten 15,000 teu LNG-fuelled vessels. In addition, Seaspan has also forward extended the charters of 17 container vessels of unspecified sizes that it has currently chartered to Cosco.

Despite the long-term charter agreement between Seaspan and ZIM, shipowners are selective about fixing long period charters fearing future problems in a normalised market. However, the short-term charters at this point in time are hitting the roof. Charter rates for sought- after Panamax boxships (4,250 teu vessel) have risen by close to 60% in the space of just three months between March and June to USD 52,500pd.

Such is the current scenario that even a feeder vessel is being chartered in for astronomical rates. According to a recent report, Allseas Global Logistics is paying USD 95,000pd for the 2,000 teu "Aisopos II" (built 2016), for a period of 80-100 days. During its previous charter to China United Lines the ship fetched a much lower USD 30,000pd. It will be used for a direct sailing between Ningbo and Liverpool, for which, according to the company, it will earn around USD 7,500 per teu, which equates to USD 15mn for the full ship load. For the chartered period Allseas will spend between USD 7.6mn and USD 9.5mn on charter hire.

4. Ports / Terminal handling costs

One of the most common costs charged to shipping lines are the terminal handling charges (THC) that comprise fees charged by shipping lines to cover costs of moving containers from terminals to ships. These port charges are the biggest cost item for container lines and also affect a container lines' choice on calling at a port as container lines prefer lower port charges.

In addition, storage costs for containers increased recently due to congestion of port and hinterland infrastructure related to the high volumes at ports in the US and Europe driven by Covid restrictions. Maersk Ocean's year-on-year container handling cost has been rising for the last two quarters. While container handling cost rose by 10% YoY to USD 2.39bn in 4Q20, it rose by another 15% in 1Q21 to USD 2.36bn compared to 1Q20.

Unusually high terminal charges also encourage container lines to consider other modes of transport such as road or rail that may work out cheaper without compromising on quality. Both Maersk and CMA CGM have a reasonably good presence in inland logistics. CMA CGM recently expanded its inland transport offering by acquiring container block train operator Continental Rail of Spain for USD 30mn.

5. Expect further upside for asset prices

The ongoing dynamics of high demand and low / tight supply has created a frenzy among shipping lines. Operators are not only trying to possess extra tonnage but are also trying to book vessels for future with forward contracts. Second-hand container ship prices are heavily correlated with charter rates so it is no surprise that asset prices are also rising. Drewry's analysis suggests that out of 145 second-hand transactions in 2020, nearly 40% were recorded during 4Q20. The trend continued further in 1Q21 with some 94 sales (300,000 teu) recorded. Additionally, 48 ships changed hands during May and June with the recent sales and purchase activities concentrated in the more liquid sub-8,000 teu segment. In the current market, more ships mean more money for carriers and MSC has been at the forefront in buying second-hand vessels, enabling it to close the gap on Maersk as the world's largest operator. Prices of second-hand container vessels continue to increase as sellers' prices rise with growing earning ability of vessels. Valuations for a five-year-old container ship (of 4,000 teu) doubled from USD 17mn in January to USD 34mn in June 2021. Meanwhile, newbuilding vessel orders have surged and yard space is becoming tight; interestingly, newbuild vessel prices have not grown as much as second-hand values. Between January and June, the value of a new build 5,500 teu vessel gained USD 15mn or 31% to reach USD 63mn.

In coming months, we expect the second-hand values of container ships to continue their upward trajectory due to the scarcity of tonnage relative to the colossal demand. However, not all shippers are in a rush to acquire vessels in the current market. For example, Danaos appears to be taking a more cautious approach by creating a cash reserve that could be used to purchase ships once ship values reduce and environmental rules become clearer.

6. Box equipment prices

Severe imbalances — such as exports from Asia, congestion in ports and delays in hinterland transports — are causing container boxes to be stuck in transit for considerably longer periods of time leading to their shortage. New and used container box prices have shot up to record highs as the very strong demand for vessel space and containers has created a shortage of ship capacity, pushing rates and prices to unprecedented levels. And despite the factories producing containers in greater quantities, inventories of new containers remain very low. The onset of peak season in the US and ensuing demand could make matters worse in coming days. Container carriers who also lease container boxes from lessors have ended up placing orders to the magnitude rarely seen before. Our analysis suggests orders worth at least USD 1.5bn analysis suggests orders worth at least USD 1.5bn have already been placed since the beginning of this year

Source: Drewry

Inséré 27/03/22 DOSSIER Enlevé 27/04/22

Allianz: "Shipping losses remain at historic lows, but Covid, mega-ship, supply chain and climate challenges loom large"

The international shipping industry continued its long-term positive safety trend over the

past year but has to master Covid challenges, apply the learnings from the Ever Given Suez Canal incident and prepare for cyber and climate change challenges ahead. The number of large vessels lost remained at record low levels in 2020, while reported incidents declined year-on-year, according to marine insurer Allianz Global Corporate & Specialty SE's (AGCS) Safety & Shipping Review 2021.

"The shipping sector has shown great resilience through the coronavirus pandemic, as evidenced by strong trade volumes and the recovery we are seeing in several parts of the industry today," says Captain Rahul Khanna, Global Head of Marine Risk Consulting at AGCS. "Total losses are at historic low levels for the third year running. However, it is not all smooth sailing. The ongoing crew crisis, the increasing number of issues posed by larger vessels, growing concerns around supply chain delays and disruptions, as well as complying with environmental targets, bring significant risk management challenges for ship owners and their crews."

The annual AGCS study analyzes reported shipping losses and casualties (incidents) over 100 gross tons. During 2020, 49 total losses of vessels were reported globally, similar to a year earlier (48) and the second lowest total this century. This represents a 50% decline over 10 years (98 in 2011). The number of shipping incidents declined from 2,818 to 2,703 in 2020 (by 4%). There have been more than 870 shipping losses over the past decade.

The South China, Indochina, Indonesia and Philippines maritime region remains the global loss hotspot, accounting for one in every three losses in 2020 (16) with incidents up year-on-year. Cargo ships (18) account for more than a third of vessels lost in the past year and 40% of total losses over the past decade.

Foundered (sunk/submerged) was the main cause of total losses over the past year, accounting for one in two vessels. Machinery damage/failure was the top cause of shipping incidents globally, accounting for 40%. Total losses by year 50% drop over a decade (876 total losses from 2011-2020) Covid-19 factors Despite the devastating economic impact of Covid-19, the effect on maritime trade has been less than first feared. Global seaborne trade volumes are on course to surpass 2019 levels this year after declining slightly in 2020. However, the recovery remains volatile. Covid-19-related delays at ports and shipping capacity management problems have led to congestion at peak times and a shortage of empty containers. In June 2021, it was estimated there was a record 300 freighters waiting to enter overcrowded ports. The time container ships are spending waiting for port berths has more than doubled since 2019. The crew change situation on vessels is a humanitarian crisis which continues to affect the health and wellbeing of seafarers. In March 2021, it was estimated some 200,000 seafarers remained on board vessels unable to be repatriated due to Covid-19 restrictions. Extended periods at sea can lead to mental fatigue and poor decision-making, which ultimately impact safety. There have already been shipping incidents which have featured crews who have been on board for longer than they should have. Seafarer training is suffering, while attracting new talent is problematic given working conditions. Future crew shortages could impact the surge in demand for shipping as international trade rebounds. Although Covid-19 has resulted in limited direct marine claims to date, the sector has not been spared significant loss activity. "Overall, the frequency of marine claims has not reduced. We are also seeing an increased cost of hull and machinery claims due to delays in the manufacture and delivery of spare parts, as well as a squeeze on available shipyard space," says Justus Heinrich, Global Product Leader, Marine Hull, at AGCS. "Costs associated with salvage and repairs have also increased." In future, insurers could potentially see an uptick in machinery breakdown claims if Covid-19 has affected crews' ability to carry out maintenance or follow manufacturers' protocols.

Larger vessels, larger exposures

The blocking of the Suez Canal by the Ever Given container ship in March 2021 is the latest in a growing list of incidents involving large vessels or mega-ships. Ships have become ever-larger as shipping companies seek economies of scale and fuel efficiency. The largest

container ships break the 20,000 teu mark, with vessels over 24,000 teu on order – capacity of container ships vessels alone has increased by 1,500% over 50 years and has more than doubled over the past 15 years.

“Larger vessels present unique risks.

Responding to incidents is more complex and expensive. Approach channels to existing ports may have been dredged deeper and berths and wharfs extended to accommodate large vessels but the overall size of ports has remained the same. As a result, a ‘miss’ can turn into a ‘hit’ more often for the ultra-large container vessels,” says Captain Nitin Chopra, Senior Marine Risk Consultant at AGCS. If the Ever Given had not been freed, salvage would have required the lengthy process of unloading some 18,000 containers, requiring specialist cranes. The wreck removal of the large car carrier, Golden Ray, which capsized in US waters in 2019 with more than 4,000 vehicles on it has taken over a year and a half and cost several hundreds of millions of dollars.

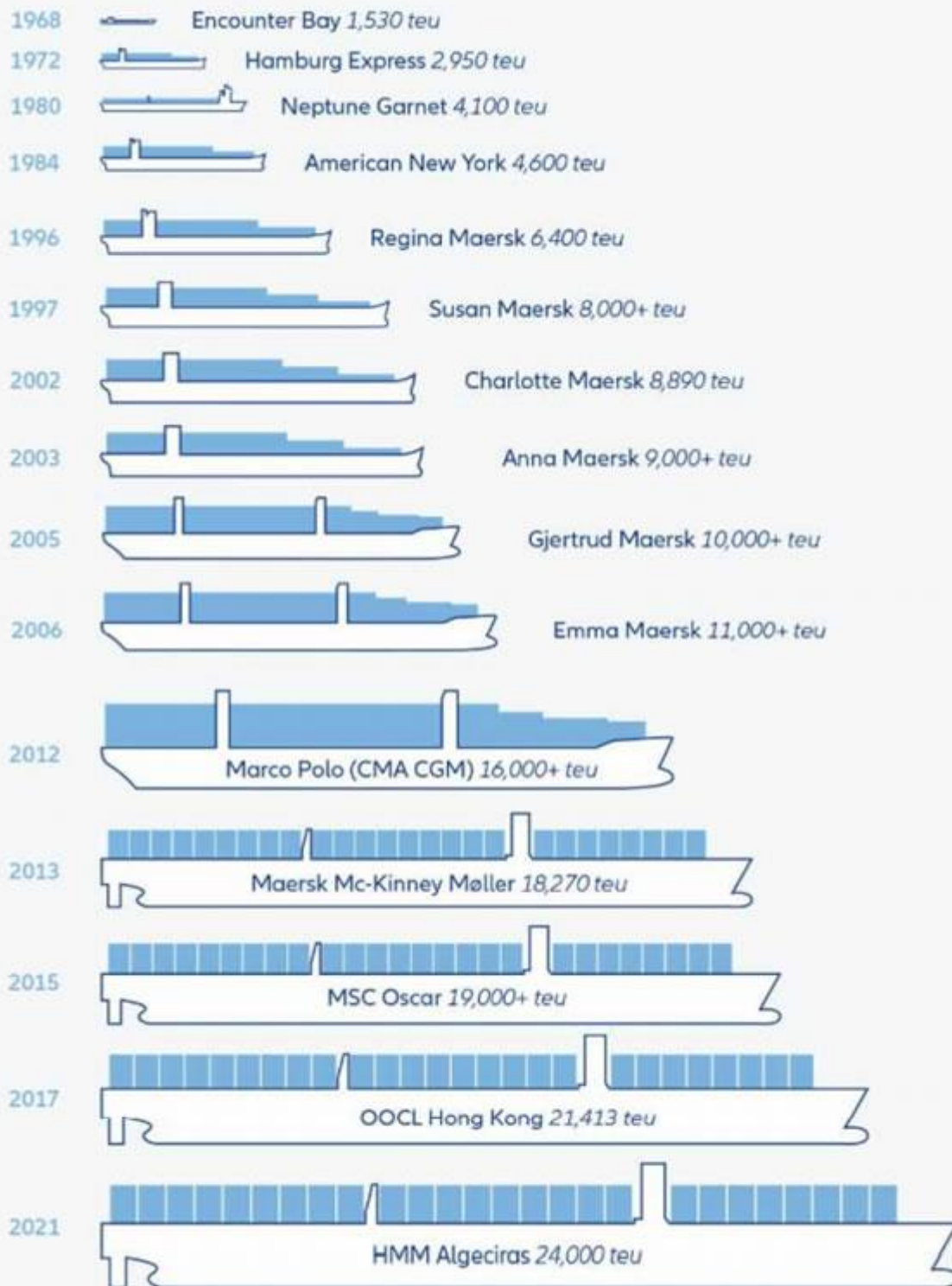
The number of fires on board large vessels has increased significantly in recent years. There was a record 40 cargorelated fires alone in 2019. Across all vessel types, the number of fires/explosions resulting in total losses increased again in 2020, hitting a four-year high of 10. Fires often start in containers, which can be the result of non-/mis-declaration of hazardous cargo, such as chemicals and batteries. When mis-declared, these might be improperly packed and stowed on board, which can result in ignition and/or complicate detection and firefighting. Major incidents have shown container fires can easily get out of control and result in the crew abandoning the vessel on safety grounds, thus increasing the size of loss.

Loss of containers at sea also spiked last year (over 3,000) and have continued at a high level in 2021, disrupting supply chains and posing a potential pollution and navigation risk. The number lost is the worst in seven years. Larger vessels, more extreme weather, a surge in freight rates and mis-declared cargo weights (leading to container stack collapse), as well as the surge in demand for consumer goods may all be contributing to this increase. There are growing questions about how containers are secured on board ships.

Delay and supply chain issues

Maritime supply chain resilience is in the spotlight after a series of recent events. The Ever Given incident sent shockwaves through global supply chains dependent on seaborne transport. It compounded delays and disruption already caused by trade disputes, extreme weather, the pandemic and surges in demand for containerized goods and commodities. “Such events expose the weak links in supply chains and have magnified them,” says Captain Andrew Kinsey, Senior Marine Risk Consultant at AGCS. “Developing more robust and diversified supply chains will become increasingly important, as will understanding pinch points and supply chain nodes.”

50 years of container ship growth



Increase in size of ships in graphic is not to scale

Approximate ship capacity data: Container-transportation.com; AGCS

The world's piracy hotspot, the Gulf of Guinea, accounted for over 95% of crew numbers kidnapped worldwide in 2020. Last year, 130 crew were kidnapped in 22 incidents in the

region – the highest number ever – and the problem has continued. Vessels are being targeted further away from the shore – over 200 nautical miles (nm) in some cases. The Covid-19 pandemic could exacerbate piracy as it is tied to underlying social, political and economic problems, which could deteriorate further. Former hotspots like Somalia could re-emerge.

The report also notes that all four of the world's largest shipping companies have already been hit by cyber attacks, and with geopolitical conflict increasingly played out in cyber space, concerns are growing about a potential strike on critical maritime infrastructure, such as a major port or shipping route. Increased awareness of – and regulation around – cyber risk is translating into an uptake of cyber insurance by shipping companies, although mostly for shore-based operations to date.

The environmental picture

With momentum gathering behind international efforts to tackle climate change, the shipping industry is likely to come under increasing pressure to accelerate its efforts. "A huge investment in research and development is required if the industry is to meet the challenging targets being set. Today's existing fleet and technology will not get the shipping industry to the International Maritime Organization's target of a 50% cut in emissions by 2050, let alone the more ambitious targets being discussed by national governments," says Khanna.

Last year, the cap on the sulphur content of ships' fuel was cut. Known as IMO 2020, the cut is expected to reduce emissions of harmful sulphur oxide (SOx) from shipping by 77%. Insurers have seen a number of machinery damage claims related to scrubbers, which remove SOx from exhaust gases for vessels using heavy marine fuel.

Most frequent loss and incident locations

According to the report, the South China, Indochina, Indonesia and Philippines maritime region is also the major loss location of the past decade (224 vessels), driven by high levels of local and international trade, congested ports and busy shipping lanes, older fleets and extreme weather exposure. Together, the South China, Indochina, Indonesia and Philippines, East Mediterranean and Black Sea, and Japan, Korea and North China maritime regions account for half of the 876 shipping losses of the past 10 years (437). The British Isles, North Sea, English Channel and Bay of Biscay region saw the highest number of reported incidents (579) in 2020, although this was down year-on-year. And finally, the most accident-prone vessels of the last year were a Greek Island ferry and a RoRo ferry in Canadian waters, both involved in six different incidents.

Source: Allianz

Inséré 28/03/22 NIEUWS NOUVELLES Enlevé 28/04/22

Northern Black Sea Is Now A 'Warlike Operations Areas' As Navy Fails To Protect Shipping In NATO Waters

By : John Konrad



While the US Navy and large NATO powers remain notably absent from the Black Sea few assets are available in the region to protect commercial shipping – while even NATO territorial waters are not being protected – the Joint Negotiating Group (JNG) and the International Transport Workers’ Federation (ITF) have designated areas in the Black Sea and the Sea of Azov as ‘Warlike Operations Areas’ triggering an increased security level and other entitlements for seafarers in the war zone.

The designation was agreed at an emergency high-level meeting on the rapidly escalating crisis in Ukraine between the social partners yesterday. Repatriation, payment of wages, safe transit and respect of individual seafarers’ rights, particularly for seafarers from the region, were the focus of discussions. The JNG and ITF as social partners, negotiate and ensure application of the International Bargaining Forum (IBF) agreement, which is the only international collective bargaining agreement covering terms and conditions for seafarers in international trade on over 9,000 ships.

The escalation in hostilities and conflict in Ukraine has put enormous pressure on seafarers of all nations and industries already laboring under the demands and challenges of the pandemic. The parties agreed that the welfare of seafarers and the protection of their rights in this unprecedented situation was paramount to the spirit and intent of the IBF agreement.

IBF Warlike Operations Areas were designated for the Sea of Azov (north of latitude 46°N), the Northern Black Sea Region and all ports in Ukraine. Under this classification seafarers onboard IBF covered ships are entitled to receive:

- Ø bonus equal to basic wage, payable for 5 days minimum + per day if longer;
- Ø doubled compensations for death and disability;
- Ø right to refuse sailing, with repatriation at company’s cost and compensation equal to 2 month’s basic wage
- Ø recommended to operate at ISPS Level 3

Due to the rapidly developing situation, these designations will be re-visited on a two-weekly basis to review the period of validity and, if necessary, the terms and conditions as well as the coordinates.

In addition to the establishment of the ‘Warlike Operations Areas’ around Ukraine and adjacent waters, the JNG and ITF also committed to further high-level discussions to monitor and review mechanisms to ensure seafarers’ safety and security in the rapidly evolving crisis. The potential need for refugee arrangements for Ukrainian seafarers and their families was also considered. The social partners agreed to increase pressure on governments to waive visas for Ukrainian seafarers to ease their repatriation.

NATO Navies Remain Silent

The US Navy and NATO have a joint Maritime Command in place but both have remained silent since the Invasion of Ukraine by Russian forces. The last update from NATO was issued almost a week ago. That update warns of AIS spoofing and suggests that commercial ship captains use "carefully consider and plan voyages based on an assessment of the escalating security situation". According to Bosphorus Naval News not a single US Navy, Coast Guard or NATO warship has entered the black sea since hostilities began. This is despite the fact that ships both chartered and owned by NATO members have been hit in missile attacks. If a NATO member's commercial aircraft was hit with a missile there would be an immediate international response but missile attacks on ships have not resulted in even a single US Navy or NATO shipping press release.

source : gCaptain

Inséré 30/03/22 DOSSIER Enlevé 30/04/22

How could all the world's ships not be able to deliver our Christmas gifts on time?

When the 400-metre long, 220,000-ton container ship **Ever Given** got stuck in the Suez Canal in March, shipping was thrust into the limelight. We don't normally pay much attention to sea lanes but the Suez snarl, which lasted for six days, underscored how dependent we are on the maritime arteries of international trade. By blocking the busy shipping lane that connects Asia and Europe, the prone vessel halted the passage of almost \$10 billion worth of seaborne traffic per day – around \$400 million each hour.



The **EVER GIFTED** inbound for Singapore Pasir Panjang Container terminal At any given moment, tens of thousands of commercial vessels are plying the world's oceans, the unsung heavy-lifters of the global economy. "We associate airports with air travel, which is all very glamorous and linked with holidays and so on, whilst shipping does the day-to-day grunt work of global trade," says Tim Harcourt, a trade economist at the University of Technology, Sydney. "Shipping is like the hard-working midfielder and airlines are like the fancy full-forwards."

Even before (and since) the Ever Given's mishap, disruptions caused by the pandemic have meant international shipping is under pressure. The flurry of online purchases we make during lockdowns has triggered a surge in demand for the giant vessels that traverse the high seas. At the same time, the spread of coronavirus has played havoc with shipping schedules and port operations. Reserve Bank figures show the global price of transporting containers quadrupled in the year to June 2021.

Australian retailers have even warned Christmas shopping might be interrupted by the supply chain crunch as consumers face delays and price hikes for shipped goods. Many popular Christmas presents are imported from overseas – toys, electronics, leisure equipment and homewares. That means they come to us by sea. But right now, the global shipping system is caught in a perfect storm of pandemic-related events, from Delta outbreaks and port closures to freighter scarcity and a lingering boom in demand for goods transported by sea. In late August, hundreds of ships were reportedly stranded outside congested ports across the world, waiting to be unloaded.

The head of one of the world's biggest shipping companies, Rolf Habben Jansen, chief executive of Hapag-Lloyd, has warned the bottlenecks will persist. "We currently expect the market situation only to ease in the first quarter of 2022 at the earliest," he said earlier in August. Even when global shipping is not grappling with these disruptions, seafarers face some age-old hazards. There were 195 incidents of piracy against ships worldwide in 2020, 20 per cent more than in 2019, and some crucial seaways are increasingly contested by regional and global powers.

So, how did we come to rely so heavily on maritime trade? How vulnerable are the sea routes that keep the global economy going? And how is global shipping changing?

Who invented container ships?

A simple idea revolutionised the shipping industry in the mid-1950s. Truck driver **Malcolm McLean** stacked 58 metal boxes on an ageing tanker ship going from Newark on the US east coast to Houston, Texas. This concept sparked a flurry of innovation, including a standardised, truck-sized container called "twenty-foot equivalent units" or TEUs. Shiploads are measured in TEUs, but containers now come in several sizes: three metres and six, twelve and 13.7 (in feet, that's 10, 20, 40 and 45). Given their size – designed to fit on trucks – many unused shipping containers have been recycled into small houses, granny flats and sheds.



Before McLean's invention, most shipped items were packed in barrels, sacks, baskets, crates or pallets then loaded and unloaded separately, partly on the backs of wharfies. It was a slow, labour-intensive and backbreaking business. But the introduction of the shipping container brought sweeping changes to international trade by slashing transportation costs.

In his 2006 book *The Box*, economist Marc Levinson explains how the standard-size container allowed huge economies of scale because ships, port facilities, trucks and trains in every country could be purpose-built to take any container in the world. The lower cost of shipping meant more factories could be located a long distance from customers, paving the way for economies in Asia, especially China, to become global manufacturing hubs. The introduction of refrigerated containers allowed perishables such as fruit, vegetables, meat, dairy, flowers and some pharmaceuticals to be transported to distant markets.

As a result, containerisation has been an important factor in the advance of globalisation. Cheaper, more efficient shipping has underpinned the development of sophisticated global supply chains and the "just-in-time" management strategies embraced by manufacturers, retailers and others. Rather than incur the costs of stockpiling goods in warehouses, companies rely on the global shipping industry to deliver what they need when they need it. This has given households access to a vast array of low-cost products – everything from power tools to iPhones and fresh fruit to plastic toys.

Around 90 per cent of the world's traded goods are transported by sea on a variety of ships. Tankers carry liquid cargo, mostly oil, while dry bulk carriers move huge quantities of commodities such as grains, coal and ore. Much of those raw materials are taken to manufacturing regions where they are made into finished goods, which are themselves then moved back across the oceans in container ships or more specialised cargo vessels such as the "roll on roll off" transporters that carry vehicles. The UN's Conference on Trade and Development (UNCTAD) says the total value of the world's merchandise exports reached \$US19 trillion in 2019.

Container ships are the heavy-lifters of the global economy.

A huge workforce keeps that trade moving. About 1.5 million seafarers are employed by the global shipping industry and each month about 150,000 crew members need to be changed over to, and from, the vessels they operate. China is now at the centre of shipping commerce, especially container cargo. It hosts the world's biggest container port, in Shanghai, which moved 42 million containers in 2018. By comparison, all of Australia's container ports combined move around 8 million per year, mostly in Melbourne and Sydney.

The increasing scale of tankers carrying oil and gas from giant terminals and the bulk carriers transporting grains, coal, ore and cement has also helped to drive global trade growth. Tankers and bulk carriers are fundamental to the world's supply of food and fuel. These giant vessels share the high seas with other commercial vessels – fishing boats, passenger liners, ferries and so on – and an array of more specialised vessels that provide specific maritime services such as drilling, research, salvage and dredging.

How does shipping affect our daily lives?

The effect of shipping-based innovations on the everyday lives of Australians has been profound. More than 42 per cent of goods in a Sydney household arrive in containers through Port Botany, according to research commissioned by NSW Ports. Each year the Port of Melbourne, which is the biggest container port in Australasia, handles nearly 3 million standard containers.



The **LE HAVRE** inbound for Melbourne **Photo : Dale E.Crisp** ©
Container shipping is now fundamental to our society, says Marika Calfas, the CEO of NSW Ports. "It's integral at a personal level, a family level and at a business and economic level," she says. And yet commercial shipping and ports receive surprisingly little public attention. Michael Bell, professor of Ports and Maritime Logistics at the University of Sydney, says that reflects positively on their efficiency. "From the point of view of the consumer, it works; the goods turn up and they are on the shop shelves," he says.



The **MSC ASYA** arriving in Melbourne assisted by the **SVITZER EUREKA** **Photo : Dale E.Crisp** ©

Australia is especially dependent on international shipping. During the past three decades, our economy has become deeply integrated into global commerce, so much so that one in five of our workers is now involved in trade-related activities. We rank fifty-fifth in the world for population but a 2019 Department of Foreign Affairs and Trade report said Australia was the world's twenty-third-largest exporter and twenty-first-largest importer (although some of that trade is in services rather than the goods transported by sea and air).

Shipping allows Australia to earn income from agricultural and mining commodities that are far too plentiful for us to consume ourselves. Australia exports about two-thirds of its agricultural produce and most of its iron ore and metallurgical coal production (used for steelmaking). Most of Australia's merchandise exports leave on tankers and bulk carriers but when it comes to container shipping we import much more than we export. That means

hundreds of thousands of empty containers are loaded onto ships each year and returned, mostly to Asian ports. "Essentially, our biggest container export is air," says Calfas. The system can be perplexing for outsiders. Many commercial ships are registered under a flag that does not match the nationality of the owner. For example, at the beginning of 2020, more than half of all ships owned by Japanese entities were registered in Panama; more than a fifth of the ships owned by Greek entities were registered in Liberia and another fifth in Marshall Islands. Bell says the main reason for this is that owners wish to avoid the stricter marine regulations imposed by their own countries including labour rules, pay rates and taxation. Nations such as Panama and Liberia also offer simple and inexpensive registrations. But Bell says the quality of construction and maintenance of commercial ships is safeguarded by the need for insurance and the threat of inspection when vessels are docked at many foreign ports.

How secure is global shipping?

The Suez Canal, a narrow sea-level waterway built in Egypt during the nineteenth century, is a shortcut between the Mediterranean Sea and the Indian Ocean that means vessels travelling between Europe and Asia don't have to sail around Africa, saving weeks each journey. It is one of three strategically sensitive passages in the Middle East that carry a large volume of maritime traffic. The other two are the Strait of Hormuz, linking the Persian Gulf to the Gulf of Oman, and the Bab al-Mandab Strait, which separates Africa and the Middle East. All three are primary waterways for the transport of oil and natural gas.

The Panama Canal, opened in 1914, is a shortcut between the Atlantic and Pacific oceans. As with the Suez, opened in 1869, it has been upgraded in the past decade to allow the passage of larger vessels. After the Ever Given debacle, Egypt announced it would further widen and deepen the Suez.

Another key maritime choke point is the Malacca Strait, a sea channel between Malaysia and Indonesia, which is the quickest route between the Indian and Pacific Oceans. There is little margin for error in this congested shipping lane, which narrows to just 2.7 kilometres at one point. It is a natural bottleneck with potential for collisions, groundings and oil spills. If the Malacca Strait were blocked, almost half of the world's shipping fleet would be required to reroute around the Indonesian archipelago, adding to transport costs. Strategic competition and diplomatic tensions are a perennial menace to commercial shipping, especially near these strategic choke points. One hotspot is the South China Sea, where China's growing military power and assertiveness has stoked international concern. Around one-third of global shipping travels through this sea, much of it via the Malacca Strait.

Choke points and hotspots

Piracy also poses a threat to commercial shipping in some regions. The industry is especially worried about deteriorating security in West Africa's Gulf of Guinea, which accounts for around 90 per cent of the world's maritime kidnappings. "Previously, many of these attacks had been principally motivated by the intention to steal cargo," says a report by peak body the International Chamber of Shipping. "Increasingly, however, seafarers are now routinely being kidnapped and taken into Nigeria where they are then held for ransom in the most appalling and terrifying conditions. Most ship types have been targeted, including container ships and bulk carriers as well as tankers and offshore support vessels." In the first quarter of 2021, 40 sailors were kidnapped globally, almost twice the number in the corresponding period the year before. As with many industries, the coronavirus crisis has been hugely disruptive to seaborne trade. The seafarers who operate the global shipping industry have been especially hard hit. Widespread border restrictions have prevented many maritime workers from being repatriated during the pandemic and often stopped ship crews from being replaced. This has forced hundreds of thousands of seafarers to continue serving on their ships for months beyond their contracted tours of duty. The International Chamber of Shipping says many crews have been pushed to near breaking point due to fatigue and the anxiety of being unable to return home.



MSC JULIE departing Cape Town **Photo : Glenn Käsner © How is global shipping changing?**

When you stand on a dock alongside a modern container ship its mammoth scale is striking. The distance from bow to stern of the world's biggest container vessels is more than double the widest point of the MCG's playing field. The economies of scale offered by even bigger vessels is appealing to shipping firms because the larger the boat, the lower the unit cost. Bigger vessels may also help shipping companies reduce their carbon footprints. But Bell says further growth in ship sizes may be limited because it means more inventory must be stored at different stages of production in global supply chains and that costs money. "Around 400 metres seems to be the maximum practical length," he says.

Port operators complain that bigger ships require additional onshore investments to unload, store and transport their cargo. Calfas says "bigger is not always better" when it comes to container ships because the land-side investments needed are likely to more than offset other savings. "It's the shipping version of deploying an A380 to every airport," she says. Most of the container ships that come to Australia are smaller than those operating at the world's biggest ports; Calfas says the average carries around 6000 containers, less than one-third of the capacity of the **Ever Given**.

Regardless of how big commercial ships become, advances in automation and other new technologies will affect demand for seaborne trade. Bell says digitalisation and artificial intelligence will allow far more localised production in some industries which, in turn, will reduce the need to ship so many goods such long distances. "What automation does is make production more mobile and less dependent on large skilled workforces," he says. "That means you can make things more easily closer to the point of consumption, and that's not good for shipping. New technologies give us a flexibility that means we don't have to source so many things from the other side of the world." A 2019 study by consultancy firm McKinsey found the intensity of goods trade is already declining in many global supply chains. It predicted advances in robotics, artificial intelligence and 3D printing would likely "reduce global goods trade by up to 10 per cent by 2030 as compared to the baseline". These technologies may lead to more "nearshoring" – when businesses switch to suppliers in countries and regions close-by in preference to those further away – allowing tighter co-ordination of supply chains and lower shipping times and costs.

Worries about the security of far-flung supply chains, stoked by the pandemic, could also encourage firms to reduce their use of long-distance shipping. The prospect of greater geostrategic tensions and trade conflict could be a further incentive for firms to lessen their dependence on distant suppliers and to source more goods closer to home – or from nations and regions considered friendly and less vulnerable to political influence. As with most industries, shipping is under pressure to help combat climate change. The oil burnt to move so many huge cargo vessels around the world is a major source of the carbon emissions that cause global warming. International shipping accounted for around 2.5 per cent of global CO2 emissions in 2019 – more than double what Australia produces. The International Maritime Organisation, the UN body that regulates international shipping, has

set a target to reduce the carbon intensity of shipping by 40 per cent compared with 2008 levels by 2030 and by 70 per cent by 2050. Bell says some major players in global shipping are moving ahead of the regulator by experimenting with cleaner fuels and exploring new low-emission engine technologies. "I'm quite optimistic about shipping making a transition to carbon neutrality," he says.

While the industry might be trying to cut emissions, in one respect, at least, it might benefit from climate change. As the Arctic ice cap recedes, oceans once the domain of ice-breakers will host other types of ships. Waters in the region will remain navigable for much longer periods, creating potential new trade routes. Unfrozen, the North-West Passage, skirting Canada and Alaska, and the Northern Sea Route, above Russia and Scandinavia, could slash voyage times between Europe and key ports in Asia and North America. An experimental trip in February 2021 saw a Russian tanker become the first commercial vessel to cross the Arctic so far into the northern winter. It provided a glimpse of the potential of Arctic sea routes as an alternative to the longer, traditional voyage between Asia and Northern Europe via the Indian Ocean and the Suez Canal. But as nations jockey for influence over Arctic sea lanes, and for control of the vast natural resources below, greater geopolitical friction looms. There is also pressure to limit economic activity in the region in a bid to preserve its unique and sensitive environment. With climate change comes both concerns about more international disputes – and the promise of a new frontier for maritime trade.

Source: The Sydney Morning Herald

Inséré 01/04/22 NIEUWS NOUVELLES Enlevé 01/05/22

Russia's war on Ukraine could triple ocean shipping rates to \$30,000 per container, expert says

By : Grace Kay - Associated Press

Russia's invasion into Ukraine could cause ocean shipping rates to triple, a supply-chain expert told The New York Times.

The war has heavily impacted cargo ships that traverse the Black Sea and exacerbated backlogs at European ports.

The conflict is likely to send ocean and air shipping rates skyrocketing, following two years of historically high prices.

Get the latest tech news & scoops — delivered daily to your inbox. Russia's invasion into Ukraine is likely to send ocean and air shipping rates skyrocketing at a time when the global supply chain is still reeling from the pandemic. Ocean rates could double or triple due to the invasion, according to Glenn Koepke, the general manager of network collaboration at the supply chain consultancy firm FourKites. Koepke told The New York Times that shipping rates could surge from \$10,000 per 40-foot container to \$30,000, while air freight rates could jump even higher.



The [CMA CGM MEXICO](#) outbound from the Brani Container terminal in Singapore heading West in the Strait TSS

Since the pandemic started, ocean shipping rates have hit all-time highs. Koepke warned the war could be yet another blow to the global supply chain. He noted that while the shipping industry hasn't hit its peak season "companies are ramping up for summer volume, and that's going to have a major impact on our supply chain." Russia's invasion has heavily impacted cargo ships that traverse the Black Sea — a key route for oil and bulk food exports. Since Thursday, several ships have been fired upon or detained. On Monday, the UK banned all Russian ships from entering its ports. Meanwhile, shipping executives and port officials in Belgium, Holland, and Germany have said cargo ships that are destined for Russia will be stopped and inspected. The conflict has caused many vessels to reroute, exacerbating congestion at other ports in Europe as Ukraine's largest port shutdown on Thursday. Over 200 ships are waiting to cross the Kerch Strait as of Monday, according to data from Lloyd's List. The channel connects the Black Sea to the Sea of Azov. "All those hubs in Northern Europe are already pretty congested, and every little thing that delays cargo flows will intensify the problem," Vincent Clerc, head of ocean and logistics services at Maersk told The Wall Street Journal. On Tuesday, one of the world's biggest shipping companies, Maersk, announced that it would temporarily suspend shipments to and from Russia and Ukraine. The shipping company joined ONE, MSC, and Hapag-Lloyd in the decision — a move that will impact at least 47% of global container shipping. The shipping leaders' decision to cut off Russia will further hamper the country's ability to send and receive goods, which has already been restricted by Western sanctions. Global air freight also faces several difficulties amid the invasion. To date, Russia has closed its airspace to 36 countries, forcing shipping planes to find new routes. Flexport's principal supply chain economist, Chris Rogers, said on Monday that the conflict will have a negative impact on global air freight capacity and raise air cargo prices as carriers are forced to take longer routes and spend more money on fuel. Experts have previously told Insider that additional transportation costs will likely be passed on to customers. The conflict could send gas and food prices higher at a time when inflation in the US is already at its highest level since the 1980s.

Source : **Associated Press**

Inséré 02/04/22 NIEUWS NOUVELLES Enlevé 02/05/22

Industry group reveals initial results from research into maritime deaths in enclosed spaces

Enclosed space deaths continue to be one of the biggest occupational hazards aboard ship.



Several years ago, InterManager launched a survey on enclosed space deaths, to which 5000 seafarers responded. A number of issues were raised, in particular:

- Procedures often seem to seafarers, difficult to understand, confusing, and do not take account of the resources, equipment and time available aboard the vessel.
- Investigations of fatalities point to failures in the victims and in particular their failure to follow procedures.
- Commercial/time pressure is a significant factor and was described as 'verging on abuse'.
- Design and equipment added to the problems by creating hazards.
- Training was seen as being limited to tanker trades.

In response to these findings, 18 months ago the Human Element Industry Group (HEIG) set up the Enclosed Space Project. The project involves the HEIG members and some 50-100 maritime sector individuals examining a number of areas with a view to influencing changes in regulations, industry practice, and training, as well as improving awareness of the problems faced by seafarers.

Most of the analysis is complete and it is appropriate to share some of this as HEIG moves into rolling out its action programme to deal with the problem.

The problems identified include:

- Excessive reliance is placed on procedures for managing enclosed space entries.
- Enclosed space procedures are complex, labour and time intensive, and require active management.
- They may require specialist equipment and trained rescue teams.

In addition, regulation is built around IMO 1050(27) 'Revised Recommendations for Entering Enclosed Spaces Aboard Ships' which was last updated in 2011. There are some significant issues with this document and HEIG is preparing a submission to IMO, in conjunction with Flag States, to address some of these concerns. The UK's Code of Safe Working Practices (COSWP) have recently been revised with the participation of HEIG members, and ISGOTT 6th Edition was revised in 2020, jointly published by OCIMF, ICS and IAPH, which includes guidelines and recommendations for enclosed spaces. Further changes to industry practices are being considered.

In conjunction with MAIIF (Marine Accident Investigators International Forum), the group looked at accident investigations and data which reinforced the views expressed above. MAIIF has written guidance on investigating enclosed space incidents that will widen the scope of the investigation beyond the immediate incident and will emphasise organisational factors, equipment and its availability, as well as the time available for the entry.

Welcoming the publishing of the initial findings and thanking those organisations who share InterManager's views on this problem, Capt Kuba Szymanski, InterManager Secretary General and a member of the HEIG committee, said: "For too long we have blamed the deceased seafarer for making a mistake for which they paid the ultimate price. HEIG is delving deeper into this issue to examine the more complex reasons for fatal incidents and we welcome these initial findings. Hopefully the committee's continuing work will enable the shipping industry to devise better procedures and create solutions to prevent these largely avoidable deaths."

Inséré 03/04/21 BOEKEN LIVRES BOOKS Enlevé 03/05/22

Flowsmedewerker maakt praktische uitgave Belgisch scheepvaartwetboek

Advocaat en Flowsmedewerker Philippe Van Dijck verzorgt een eigen uitgave van het nieuwe Belgisch Scheepvaartwetboek. Geïnteresseerden kunnen het boek online bestellen.



Belgisch Scheepvaartwetboek door Philippe Van Dijck - © Philippe Van Dijck
"Het opzet van het boek is eenvoudig: de tekst van het nieuwe Belgische scheepvaartwetboek, voorzien van een korte inleiding en een praktische inhoudstafel. In de originele wetteksten ontbreekt die, terwijl de wettekst toch zo'n 260 bladzijden telt", zegt Van Dijck. Als managing associate bij Ambos Advocaten krijgt hij

vaker met het maritieme recht te maken. "Het opzet was in de eerste plaats om het boek voor onze klanten beschikbaar te stellen."

Niche

De beslissing om het boek in eigen beheer uit te geven, werd ingegeven door het nichekarakter van de materie. "Uitgeverijen staan niet te springen om een wetboek voor zo'n beperkt publiek uit te brengen, dus hebben we het maar zelf gedaan. De voorbereiding van zo'n uitgave in eigen beheer kost wel wat tijd en energie, maar gaandeweg ben ik het proces wel interessant gaan vinden", besluit Philippe. Het Belgisch Scheepvaartwetboek is [hier](#) te koop en kost 35 euro.

Inséré 03/04/22 HISTORIEK HISTORIQUE Enlevé 03/05/22

La Chine maritime et navale: les aventures de Zheng He

Par Igor Gauquelin



En République populaire, l'amiral Zheng He est un héros utilisé par le régime pour symboliser cette « Chine millénaire » et fière de sa puissance. Il y a six siècles, l'empereur Yongle le dépêche aux confins du monde connu, de l'Inde à l'Afrique en passant par le Moyen-Orient, à la tête d'une imposante flotte. Il a pour mission d'exporter l'éclat de la dynastie Ming. À l'autre bout du monde, au même moment, les navigateurs occidentaux tâtonnent. Une histoire instructive, à l'heure où Pékin se projette de nouveau sur les mers avec défiance.

Au XV^{ème} siècle, le Portugal se lance dans ses grandes explorations maritimes le long de la côte occidentale de l'Afrique, poussant toujours plus loin vers le Sud. Le petit pays lusitanien, revivifié par une révolution bourgeoise réussie à la fin du siècle précédent, est avide de terres, de richesses, d'épices, de découvertes. L'esprit de croisade anime encore ces chrétiens.

Des bourgeois, de la ville portugaise de Lagos notamment, participent aux expéditions pionnières organisées par le fils du roi, le prince Henri, dit « le Navigateur ». Relativement indifférents aux pays rencontrés, ces hommes poursuivent une quête : l'Inde.

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Dénouer l'étau commercial de Venise et des musulmans est alors un enjeu pour les Européens de la façade Atlantique. Il faut contourner le continent africain par le Sud et plonger vers le Nord-Est dans l'océan Indien, jusqu'à la grande cité portuaire de Calicut. Pour la traversée dans ces eaux inconnues, on s'appuiera au besoin sur les connaissances d'un musulman ou d'un Indien.

Fin XV^{ème} siècle, l'affaire est bien engagée : le port de Lagos, cette fois au Nigeria, au bord du golfe du Bénin, a été fondé depuis déjà longtemps par les Portugais qui, par la suite, mettront la main sur le Brésil. Et en 1498, après avoir franchi le cap de Bonne Espérance dans le sillage du précurseur Bartolomeu Diaz, Vasco de Gama a enfin atteint l'Inde tant espérée.

Des ombres chinoises dans l'océan

En 1503, une flottille portugaise vogue à son tour vers l'Inde, et plus précisément vers le port de Cochin. Elle doit y rejoindre le navigateur Afonso de Albuquerque. À la tête d'un des navires, le capitaine António de Saldanha, qui sera le premier Européen à accoster sur le site de l'actuelle ville du Cap, en Afrique du Sud, consigne ce qu'il apprend dans l'océan Indien.

Il note que les habitants de Socrota, petite île au large de l'actuel Yémen, se souviennent que bien avant les Portugais, d'autres navires sont arrivés de très loin, avec à leur bord des équipages « aussi blancs » qu'eux . Et au moment de décrire Kollam, en Inde, il affirme qu'il y a sur place des descendants de ces expéditions, et que ces gens sont des « Chinois », des vrais, venus des confins de l'Asie.

Quelques années plus tôt, le souverain de Calicut n'est lui-même pas spécialement étonné par l'arrivée des Portugais ; juifs, musulmans, chrétiens, nombreux sont ceux qui, marchands ou religieux, les ont précédés dans sa cité-État, une escale fréquentée depuis fort longtemps. Mais, fait notable, ce rāja leur propose d'installer leur comptoir dans des remparts fortifiés utilisés autrefois par les Chinois, qu'on n'a plus vus de longue date.

Bien plus loin à l'Est, dans les années 1510, Tomé Pires décrit comment le détroit de Malacca, carrefour maritime clé entre la mer de Chine méridionale et l'océan Indien depuis des millénaires, a participé dans un passé relativement récent à un « ordre chinois du monde », et comment l'ombre de la suzeraineté de l'empire plane encore sur les lieux. En 1528, le sultan de Johor, entrant en contact avec les Portugais, propose de leur payer ce qui revenait autrefois « au roi de la Chine ».



L'entrée de la nécropole de Hongwu, fondateur de la dynastie des Ming, à Nankin. (Source : Wikimedia Commons)

Pendant leurs « découvertes », les Européens consignent une multitude de vestiges chinois datant d'une époque révolue : du patrimoine urbain sur les côtes indiennes du Kerala et du Coromandel, mais aussi à Ceylan

(l'actuel Sri Lanka), aux Maldives ou sur l'île de Tanah, dans l'Indonésie actuelle. Ils remontent le fil de cette empreinte, omniprésente en mer de Chine méridionale, jusqu'à entrevoir la tanière du dragon, à Macao.

Pour mesurer la trace que la Chine a laissé jusqu'au Kerala, plusieurs éminents chroniqueurs de l'époque, dont le naturaliste Gaspar de Orta, évoquent dans leurs écrits l'existence, à Cochin, d'une stèle chinoise en pierre vieille d'un siècle. Elle semble pratiquement fonder la légitimité du pouvoir du souverain local ; un objet jaloué par ses voisins, et tout particulièrement le rāja de Calicut, tant sa charge symbolique est forte.

Gaspard Correa affirmera plus tard que dans le pays de Cananor, plus au Nord, une légende racontait, en 1498, que l'Inde serait un jour « *dominée par un roi venu de très loin, avec des gens blancs, qui feraient beaucoup de mal à tous ceux qui ne seraient pas leurs amis* ». D'autres Blancs, confirme-t-il, venus à la fois de Chine, de Malacca et des Ryukyu, en mer de Chine orientale, sont arrivés bien avant. Mais il ne s'agissait pas des conquérants de la prophétie, selon les sorciers.

En 1622, Duarte Gomes de Solis écrit : « *La Chine est le plus puissant, le plus riche, le plus commerçant et le plus fertile de tous les pays que l'on connaisse sur terre, et est si peuplé de gentils que ceux-ci semblent ne pas tenir dans leur territoire, puisqu'ils habitent sur les fleuves, sont sortis de leur pays, et ont même conquis l'Inde ; pourtant l'expérience a montré qu'il valait mieux ne pas se diviser et ils se sont repliés.* » L'économiste conclut qu'ils n'ont plus jamais quitté leur lit.

« Ming », l'histoire d'un grand éclat

La Chine, pays réputé centré sur lui-même, a donc selon les Portugais « conquis » l'Inde et marqué l'océan tout autour, à des milliers et des milliers de kilomètres de ses côtes, avant les Européens. Puis elle s'est retirée. Le mot « conquête » est un peu fort, mais cette histoire est avérée. Elle prend racine au moment de la chute de la dynastie mongole des Yuan, fin XIV^{ème} siècle, plus de 100 ans avant les épopées de Vasco de Gama et Colomb. Né paysan, Zhu Yuanzhang est le général rebelle qui, en 1368, prend le contrôle du centre décisionnel des Yuan, à savoir la ville de Pékin, que les Mongols appellent Dadu. Fondateur de la dynastie des Ming, il règne 30 ans. C'est l'ère Hongwu. Il tente déjà, entre autres tâches, de renouer des relations avec ses voisins depuis la nouvelle capitale, son fief de Nankin.

À sa mort, son petit-fils lui succède, ouvrant l'ère Jianwen. Mais cette dernière sera de courte durée. Car l'un des fils de Hongwu, jusqu'ici chargé de la défense de l'ex-capitale

Yuan, dépose son neveu. Intrônisé au tout début du XV^{ème} siècle à Nankin, feu le prince Zhu Di ouvre l'ère Yongle. Il a une soif insatiable de légitimité et de prestige.

Sur le continent, il parachève le Grand Canal. Dans le Nord, on lui attribue la Grande Muraille sous sa forme actuelle. À Pékin, ville où il a écrit sa légende et dont il fait de nouveau la capitale, il ordonne la construction de la Cité interdite. Et sur les mers, c'est lui qui va projeter l'empire dans une vaste aventure à travers le grand « océan de l'Ouest ». Pour l'État chinois, plurimillénaire, c'est sans équivalent.



L'entrée de la nécropole de Hongwu, fondateur de la dynastie des Ming, à Nankin. (Source : Wikimedia Commons)

Dès ses débuts, le troisième empereur de la dynastie Ming est dédaigné par les confucéens, qui lui reprochent son violent coup d'État et son ambition volontariste. Nombre d'entre eux le boudent, et son projet de rassembler une impressionnante encyclopédie littéraire, la *Yongle dadian*, ne suffit guère à les amadouer.

Yongle s'entoure d'eunuques fidèles, une « caste » que son père avait tenté d'écarter du pouvoir sans y parvenir vraiment. Ces derniers seront de tous les projets que les confucéens désapprouvent ou dénigrent. Le préféré de l'empereur s'appelle Zheng He : il est surintendant de l'office des eunuques.

Zheng He serait né vers 1371 au Yunnan (nord du Vietnam), dans une famille musulmane nommée Ma. Son père a effectué le pèlerinage à La Mecque. Il a

11 ans, lorsqu'en 1382, la nouvelle dynastie de Hongwu conquiert sa région. Il subit la castration avant d'être placé au service du prince Zhu Di, qu'il accompagne dans ses succès contre les Mongols à Pékin, et dans sa prise de pouvoir à Nankin.

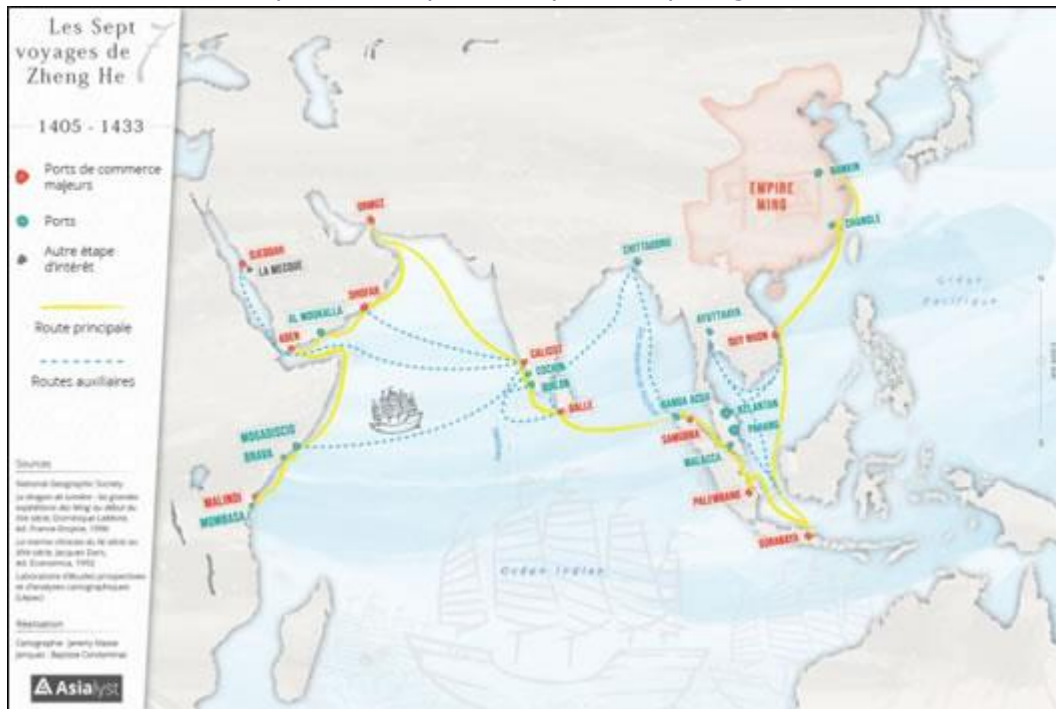
Des archives familiales lui attribuent une haute taille, une belle corpulence et une voix aussi sonore qu'une cloche. À la fin du coup d'État, pudiquement appelé « guerre de succession », le nouveau Fils du Ciel lui confère, en 1404, au premier jour de l'année chinoise, le nom de Zheng. Peut-être aussi le prénom He. Il est nommé grand amiral d'une flotte de haute mer dont il va superviser la constitution.

Quand la Chine déploie ses jonques

Sur le fleuve Bleu, on applique aussitôt les techniques du Fujian et de Canton, régions côtières méridionales, pour fabriquer une multitude des navires de tailles diverses, des « jonques ». La Chine possède à l'époque une très riche connaissance maritime et fluviale ; Marco Polo, Odoric de Pordenone et Ibn Battuta en ont témoigné. Pendant des siècles, l'empire s'est en fait nourri d'échanges, avec des pays dont la science remonte à très loin. Les savoirs maritimes accumulés depuis plusieurs dynasties sont mobilisés. On travaille ardemment différentes sortes de conifères ; on utilise les arbres plantés sous Hongwu. Certains navires sont renforcés d'une triple épaisseur de coque, aime-t-on préciser de nos jours. Ils abriteraient par ailleurs de multiples cloisons étanches, technique que la Chine a fait inscrire au patrimoine mondial de l'humanité par l'Unesco en 2010.

Notons néanmoins qu'encore aujourd'hui, lorsque les passionnés débattent des méthodes alors utilisées, ou de la taille des plus grandes jonques construites à cette époque, ils demeurent bien incapables de tomber d'accord. D'après le *Ming Shi*, les plus grands navires de l'époque de Zheng He, les *baochuan* ou « bateaux-trésor », mesurent 44 *zhang* de long et 18 *zhang* de large, soit environ 138,4 mètres sur 56 mètres . À une vingtaine de mètres près, c'est tout de même la longueur de l'actuel destroyer 117 *Xining*.

De tels navires en bois étaient-ils assez solides pour affronter la haute mer et suffisamment manœuvrables dans les ports et estuaires ? Certains spécialistes préfèrent retenir des dimensions au moins deux fois inférieures, ce qui reste énorme. Ces jonques, grées de nombreuses voiles, pouvaient, paraît-il, pour les plus grandes être armées de neuf mâts.



Carte des

expéditions de l'amiral Zheng He. (Crédits : Jeremy Masse pour la cartographie / Baptiste Condominas pour le dessin / Asialyst)

En 1405, trois ans seulement après le coup d'État, Zheng He fait graver une épitaphe pour son père dans le Yunnan, puis il prend la mer, à la tête d'une armada composée de dizaines et de dizaines de jonques. Elles embarquent une multitude de marins, des artisans, des diplomates, des militaires, des religieux, des médecins, des cartographes, des herboristes et toute une suite d'esprits curieux et cultivés. Selon les données officielles, l'amiral commande plus de 27 000 hommes.

Afin de faciliter le dialogue lors de ces voyages, comme en Asie centrale au demeurant, un institut d'interprètes est remis sur pied en 1407. Des marins sont recrutés dans les communautés côtières, notamment des Arabes. Les Chinois ont des boussoles, des routiers. La nuit, ils s'appuient sur des étoiles répertoriées. Ils ne partent pas à l'aveugle, loin s'en faut.

La « Grande Flotte » est armée pour parer à toute éventualité. En sus des fantassins et autres arbalétriers, elle embarque des cavaliers et leurs montures, ainsi que des machines de guerre. Les bombardes intimideront pirates intrépides et roitelets hostiles. Il semble que les navires remontent moins bien le vent, mais cela ne pose aucun problème tant qu'il suffit de se laisser porter par la mousson. Ce que feront les Chinois pour gagner Ormuz, par exemple.

L'année du premier départ de Zheng He, en 1405, est aussi celle de la mort de Tamerlan, qui voulait marcher sur la Chine. Dix ans après, une escadre de la Grande Flotte atteint finalement la Perse dans l'autre sens, mais il n'est alors nullement question de lancer des hostilités ; grâce aux émissaires dépêchés par Yongle, les relations avec les successeurs du célèbre conquérant sont, à l'inverse, en passe de se normaliser.

Les sept voyages du grand amiral

Les experts s'interrogent encore aujourd'hui sur le pourquoi de cette épopée maritime, aventure unique dans toute l'histoire de la Chine. S'agit-il simplement de retrouver et de capturer le jeune prédécesseur de l'empereur Yongle, dont on soupçonne qu'il est encore

en vie ? Les moyens mis en œuvre seraient, dans ce cas, extravagants et inadaptés. L'explication, à l'évidence, est ailleurs.

Peut-être faut-il s'assurer que le détroit de Malacca reste ouvert au commerce ? Face à l'essor des Javanais, le premier empereur mongol de Chine, Kubilai, a déjà essayé d'y envoyer des troupes par bateau, en 1293. Il a d'ailleurs échoué. À l'époque de Yongle, la route terrestre de la soie, par l'Asie centrale, est perturbée par des Mongols insoumis. Hongwu a déjà eu l'ambition de faire des Ryukyu un important centre de transbordement des marchandises entre la Chine et d'autres parties de l'Asie. L'objectif est également politique et diplomatique. Sur sa route, Zheng He étale, par la majesté de ses navires, par ses présents, tout le prestige des Ming et de leur nouvel empereur. Il ramène en Chine une part d'exotisme, et des émissaires. Son père avait-il déjà initié ce mouvement de relations « amicales » à l'étranger ? Yongle va l'amplifier. Le Fils du Ciel ne demande aux dirigeants côtiers, plus faibles militairement, que d'accepter sa souveraineté.

Une souveraineté d'ailleurs toute théorique pour la lointaine Chine. Il suffit de pratiquer le système des tributs, un échange mutuel de cadeaux. C'est souvent tout bénéfique pour le roitelet qui y consent : les produits chinois, très recherchés, revalorisent son règne qui peut, en sus, profiter de la protection d'un très puissant allié. Les Chinois n'exigent aucune terre, aucun changement politique, aucune conversion. L'entreprise coûtera cher à l'empire, qui expédie des cadeaux plus raffinés que ce qu'il ramène avec lui.

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Statue de Zheng He à Malacca, en Malaisie. (Source : Wikimedias Commons)

Au total, Zheng He dirige sept expéditions, entre 1405 et 1433. Les six premières sont ordonnées par Yongle. Chacune longe les côtes orientales chinoises en direction du Sud, traverse la mer de Chine méridionale puis franchit Malacca. Le premier objectif, c'est l'Inde. Puis il s'agit, au fil des années, de rejoindre le golfe Persique, et enfin l'Afrique orientale, qui sera longée.

Encore une fois, les jonques de Zheng He nouent une diplomatie qui n'impose qu'une vassalité de principe. En comparaison, les futurs arrivants portugais auront tôt fait de se forger une réputation méritée d'agressivité. De surcroît, les biens offerts par les Portugais n'auront, au début, que bien peu de valeur, comparés aux objets de luxe apportés par les Chinois. Malgré les intentions pacifiques, l'épopée du grand amiral ne va pas sans affrontements. On ne saurait

manquer de respect aux navires et aux envoyés de l'empereur ! Sur le chemin, les pirates sont exterminés sans pitié. Quant aux rois récalcitrants, ou aux usurpateurs, ils sont

chassés sans ménagement, ou amenés prisonniers en Chine. L'empereur décide alors de leur sort.

Peut-être les capitaines d'escadre prennent-ils, parfois, fait et cause pour des « colons » chinois dans leurs conflits avec les indigènes ? Peut-être tranchent-ils à leur manière des litiges locaux, la paix impériale étant à ce prix ? Quoi qu'il en soit, pacifisme ne signifie pas angélisme ; les stèles que Zheng He fait graver pour rendre compte de ses péripéties chez les « barbares » sont sans la moindre ambiguïté sur ce point.

Le grand repli des Chinois

Le système des tributs empêche théoriquement les officiels de commercer. Représentant l'empereur, ils ne sauraient s'abaisser à ce genre d'activités. Mais dans les faits, les fonctionnaires, tout comme les eunuques et autres membres d'équipage, ne s'en privent probablement pas. Émerveillées au retour des navires, les cours chinoises sont désireuses des produits exotiques que ne doivent pas manquer de leur rapporter, contre faveurs, tous ces marins.

Entre 1431 et 1433, Xuande, petit-fils de Yongle, lance un septième voyage, toujours dirigé par Zheng He. Il faut au moins raccompagner chez eux les ambassadeurs venus en Chine du temps de son grand-père. La flotte du vieil amiral revisite presque tous les pays rencontrés précédemment, y ajoutant peut-être les lieux saints de l'islam (Djeddah sûrement, Médine et La Mecque, c'est moins sûr). Xuande décède jeune, en 1435. Peu après l'eunuque, de ce que l'on en sait.

Le sempiternel discours confucéen – pourquoi dépenser tant d'argent et d'énergie pour quelques produits exotiques ? – reprend ensuite le dessus. D'autant que le pays n'est pas au mieux et que les Mongols redeviennent agressifs. Ils captureront l'empereur Zhengtong en 1449. Côté Vietnam, les Annamites ont, pour leur part, recouvré leur indépendance dès 1427. L'heure n'est plus au grand large.

Les bateaux-trésor et les autres jonques impériales de Zheng He n'auront, au final, parcouru les mers que 28 ans. Aussi est-il bien difficile de dresser un bilan, quand on sait que les découvertes européennes durèrent des siècles. D'autant que pour empêcher l'eunuque Wang Zhi d'entreprendre de nouvelles expéditions, un haut fonctionnaire, Liu Daxia, brûle vers 1470-80 tous les documents officiels relatifs aux expéditions de Zheng He.



Réplique de la stèle de Galle, sur l'île de Ceylan, le Sri Lanka actuel, écrite en trois langues (1409). (Source : Wikimedias Commons)

Au niveau diplomatique, faute d'être entretenus, les liens vont se distendre entre la Chine et ses anciens « vassaux ». Ce retrait favorisera

sûrement les ambitions européennes, d'abord portugaises et espagnoles. Au niveau commercial, on ne sait si les expéditions eurent un réel effet d'entraînement.

Contrairement au Portugal, les marchands n'y sont guère associés officiellement. Cette aventure étatique manque singulièrement de relais sociaux. Par la suite, les Ming, profitant à leur tour du trafic américain, bénéficient globalement d'un très bel essor commercial, malgré les entraves mises par le gouvernement aux échanges maritimes. Mais la marine impériale, abandonnée, périclité. L'intensification de la piraterie des Wokou, sur les côtes chinoises, conduit à une reprise en main de l'outil, mais les finances suivent difficilement. La Chine est accaparée par le Nord, où se tient de nouveau sa capitale, et le Nord est harcelé par les Mongols. Les Mandchous s'en mêleront pour finalement renverser les Ming en 1644.

Au niveau scientifique, on sait peu de choses. Comme des érudits sont membres des expéditions, des plantes exotiques intègrent les ouvrages, des animaux sont exhibés, enregistrés, des objets sont répertoriés. Les rares récits des participants, dont celui de Ma Huan, restent toujours des sources d'informations ethnographiques très intéressantes sur les pays visités.

La cartographie en profite aussi. L'île de Timor ne serait pas inconnue. Peut-être une ou deux jonques ont-elles pu atteindre l'Australie, ou encore franchir le cap de Bonne Espérance vers l'Ouest. Mais rien n'est moins sûr. Quoi qu'il en soit, aucun élément ne permet d'affirmer qu'une escadre Ming réalisa le tour du monde, découvrant l'Amérique avant Colomb, en 1421, comme le prétend l'auteur britannique Gavin Menzies.

Matérialisme à la Chinoise

Malgré le mépris des confucéens, la figure de Zheng He n'a pas manqué de devenir populaire en Chine. Très tôt, des romans plus ou moins fabuleux lui ont été consacrés. *Le Récit des voyages de l'eunuque Sanbao dans les mers de l'Ouest*, daté de 1597, est le plus ancien. Il a été édité au moins 15 fois jusqu'à la fin du XXème siècle dans le pays, rencontrant également un franc succès chez les descendants de Chinois en Indonésie, où il fut traduit en malais et en javanais au XIXème siècle.

L'intérêt porté au chef des eunuques de Yongle est toujours grand dans l'archipel indonésien. En 2004, un roman fleuve intitulé *La première expédition de Sanbao Gong*, fiction qui se déroule principalement en Insulinde, est publié par l'auteur Remy Sylado sur commande d'un admirateur sino-indonésien de Semarang. Quant au Gedung Batu, ensemble construit en l'honneur de l'amiral sur l'île de Java, il a été rénové.

En Asie, des temples bouddhistes sont dédiés à l'amiral chinois, et l'on trouve des timbres à son effigie jusqu'à Madagascar. Au Kenya, où des vestiges ont été retrouvés, des habitants de Lamu affirment qu'ils descendent eux-mêmes des expéditions de Zheng He. Mais il convient de mentionner que bien avant les Ming, des Asiatiques ont fréquenté les rives africaines. Le malgache est d'ailleurs une langue austronésienne.

De nos jours, lorsqu'un pêcheur de l'île de Hainan revendique des droits historiques sur la mer de Chine méridionale, il faut comprendre qu'il a été imprégné par le faste du 600ème anniversaire de toutes ces aventures, en 2005. Et chez les Hui, musulmans de Chine qui abritent notamment la descendance de la fratrie Ma, l'aïeul Zheng He est carrément devenu un mythe : sa filiation, ce n'est pas avéré du tout, remonte à Mahomet en personne, croit-on.

Aucune flotte européenne n'aurait fait le poids face à Zheng He. Aussi, l'évocation de ce héros s'avère utile, non seulement en Chine mais également dans toute une partie océanique du monde actuel. L'amiral était déjà mentionné dans les années 1960 en Afrique, lorsque le PCC interférait dans la lutte armée alors en cours au sein des... colonies portugaises. En 1963, le Premier ministre chinois effectue un long déplacement sur ce continent, et dans plusieurs discours, notamment à l'OUA, Zhou Enlai fait référence au célèbre navigateur.

En 1983, le cénotaphe de l'eunuque, situé à Nankin, est restauré et plusieurs ouvrages lui sont de nouveau consacrés. Lors des Jeux olympiques de Pékin, en août 2008, les chorégraphies de la cérémonie d'ouverture s'arrêteront longuement sur les pérégrinations

de l'amiral. En Chine populaire, le 11 juillet est devenu le Jour de la mer : la date, gravée dans la roche, commémore le départ de la première des sept aventures de l'eunuque.

Cette réhabilitation appuie de nos jours les ambitions de Pékin, bien moins continentales qu'à l'époque de Mao. « *Ces pionniers ont gagné leur place dans l'histoire, non comme des conquérants sur des bateaux de guerre, munis d'armes ou d'épées. On se souvient d'eux comme des émissaires de l'amitié conduisant des caravanes de chameaux ou des bateaux transportant des trésors* », déclarait Xi Jinping en 2017, au moment de présenter ses « Nouvelles Routes de la Soie », qui empruntent les mêmes axes maritimes que la Grande Flotte.

Face aux Malaisiens, l'ancien président Hu Jintao ne procédait pas autrement. « *Voyez comme la Chine de Zheng He était pacifiste* », répètent à l'envi les dirigeants communistes actuels, qui voient grand sur les océans et maintiennent des prétentions hégémoniques sur des îles et îlots où aurait pu croiser Zheng He, du Japon jusqu'à l'Indonésie. L'eunuque est devenu l'incarnation de l'appel du grand large, dans son pays. Mais il faudra attendre la deuxième moitié du XIX^{ème} siècle pour que l'empire, oscillant entre yin et yang, se laisse retenter par la compétition maritime internationale.

Inséré 05/04/22 DOSSIER Enlevé 05/05/22



Global scrubber washwater discharges under IMO's 2020 fuel sulfur limit (I)

INTRODUCTION

When the International Maritime Organization's (IMO) global fuel sulfur limit came into force on January 1, 2020, it reduced the maximum sulfur content for marine fuels from 3.5% to 0.50%, except for ships that have an exhaust gas cleaning system, also known as a scrubber (Marine Environment Protection Committee [MEPC], 2019). Scrubbers allow ships to continue to use low-cost, high-sulfur heavy fuel oil (HFO) because the scrubber removes a portion of the sulfur from the exhaust before it is emitted, resulting in sulfur dioxide (SO₂) emissions that are at least equivalent to using lower sulfur fuels. Scrubbers spray the exhaust with seawater (open-loop scrubbers) or alkaline water solution (closed-loop scrubber) to control SO₂ emissions, and then dump the water overboard in the form of either washwater (open loop) or bleed-off water (closed loop).

For simplicity, this paper uses the term washwater to cover both open- and closed-loop discharges. In earlier research, we found that all scrubbers (open-loop, closed-loop, and hybrid) discharge washwater that is more acidic than the surrounding seawater and which contains polycyclic aromatic hydrocarbons (PAHs), particulate matter, nitrates, nitrites, and heavy metals including nickel, lead, copper, and mercury (Comer, Georgeff, & Osipova, 2020). Additionally, earlier work shows that, while scrubbers are effective at reducing air emissions of SO₂, emissions of carbon dioxide, particulate matter, and black carbon were higher with scrubbers compared with using marine gas oil (MGO) (Comer, Georgeff, & Osipova, 2020). Scrubber air emissions and water pollution are already occurring near shore, including within areas designated as critical habitat for threatened and endangered marine mammals, while PAHs and heavy metals have been linked to cancers and reproductive dysfunction in marine mammals (Georgeff, Mao, & Comer, 2019). The continued use of scrubbers therefore raises environmental and public health concerns, and a growing list of governments has banned the use of scrubbers in their waters.

Scrubbers cost several million dollars to install and ship owners rely on the price differential between HFO and lower sulfur fuels like very low sulfur fuel oil (VLSFO, <0.50% sulfur) and MGO (<0.10% sulfur) to make them worth the investment. As of January 2021, HFO was about \$100/tonne cheaper than VLSFO or MGO, according to Ship & Bunker.¹ Large cargo ships can burn more than 100 tonnes of fuel per day and cruise ships can burn more than 200 tonnes of fuel per day. The payback period depends on both the scrubber costs (capital, operating, and maintenance) and the fuel price differential. The economics seem to be compelling, as the number of ships fitted with scrubbers increased from 243 in 2015 to more than 4,300 in 2020.

This paper presents a first global assessment of the mass and distribution of scrubber washwater discharges from ships. Additionally, we are releasing an interactive, global washwater discharges map, available at the ICCT website. The map can be used by interested states, ports authorities, policymakers, environmental protection organizations, and members of the public. We mapped and ranked scrubber discharges by ship type, flag state, national waters, and major ports. We also estimated discharges within IMO-designated Particularly Sensitive Sea Areas (PSSAs), many of which contain coral reef systems that are already negatively impacted by ocean acidification.

The mass of scrubber washwater discharges was estimated for ships that had or were expected to have scrubbers installed by the end of 2020, according to Clarksons Research Services data when referenced in June 2020.² The distribution of washwater discharges was mapped using Automatic Identification System (AIS) data from exactEarth.³ We used 2019 ship traffic patterns to provide a pre-pandemic baseline of ship activity. We expect these results to be representative of the distribution and mass of scrubber washwater discharges for most ship types for the next several years, beginning with 2021. The main exception is cruise ships. The pattern of discharges presented in this study reflects pre-pandemic traffic patterns. Unless and until cruise ships are sailing their typical routes, the

amount and location of their scrubber discharges will be different from those presented here.

BACKGROUND

In the 2008 amendments to the International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI, IMO agreed in Regulation 14 to reduce the maximum allowable sulfur content of marine fuels from 4.5% to 3.5% in 2012, and then to 0.50% in 2020, except in Sulfur Emission Control Areas (SECAs), where the maximum sulfur content was limited to 1.0% in July 2010 and 0.10% in January 2015. Regulation 14 also specified that the 0.50% global limit could be delayed to 2025, depending on the outcome of a study on fuel oil availability. The IMO agreed to implement the 0.50% sulfur limit in 2020 based on research showing that sufficient quantities of compliant, low-sulfur-content fuel would be available in 2020 (Faber et al., 2016) and that doing so would prevent tens of thousands of premature deaths each year by reducing air pollution (Sofiev et al., 2018). Compliance with Regulation 14 can be achieved either by replacing the HFO commonly used in shipping with low-sulfur content fuel or by using a scrubber, which is allowed under MARPOL Annex VI Regulation 4, which deals with “equivalents,” as long as the scrubbers are at least as effective at reducing emissions.

Scrubbers have been installed on ships since the 1990s. At first, scrubbers were used only within SECAs, where limits on sulfur emissions were more stringent than the global limit. For SECAs, unless a scrubber was used, the maximum allowable fuel sulfur limit was 1.5% before July 1, 2010, 1.0% from July 1, 2010, to December 31, 2014, and then 0.10% beginning January 1, 2015. It was only in 2020 with the implementation of a stricter global regulation that ships started routinely using scrubbers outside of SECAs.

Scrubbers are not tightly regulated and, until recently, have not been widely used. But according to DNV GL (2020), 4,341 ships were expected to be outfitted with scrubbers by the end of 2020, which is 83% more than in 2018.

Types of scrubbers

Scrubbers are categorized as open-loop, closed-loop, or hybrid, with hybrid scrubbers able to alternate between open- and closed-loop modes. Open-loop scrubbers take up seawater, use it to capture sulfur oxides (SO_x) in exhaust, and then release the discharge water, or washwater, back into the ocean. Open-loop scrubbers have been shown to release hot, acidic washwater containing, in varying concentrations, PAHs, particulate matter, nitrates, nitrites, and heavy metals including nickel, lead, copper and mercury (Boer & 't Hoen, 2015; Comer et al., 2020; Kjølholt, Aakre, Jürgensen, & Lauridsen, 2012; Teuchies, Cox, Van Itterbeeck, Meysman, & Blust, 2020). The washwater can be treated before discharge, but this is not mandatory and most open-loop scrubbers do not filter the washwater before dumping it overboard (European Sustainable Shipping Forum, 2017). Unlike open-loop systems, closed-loop systems collect contaminated scrubber sludge on board and store it for on-land disposal. Closed-loop scrubbers also add caustic soda to the water to neutralize some of the acidity, but they are not waste-free, as they produce highly concentrated “bleed-off” water (Magnusson, Thor, & Granberg, 2018; Winnes, Moldanová, Anderson, & Fridell, 2016).

Open-loop scrubbers are the most common type installed on ships because they are less expensive, dump the sludge they generate overboard, and do not require adding chemical additives to increase alkalinity. Later, we will show that, as of 2020, open-loop scrubbers accounted for 85% of installations; 14% were hybrid systems and the remaining 1% were closed loop.

Scrubber washwater IMO guidelines

The first IMO scrubber washwater guidelines were adopted in 2005 (Resolution MEPC.130(53)) and the first numeric discharge criteria for water pollutants were

introduced in the 2008 revisions to the guidelines (Resolution MEPC.170(57)). The guidelines were later reviewed and revised—but not strengthened—in 2009, 2015, and 2020. (Comer et al., 2020). The first washwater discharge criteria that were accepted in 2008 (MEPC 57/4/1) only included numerical limits for pH, turbidity (as a proxy for heavy metals), and PAHs. Specific discharge criteria for heavy metals were never established despite numerous studies showing that washwater contains substantial amounts of heavy metals (Teuchies et al., 2020). IMO's discharge limits were initially developed based on data from just three ships operating with scrubbers, two of which were prototypes, and the discharge criteria have never been strengthened despite several rounds of review: Resolution MEPC.184(59) in 2009; Resolution MEPC.259(68) in 2015; and a new draft of the guidelines PPR/7/22/Add.1, Annex 9, in 2020. According to current IMO guidelines, washwater discharged during scrubber operation should not exceed the limits established by MEPC, and there is a recommendation—though not a requirement—that ships continuously monitor the pH, PAH, nitrates, and turbidity of the discharge.

Environmental impact of contaminants in scrubber washwater

A number of studies have shown that washwater influx can damage marine ecosystems. High concentrations of PAHs and heavy metals in washwater accumulate in sediments, especially in coastal areas, and also increase water toxicity in aquatic ecosystems (Koski, Stedmon, & Trapp, 2017; Teuchies et al., 2020; Winnes et al., 2016). Bioconcentration of PAHs and heavy metals has been linked with reproductive dysfunction and cancer in marine mammals (Georgeff et al., 2019; Martineau et al., 2002). Additionally, PAHs and heavy metals have a high likelihood of bioaccumulation in the marine food web, including in fish consumed by humans (Chouvelon et al., 2019; Valavanidis et al., 2008).

Stips et al. (2016) found that seawater acidification from washwater influx in the coastal areas of the North Sea could double the annual impact of greenhouse-gas induced acidification. A recent study by Dulière, Baetens, and Lacroix (2020) estimated that if 15% to 35% of the merchant fleet (by tonnage) operating in and near the English Channel were outfitted with open-loop or hybrid scrubbers, the rate of ocean acidification would double or quadruple in that area compared with how much it is expected to acidify due to climate change. Near Rotterdam, the annual acidification from these ships could be 50 times that expected from climate change. While the authors also stressed that there is a lack of explicit study on acidification of the ocean caused by international shipping, ocean acidification is listed as an increasing cause for the decline of the Great Barrier Reef (Mongin et al., 2016), an area we will show is being polluted by ships with scrubbers.

Comer et al. (2020) showed that all scrubbers (open, closed, and hybrid) discharge water that is more acidic and turbid than ambient seawater. Also, all scrubbers emit PAHs and heavy metals that have been linked to cancers and reproductive dysfunction in marine mammals, including threatened and endangered species like Northern and Southern resident killer whales and beluga whales.

Particularly Sensitive Sea Areas

PSSAs are intended to protect ecologically vulnerable areas from the impacts of international shipping. PSSA status is granted after a country or coalition submits a proposal to MEPC citing the need for IMO to protect this area. Measures to protect PSSAs often include "areas to be avoided" by ships (especially those carrying oil), traffic separation schemes, and mandatory ship reporting. However, shipping is still allowed in PSSAs, and there are not yet any limits on scrubber washwater discharges. There are currently 15 IMO-designated PSSAs, and among them are the Great Barrier Reef, the Florida Keys, the Galapagos, and other areas with coral reef systems and endangered species. As stated above, all scrubber washwater is more acidic than the surrounding seawater. Ocean acidification is expected to become an increasing threat to all coral building organisms, as acidic water significantly reduces their ability to produce hard exoskeletons, and this is a particular concern in the Great Barrier Reef (Kleypas et al., 2006).

IMO assessment of scrubber impacts

As a response to concerns from IMO delegates, the IMO requested that the Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) conduct independent research and report on the potential environmental impacts of scrubbers (International Maritime Organization [IMO], 2019). The task team concluded that while scrubbers efficiently remove sulfur from air emissions, washwater content varied greatly depending on fuel, engine type, and a ship's operating conditions. While referencing the possible impacts of scrubbers on acidification and eutrophication, the authors noted that the study was limited in time and that a longer-term understanding was needed to fully assess the environmental impacts. Given the potential for harm, some countries have taken preventive measures and have banned the use of scrubbers in their ports and national waters (North, 2020).

With the recent and rapid increase in the number of ships using scrubbers, we saw a need to quantify and map scrubber washwater discharges and to identify the areas most affected. Shipping traffic is unevenly distributed both spatially and temporally and, as a result, regions where the concentration of pollutants is higher might experience stronger negative effects. Ports may be particularly affected by scrubber discharges. When the ambient water alkalinity is low, which is often the case in harbors situated in estuaries, less of the acidity of the washwater is neutralized. Moreover, PAHs and heavy metals are discharged in shallow water, where they can be more concentrated and accumulate in sediments, which could lead to human health risks in addition to threats to marine life.

To be Followed

Inséré 06/04/22 DOSSIER Enlevé 06/05/22

Global scrubber washwater discharges under IMO's 2020 fuel sulfur limit (II)

METHODOLOGY

AMOUNT OF WASHWATER DISCHARGED

We estimated scrubber washwater discharges from all ships that were expected to be using scrubbers by the end of 2020. For each ship, hourly washwater discharges were calculated as follows, based on the methods of Georgeff et al. (2019):
$$D = \text{TED} \times r$$

D = discharge water mass, in tonnes (t);
TED = total energy demand per ship, in megawatt hours (MWh); r = scrubber washwater flow rate, t/MWh.

Energy demand per ship in MWh was estimated using the SAVE model, which uses AIS data paired with ship registry data to estimate hourly energy use, fuel consumption, and emissions for the global fleet. The SAVE model is described in detail in Olmer, Comer, Roy, Mao, and Rutherford (2017). For the washwater flow rate, we applied a normalized flow rate of 45 t/MWh for open-loop scrubbers in accordance with IMO guidelines for exhaust gas cleaning systems in Resolution MEPC.259(68).⁴ For hybrid scrubbers, we assumed they were always operated in open-loop mode with the same flow rate as open-loop scrubbers (45 t/MWh).

Typical flow rates for closed-loop scrubbers vary from 0.1 and 0.3 m³/MWh (IMO, 2019). In this study we used a conservative flow rate value equal to 0.1 t/MWh, based on the assumption that the density of water is approximately 1 t/m³.

DATASETS AND A SHIP'S POWER CONSUMPTION

We used three global commercial shipping datasets: AIS, IHS, and Clarksons World Fleet Register (WFR).⁵ AIS data from exactEarth provided the global shipping traffic.⁶ AIS reports each ship's location as frequently as every few seconds. It also reports each ship's speed over ground and draught. The IHS dataset provided key technical characteristics for each ship and ship's engine, which are used in the SAVE model.⁷ ICCT's SAVE model integrates AIS and IHS datasets to estimate ship-specific power consumption hour by hour for each ship (Olmer et al., 2017). The model incorporates a set of uncertainties related to ship age and weather conditions and calculates power demand for main engines, auxiliary engines, and boilers for each hour of all identified ships in a given year. The SAVE model's power demand assumptions for auxiliary engines and boilers have been updated from Olmer et al. (2017) to align with those in the Fourth IMO Greenhouse Gas Study (Faber et al., 2020).

FLEET WITH SCRUBBERS

We identified individual ships by matching the IMO numbers of each scrubber-equipped ship in Clarksons WFR with ships observed in the AIS data. Each scrubber in the Clarksons WFR dataset has a type assignment (open loop, closed loop, or hybrid) and an installation or order date. Integrating the WFR dataset with the SAVE model allows us to identify year-round shipping routes of the world fleet outfitted with scrubbers. In this study, we analyzed 2019 ship activity for ships that already had scrubbers installed by the end of 2020, according to Clarksons WFR when referenced in June 2020.

Business as usual shipping traffic under the 2020 global sulfur limit

We modeled global scrubber washwater discharges under IMO's 2020 global sulfur limit by analyzing real-world ship activity in 2019 for the 2020 scrubber-equipped fleet. We estimated expected discharge locations based on 2019 shipping traffic. The prediction excludes ship activity of 2020, where global traffic was significantly affected by the coronavirus pandemic. We expect these estimates to be valid for the near term, in 2021 and for a few years thereafter. Over time, without additional policy actions to prohibit scrubber use, we expect global scrubber discharges to increase.

REGIONS OF SPECIAL FOCUS

We summarized the amount of discharge water within each country's Exclusive Economic Zone (up to 200 nautical miles [nm]), territorial seas (up to 12 nm), internal waters, and ports. We estimated absolute discharges in tonnes (t) and discharge concentrations in tonnes per square kilometer (t/km²). Table 1 includes all definitions and data sources used for analysis. The shapefiles for Exclusive Economic Zone (EEZ), territorial seas (TS), and internal waters (IW) were from the Flanders Marine Institute, while PSSA shapefiles were created by Hamilton (2018) based on the boundaries listed in the MEPC Resolution that established each PSSA, and the descriptions as summarized by IMO (2017). We also estimated absolute discharges within a 1 nm radius of "major ports," as defined by the World Port Index (2019).

Table 1. Data sources and definitions of the regions used in this study.

Name	Abbreviation	Definition	Source for the full definition	Source of GIS data
Territorial seas	TS	Up to 12 nm, measured from baselines determined in accordance with the United Nations Convention on the Law of the Sea (UNCLOS).	UNCLOS, 1994; Part II, Article 3	Flanders Maritime Institute, 2019
Exclusive Economic Zone	EEZ	Up to 200 nm from the baselines determined in accordance with UNCLOS.	UNCLOS, 1994; Part V, Article 57	Flanders Maritime Institute, 2019
Internal waters	IW	Waters on the landward side of the baseline of the territorial sea form part of the internal waters of the state	UNCLOS, 1994; Part II, Article 8	Flanders Maritime Institute, 2019
Ports		Major ports and terminals worldwide	National Geospatial-Intelligence Agency, 2019	National Geospatial-Intelligence Agency, 2019
Particularly Sensitive Sea Area	PSSA	An area that needs special protection through action by IMO because of its significance for recognized ecological, socio-economic, or scientific attributes where such attributes may be vulnerable to damage by international shipping activities.	IMO Assembly Resolution A.982(24)	Hamilton, 2018; IMO, 2017

AREAS WHERE SCRUBBER DISCHARGES ARE PROHIBITED

Areas with special regulations for scrubber discharges as of June 2020 are listed in Table 2. In these areas, we assumed that scrubber discharges did not occur based on the rules listed in the table. As ports have different infrastructure and different harbor sizes, we applied a universal buffer of 5 nm around regulated ports. For assessing ban effectiveness, we calculated the discharge water mass that would have been emitted if ships had been allowed to use scrubbers in the restricted areas as usual and reported these values.

Although the list of countries with special regulations and bans on scrubbers is constantly updated, this study includes only the states that adopted and publicly announced scrubber bans as of June 2020 (North, 2020).

Table 2. Countries where scrubber discharges are restricted (as of June 2020).

Country	Rules applied
Bahrain	Open-loop scrubbers cannot be used in port or at anchor
Belgium	Scrubbers cannot be used within 3 nm of the coast
Brazil	Scrubbers cannot be used in territorial seas
China	Open-loop scrubbers cannot be used in China's domestic emission control areas
Egypt	Open-loop scrubbers cannot be used in all ports and Suez Canal
Gibraltar	Open-loop scrubbers cannot be used in Gibraltar waters*
Ireland	Scrubbers cannot be used in Dublin and Waterford ports
Malaysia	Open-loop scrubbers cannot be used in the territorial seas (12 nm)
Norway	Open-loop scrubbers cannot be used in the World Heritage Fjords sea areas of Geirangerfjord and Nærøyfjord
Pakistan	Open-loop scrubbers cannot be used in the ports of Karachi or Bin Qasim
Panama	Open-loop scrubbers cannot be used in the Panama Canal
Portugal	Open-loop scrubbers cannot be used in any port or at berth
Singapore	Open-loop scrubbers cannot be used in any port
Spain	Open-loop scrubbers cannot be used in the ports of Algeciras, Cartagena, or Huelva
United States	Scrubbers cannot be used in California ports or waters; Connecticut ports or waters; or Hawaii ports or waters, except under certain conditions
United Arab Emirates	Open-loop scrubbers cannot be used in the port of Fujairah

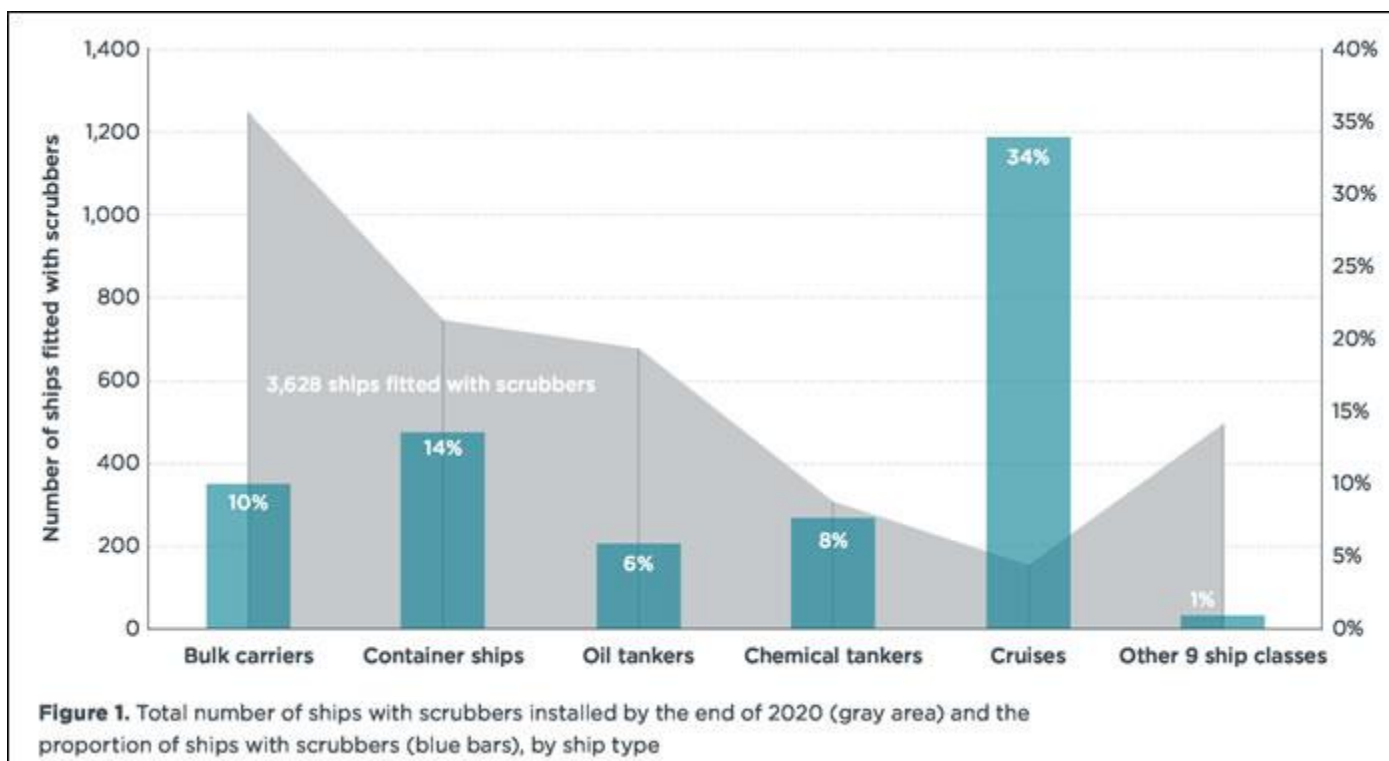
* We modeled a ban in the Strait of Gibraltar in this study as the regulation did not clearly define the scope of Gibraltar waters.

RESULTS AND DISCUSSION

FLEET OF SCRUBBER-EQUIPPED SHIPS

In 2019, we identified 81,297 active ships in the global fleet by matching AIS data with ship registry data based on each ship's IMO number.⁸ We used the 2019 fleet as the baseline for this analysis because 2020 traffic patterns were disrupted by the coronavirus pandemic and do not reflect typical shipping traffic. Of the 81,297 ships in the fleet, we identified 3,628 that have or will have scrubbers installed by the end of 2020. This is lower than the roughly 4,300 ships that were fitted with scrubbers by the end of 2020 because, at the time of this analysis, Clarksons reported only 3,754 ships with scrubbers (we matched 3,628 to the AIS data set). Since this analysis, Clarksons has added additional ships with scrubbers to their database. Of the scrubbers installed on the 3,628 ships we could match with the AIS data, open-loop scrubbers are the most common type (85% of all scrubbers installed) and hybrids are second most popular (14%); only 1% of the scrubbers are closed loop. More than half of all scrubbers were installed in 2019 in preparation for the global marine fuel sulfur regulation that came into force at the beginning of 2020.

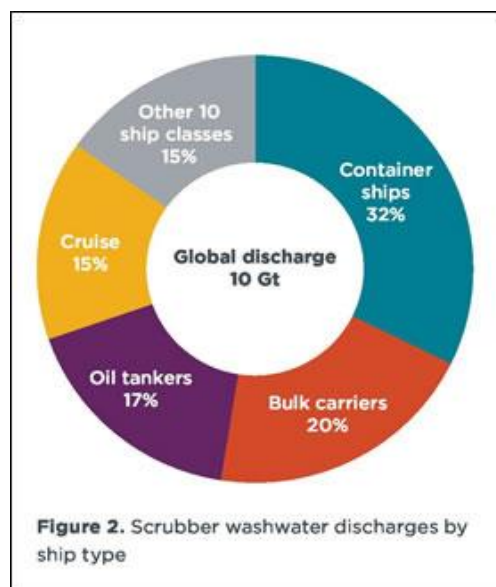
Bulk carriers, container ships, and oil tankers represent 74% of the fleet outfitted with scrubbers, by number of ships. Bulk carriers are the most common ship type outfitted with scrubbers—1,246 ships, or 34% of all outfitted ships. However, within each ship type, cruise ships have the largest share of their fleets outfitted with scrubbers: 34% of all cruise ships (Figure 1). Even though bulk carriers are the leaders by absolute numbers, only 10% of all bulk carriers have a scrubber installed. More information can be found in the supplemental data that accompanies this paper on the ICCT website.



DISCHARGED WASHWATER

Globally

Ships with scrubbers are expected to discharge more than 10 gigatonnes (Gt) of washwater worldwide annually. This is comparable to the total amount of cargo carried by the global shipping industry, 10.7 Gt in a single year (United Nations Conference on Trade and Development, 2019). Nearly all of the washwater will be emitted by open-loop scrubbers and hybrid scrubbers working in open-loop mode; 10 Gt will be emitted by scrubbers in open-loop mode and 0.3 million tonnes (Mt) from closed-loop scrubbers. Together, container ships, bulk carriers, and oil tankers are responsible for about 70% of the discharges. Cruise ships are expected to account for 15% of scrubber discharges, despite accounting for only 4% of scrubber installations on the basis of the number of ships with scrubbers in the fleet.



Global discharge water from scrubbers is distributed unevenly and we found it formed three spatial hot spots: the Caribbean Sea; the Baltic Sea, English Channel, and Mediterranean Sea in Europe; and a route through the Strait of Malacca along the South and East China Seas (Figure 3).

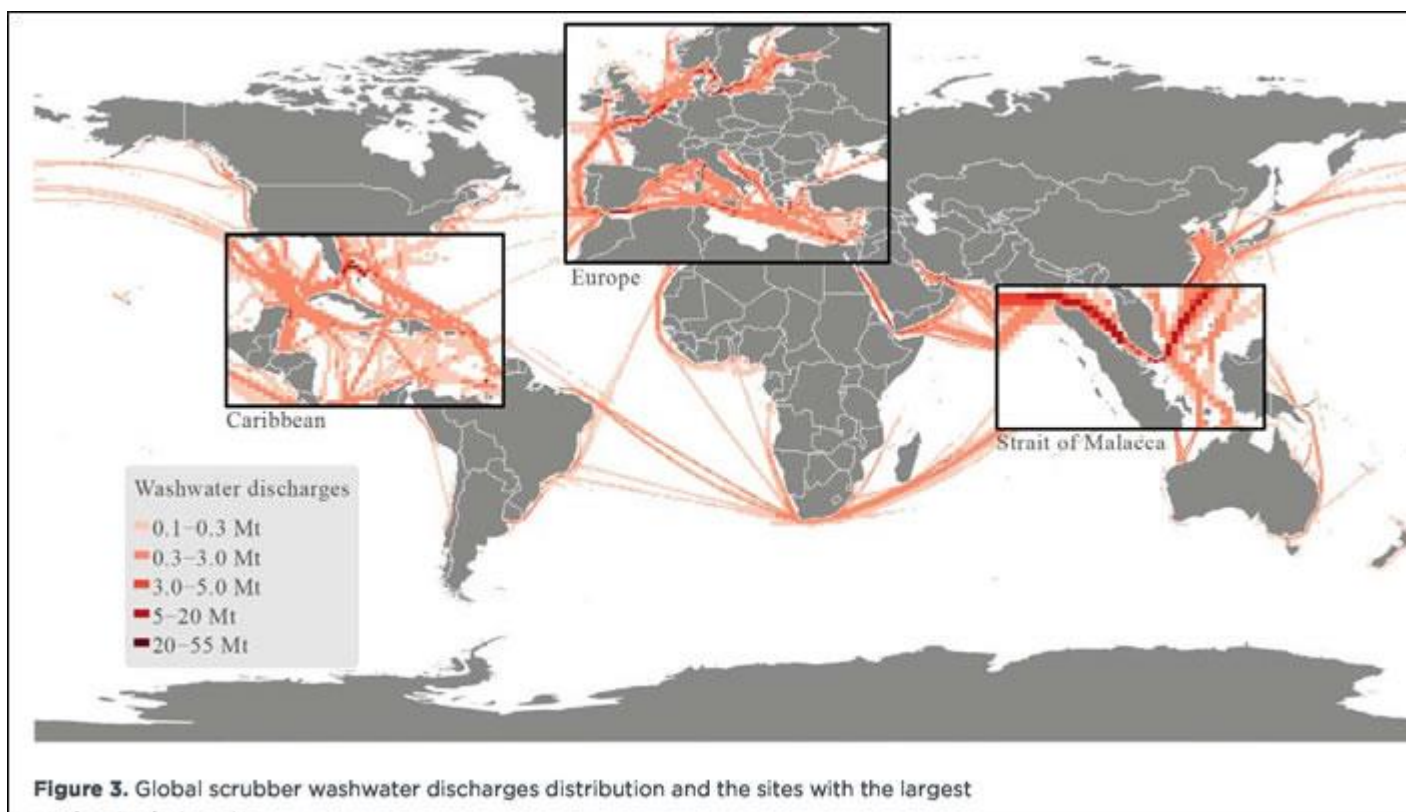


Figure 3. Global scrubber washwater discharges distribution and the sites with the largest discharges.

There are many locations in which shipping traffic bottlenecks. This bottlenecking is due to natural geographic channels and straits as well as artificial canals and locks. Within these bottlenecks are increased amounts of discharge water. Several of the most extreme cases of shipping bottlenecking are in Europe, and these include the English Channel, the Great Belt of Denmark, and the Bosphorus Strait of Turkey. Due to the high number of ships and intensive shipping activity in these areas, millions of tonnes of washwater are being discharged.

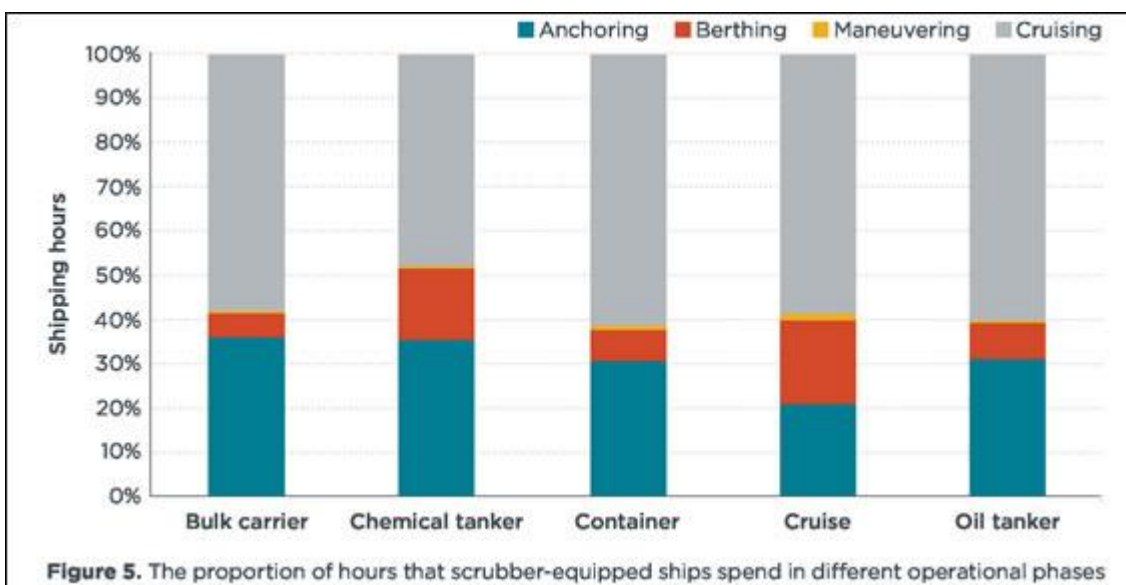
One well-known bottleneck occurs in the Strait of Malacca in Southeast Asia. Singapore, Indonesia, and Malaysia, which surround the strait, have already banned open-loop scrubber washwater in their ports, but not in the strait itself. Between the northern tip of Sumatra and the start of the Singapore Strait, more than 180 Mt of washwater will enter this narrow area.

Even where bottlenecking is not occurring, there are areas of extreme washwater concentrations, such as the Caribbean Sea. This area is home to several popular cruise ship ports of call, including Miami and other southern U.S. ports. Before the IMO's global sulfur regulation took effect at the start of 2020, cruise ships already accounted for one-third of all scrubbers in operation (DNV GL, 2020). As we will show later, popular cruise destinations like Georgetown, Freeport, and Nassau are where in-port discharges are the highest.

As shown in Figure 4, of the 10 Gt of discharge water we expect to be emitted, about 8 Gt or 80% would be discharged within 200 nm of shore (i.e., within the EEZ, TS, or IW of a country). The remaining 20% is expected to be discharged on the high seas. Approximately 1.3 Gt is expected to be emitted within TS and 0.5 Gt inside IW.



The prevalence of water pollution near coastal areas can be explained by the fact that scrubber-equipped ships spend approximately 40% to 50% of their time at anchor or at berth in or near ports (Figure 5).



Distribution by flag

Scrubber-equipped ships are currently registered to 52 flag states. Most of the time, foreign-flagged ships are responsible for the majority of scrubber discharge water in a country's territorial seas. In only 11 out of 154 states are the largest contributors to washwater discharges in their territorial seas from ships flying their flag.

Inséré 07/04/22 NIEUWS NOUVELLES Enlevé 07/05/22

Dutch Gasunie charters small FSRU from Exmar for Eemshaven project



Image: Exmar

Dutch gas grid operator Gasunie has secured a small floating storage and regasification unit from Belgian shipowner Exmar for its planned terminal in Eemshaven, as the Netherlands looks to reduce reliance on Russian gas. Exmar said in a statement on Friday it has signed a deal with Gasunie LNG to charter its 26,000-cbm barge-based FSRU S188 for a period of five years. The 120 meters long FSRU has a capacity of 600 mmscfd. Gasunie would use the FSRU as floating LNG import terminal at Eemshaven in Groningen, in view of the geopolitical developments currently going on in Europe and the increased emphasis of governments on the security of energy supply, Exmar said. The Dutch firm recently said it was looking to build the country's second LNG import facility in the Eemshaven port, operated by Groningen Seaports, but also boost capacity at the Gate terminal in Rotterdam. With the new LNG facility in Eemshaven and the expansion of Gate, the LNG capacity in the Netherlands could double from 12 bcm to 24 bcm, Gasunie said. According to Exmar, the objective is to deploy the FSRU S188 and have the terminal up and running by the end of the third quarter of 2022. Exmar said in September last year it had expected to find work for the small FSRU in the next twelve months after trader Gunvor terminated a long-term charter deal. The company had previously chartered the FSRU to Gunvor in 2018 for a period of 10 years to serve its clients in Bangladesh. "We are happy to reach this agreement with Gasunie. It proves the possibilities of our floating infrastructure solutions as a quick to market and competitive solution for securing energy supply to communities, industries and households," Nicolas Saverys, Exmar's executive chairman said.

Source : LNG

Inséré 09/04/22 DOSSIER Enlevé 09/05/22

Was The Deliberate Sinking Of The Mauritius Oil Spill Vessel, Wakashio, An International Crime?

By : Nishan Degnarain

I cover innovation within the green/blue industrial revolution.



On Monday 24 August 2020, the front section of the 300-meter-long iron-ore transporter, the **WAKASHIO**, was deliberately sunk, as dramatic video was released of the sinking with cheering heard in the background. This follows a month of the

ship being grounded on the reefs of Mauritius and the vessel splitting in two on 15 August. Despite an operation to tow the front half of the vessel since half past midnight on Wednesday 19 August, 10 days later (29 August), there has still been no public disclosure of the location of the deliberate sinking of the **WAKASHIO** (although satellites have been able to ascertain the direction of travel).

Government statements have said that the vessel was sunk in waters that were 2000 meters deep (although there has been no independent verification). This would mean the pressure at the bottom would be 200 atmospheres (or 200 times the pressure at the surface). This would result in any remnants or traces of toxic materials on the vessel being squeezed out like ketchup from a bottle, given the pressure at such depths. This is why both the materials on the vessel and location are so critical to understand the potential impact on the marine environment.

19 August 2020: local journalist **Reuben Pillay** rushes out to catch the **WAKASHIO** as it is towed off the coral reefs of Mauritius earlier on 19 August. A 4-minute video shot by local journalist and human rights activist, Reuben Pillay, reveal the dramatic chase and scale of operation being prepared to sink the **WAKASHIO** as it was towed out to sea on 19 August. Two days after the sinking of the forward section of the **WAKASHIO**, 18 dolphins and whales washed up dead on the shores of Mauritius on Wednesday 26 August 2020. By Friday 29 August, 39 dolphins and Melon-headed whales had died and video taken by local journalists around the lagoons of Mauritius revealed that many more dolphins and whales were clearly distressed. The mammal autopsy results have not yet been publicly released. As thousands of citizens of Mauritius marched in protest on Saturday demanding greater transparency and accountability over the handling of the Wakashio grounding, oil spill and salvage operation, questions are also being asked about the decision to sink the Wakashio, when weather conditions at the time of the sinking reveal calm oceans and clear skies.

As organizations like Greenpeace also question the legality of the deliberate sinking of the **WAKASHIO**, there are three important questions to ask:

- What international laws could have been broken?
- Which courts would have jurisdiction?
- Who was responsible?

Let's look at each in turn.

Regulations governing dumping of vessels at sea

The main body of law governing pollution at sea is called Marpol (short for Maritime Pollution), and is a body of law that was adopted by the UN shipping regulator, London-based International Maritime Organization. These laws were adopted in 1979 in response

to environmental pressure due to the widespread practice of dumping waste in the ocean at that time.

There are six main chapters within this body of law covering different aspects of pollution from shipping (e.g., oil pollution, chemical pollution, sewage, cargo, air pollution). Annex 5 - which came into force in 1988 - deals with pollution associated with garbage, which dumping a vessel and any materials on board would constitute.

In addition, there are several separate bodies of law under the IMO, as well as agreements under the Vienna Convention on the Law of Treaties, that may need to be looked at with a vessel situation as complex as the *Wakashio*. This includes individual bodies of law that govern Ballast Water Pollution, Regulations on Anti-fouling Materials used on vessel hulls, and guidance on the Environmentally Sound Recycling of Vessels.

In short, there are many well documented international laws and norms governing the deliberate sinking of any vessel that could have been violated.

There are reasons these laws have been developed, and very clear guidance and protocols that need to be followed for any decision to scuttle a vessel, that has not been inventoried and cleaned. Let's look at some of the main risks.

1. Ballast Water and risk of invasive species

Ballast water is one of the biggest risks to life in the ocean. This is the water used to stabilize vessels. It is critical to the operation of any vessel that varies the load it is carrying, but as vessels have become larger, the risks that ballast water entails have increased, posing serious ecological, economic and health risks due to the multitude of marine species carried in ships' ballast water.

Ballast water – which is often filled from one location and transported to another somewhere else in the world – is often full of bacteria, microbes, small invertebrates, eggs, cysts and larvae of various species that are not native to the location the vessel is travelling to.

There are much stricter international laws concerning the uptake and disposal of ballast water that could be harmful for the marine environment around the world if it is not filtered for invasive species, many of which could be microscopic to the human eye. The transferred species may survive to establish a reproductive population in the host environment, becoming invasive, out-competing native species and multiplying into pest proportions or causing marine disease. Harm caused by ocean-born invasive species include cholera, water flea, toxic algae.

The spread of invasive species is now recognized as one of the greatest threats to the ecological, and the economic well-being of the planet. These species are causing enormous damage to biodiversity. Direct and indirect health effects are becoming increasingly serious and the damage to the environment is often irreversible. A new international treaty to govern the safe use of ballast water came into force in 2017, called the Ballast Water Management Convention (BWM).

Journalists have approached the owner of the **WAKASHIO**, Nagashiki Shipping, for details of the volume of ballast water being carried by the **WAKASHIO** at the time of the grounding, details of the operation to pump any water from the vessel prior to scuttling, details of where the ballast water had already been collected from to assess any marine disease risk, as well as details for how any ballast water collected from the **WAKASHIO** was safely disposed of. There has not yet been a response, when much of this information should be available at a click of the button and is required to be carried by the vessel as per the 2017 laws.

2. Industrial cargo residue

The residue of industrial cargo could contain harmful toxins, given the pressures at which the vessels are being sunk. There are strict regulations to inventory and disclose the materials on board the vessel. Annually, for the over 9.5 billion tons of bulk cargo goods

transported across the ocean, over 2 million tons enter the oceans, with 100,000 tons being potentially harmful to the marine environment, according to the IMO.

As could be seen from video released of the operation to flood the hold of the Wakashio starting 21 August, there was clearly cargo residue on the vessel that turned the water a murky color. While the vessel was an iron-ore bulk carrier, it was not clear whether toxicology tests had been taken of this residue.

Residue from iron ore has been a particular focus of several organizations. There are IMO guidelines on the implementation of Marpol Annex V, including the adoption of OECD standards needed to conduct such tests. Failing to conduct these tests at OECD standards could put the vessel in violation of the complex P&I rules that govern the vessel insurance.

3. Recycling of ships

There are strict rules to prevent the discarding of vessels in the ocean (just like abandoning a car in a forest is banned), there are strong measures to encourage the circular economy and recycling of all parts of a ship including the three aspects of the vessel to look at: materials contained in ship structure or equipment, waste from vessel operations, waste from the stores. These categories of waste are well defined and there is a five step process to ensure the appropriate procedures have been followed, namely: 1. collection of the necessary information, 2. assessment of collected information, 3. preparation of visual or sampling check plan, 4. onboard visual check and sampling check, 5. preparation of inventory documentation and related documentation. These are clearly defined responsibilities of the shipowner.

Checking the materials used in the vessel construction should be based on the Material Declaration given by the suppliers in the shipbuilding supply chain (e.g. equipment suppliers, parts suppliers, material suppliers). With a strong focus on environmental sustainability around the world, after several high profile stories about the end of life of vessels, the shipping industry has recently been moving toward the circular economy and recycling of materials. With a vessel the size of the Wakashio – in the top 1% of all vessel in the world - there were sizable quantities of various materials that could have been reused.

One of the other risks of sinking a vessel without fully understanding all the components that went into the construction of the vessel is the risk over many decades as the outer layers start to disintegrate. In the tropical reefs of the Pacific Ocean just South of Hawaii, many wrecks had to be removed at significant cost decades after being sunk due to the contamination caused to local marine habitats. Those were vessels one-tenth the size of the **WAKASHIO**, and there has still been no public release of this information from local authorities or the owners of the **WAKASHIO**, even though this information should have been available at a click of a button from the shipbuilder, Universal Shipping of Kawasaki in Japan.

After four years of work, in May 2009, the International Maritime Organisation (IMO) adopted the Hong Kong Convention on the Safe and Environmentally Sound Recycling of Ships. There are clear guidelines on the protocols that must be followed in the disposal of any vessel at sea, including clear inventories of all environmentally hazardous substances such as asbestos, heavy metals, hydrocarbons, ozone-depleting substances and others.

4. Harmful anti-fouling systems

Anti-fouling systems are systems (usually paints but other physical techniques can be used as well) that prevent the growth of algae and barnacles on the underside of vessels. Such growth slows the vessel and makes transportation a lot more fuel intensive.

However, the side effect of anti-fouling systems is that they use several toxic chemicals. As these chemicals break up in the marine environment over time, they can cause additional harm. Examples include harmful organotin compounds in anti-fouling paints used on ships. In July 2017 controls on cybutryne were also restricted in anti-fouling paints

when the IMO revealed that scientific data presented indicated that cybutryne causes significant adverse effects to the marine environment.

There is an entire body of law that governs the use and disposal of harmful anti-fouling systems on ships. This is called the International Convention on the Control of Harmful Anti-fouling Systems on Ships, and was adopted on 5 October 2001, coming into force on 17 September 2008, and governed by the IMO.

These are just some of the strict environmental laws designed to protect life in the ocean, as the ocean faces unprecedented pressures of climate change, overfishing, pollution and habitat destruction, amid fears of a large ocean deoxygenation event occurring.

5. Which international court?

Although the IMO is the body responsible for setting the standards of these laws, there are several other international courts that make judgements against whether such laws have been broken.

An important court of jurisdiction in this case is the International Tribunal for the Law of the Sea (ITLOS), which has several examples of cases of maritime pollution brought there.

There may also be many provisions in domestic law that had been violated with the decision to deliberately sink the Wakashio in the location decided upon, without following many of the well defined procedures that had been designed to protect the environment.

Who is responsible?

The responsibility of the decision to sink the **WAKASHIO** will be the subject of strong scrutiny. There are at least eight parties known to be involved with the Wakashio in the run up to the decision to sink the vessel.

- **Government of Mauritius**

The Government of Mauritius had an important role to play. In a statement issued by Nagashiki Shipping to Forbes on 25 August, Nagashiki Shipping was very clear under whose guidance they had been operating. "At approximately 0030 hrs, local time on Aug 19, the forward section of the hull was successfully re-floated and towed offshore to an area designated by the authorities. After that, they moved to the sea area designated by the Mauritius authorities to sink the hull and started work at 2100 hrs, local time, Aug 21. At 1500 hrs, local time, Aug 24, the front part of the hull was submerged and allowed to sink in the designated sea area of Mauritian territorial waters, in accordance with the instructions of the authorities." A level of detail within the Government may extend to which Department or Ministry may have been responsible and what was the legal basis of any decision (e.g., a collective Cabinet decision). In addition, the monitoring, compliance and enforcement of MARPOL falls to Governments. IMO has been given a role to carry out audits of Member States since 2016.

- **The flag state, Panama**

The **WAKASHIO** was flagged in Panama, which has responsibilities to ensure compliance to Marpol. The ... [+] GETTY As the vessel was Panama-flagged there are clear responsibilities for flag states that are set out by the IMO. Flag States (the State of registry of a ship) and port States have rights and responsibilities to enforce compliance. Questions will be raised around the role of Panama Maritime Authority in its role in monitoring and enforcing compliance of Marpol, given that the **WAKASHIO** fell under its jurisdiction.

- **France**

Following the visit of French Overseas Minister Sebastien Lecornuu on 17 August, the Government of Mauritius issued a press release on 19 August 2020, in which they revealed, "The scuttling position and conditions are in conformity with the advice of the French experts present in Mauritius." It was unclear whether these were the experts brought in by the Government of France or French representatives of the cleanup companies. Questions will now be asked about the documentation and role of the French experts brought in by the Government to influence such a decision to sink the Wakashio when other more sustainable options were available.

- **Malta**

The two supporting vessels, **BOKA SUMMIT** and **BOKA EXPEDITION**, were flagged to Malta.

In a statement on 19 August, Greenpeace Africa and Greenpeace Japan revealed that the two support vessels behind the towing operations, **BOKA SUMMIT** and **BOKA EXPEDITION**, were Malta-flagged. This meant that as Malta was party to Marpol regulations, these vessels would also be subject to this law too.

In an open letter to the authorities of Malta on 25 August, Greenpeace made inquiries into what actions Malta was now taking to look into the decision to deliberately sink the Wakashio and whether these Marpol regulations had been violated. No response has yet been received.

- **Japan**

The **WAKASHIO** was a vessel built in Japan, owned by a major Japanese shipping company and operated by a Japanese shipping line. It had never been to Panama. The Japanese Government has sent six experts to Mauritius since 19 August.

It was unclear what their roles and responsibilities had been toward the salvage operation, decision to sink the Wakashio and potential impact on the marine environment.

- **The IMO**

The UN global shipping regulator, the IMO was established to adopt legislation and Governments are responsible for implementing them.

When a Government accepts an IMO Convention it agrees to make it part of its national law and to enforce all of the provisions contained therein. There are clear demarcations of the responsibilities and functions of the IMO and the functions of States.

Some of the IMO's conventions have been criticized as being too weak, and this could open up greater criticism of IMO standards if the sinking of the Wakashio was permitted under IMO regulations.

However, in the case of Mauritius and the decision to sink the Wakashio, the issue is more nuanced. An IMO specialist had been deployed by the IMO to advise the Government of Mauritius specifically on any operations related to the leaking oil. His mandate – agreed between the IMO and the Government of Mauritius, and confirmed by a spokesperson at the IMO – did not extend to advising the Government of Mauritius on any aspect of the salvage operation that did not involve the oil spill. Despite repeated questions to the IMO on the specific role and advice provided by the IMO representative on the ground with relation to the decision to sink the Wakashio, no answer has been forthcoming, raising

questions whether the IMO itself could be liable for influencing the decision to sink the Wakashio against laws and standards that the organization is supposed to have set.

- **Shipowner and operator: Nagashiki Shipping and Mitsui O.S.K. Lines**

Amid all of the Government interventions, the Wakashio was a privately owned and operated vessel by a large Japanese corporation. It was owned by Japan based Nagashiki Shipping and was being operated by one of the world's largest shipping companies, Mitsui O.S.K. Lines that earned \$12 billion revenue last year. There are clear laws and rules that the owner and operator of the vessel have to abide by.

Despite several very straight forward questions asked by journalists at the outset, no answer has been received from Nagashiki Shipping on any of the information that could have a material impact on the health of the marine environment (such as amount of ballast water that was on the vessel at the time of sinking, and the origins of this ballast water). In the year 2020 when advanced data science, cloud computing, machine learning and satellite technologies are available at the click of a button, the urgency of having this information is critical to a safe cleanup of all the pollution caused by the Wakashio. Delays in getting this information to the relevant parties impacted by this tragedy is not just a legal issue, but a moral one too.

- **Array of contractors engaged in the salvage operation**



In a series of Government press releases, it was revealed that the overall salvage operation was being supervised by SMIT Salvage. The pollution cleanup efforts were being advised by Polyeco and Le Floch Depollution. The oil industry response group ITOPF was also involved.

This is a confusing array of specialists in an island nation that has never experienced a major oil spill before. As the world has demanded greater transparency of advice and recommendations, ordinary citizen of Mauritius have been surprised that 36 days after the grounding of the vessel, there has not been a single press conference or information release by any of these anonymous specialists.

If the clean up operations had been going smoothly, perhaps there would not need to be such scrutiny. But with 39 dead whales and dolphins (as of the last official count on Friday 28 August), important questions are now being asked on the liability of organizations who had provided such advice supporting the sinking of a vessel that could have been in violation of international law.

A case of 'Who Did It'

As the mystery surrounding the **WAKASHIO** deepens, so too does the complex web of legal cases on every aspect of the operation.

The decision to sink the **WAKASHIO** was a controversial one. It was done in full light of media scrutiny at a time when the public was demanding answers. The lack of answers from 8 individual sets of actors over these decisions, has raised alarm bells internationally, as shown by protests not just in Mauritius – but in front of embassies around the world.

Understanding and publishing the basic factual information about the ship inventory, ballast water, toxic materials, location of the sinking should not be a game of 'cat and mouse,' where one needs the skills of Agatha Christie's famous detective, Hercule Poirot to figure out 'who did it' and where.

In addition to the legal aspects of the case, there are now moral questions being asked about the global shipping industry, and how such a global industry could have been allowed to operate in such opaqueness for so long, impacting the lives of so many of the world's poorest populations.

There are 39 dead whales and dolphins on Mauritius' beaches, thousands of villagers who depend on the ocean remain in the dark, and it's been 36 days since the grounding of the Wakashio. The current approach of secrecy has clearly not worked - either for the sinking of the Wakashio or any other aspect of the rehabilitation - and has triggered a political crisis. Regardless of legal outcomes, it is clear that this is also a crisis of the global shipping industry's own making.

Source : Forbes

Inséré 11/04/21 BOEKEN LIVRES BOOKS Enlevé 11/05/22

OCIMF publishes Recommendations on Usage of ECDIS and Preventing Incidents

The Oil Companies International Marine Forum (OCIMF) has released a new information paper, Recommendations on Usage of ECDIS and Preventing Incidents, which provides guidance to enhance policies and procedures regarding the safe use of Electronic Chart Display and Information Systems (ECDIS).

With more vessels using Electronic Navigational Charts (ENCs) for primary or secondary navigation, there have been several significant navigational incidents over the last decade where one of the contributing factors has been ECDIS-related. *Recommendations on Usage of ECDIS and Preventing Incidents* takes into account ECDIS-related navigational incident findings and safety-related observations from OCIMF's Ship Inspection Report Programme (SIRE). To provide practical support and guidance, the information paper draws upon this analysis to provide recommendations for improving ECDIS-related practices and preventing ECDIS-related navigational incidents.

OCIMF Managing Director, Robert Drysdale, commented, *"My view is that technology and digitalisation provide tools to ensure our industry will be successful and sustainable in the future. However, new technology can introduce unintended consequences if not planned, developed and introduced in a robust manner. Everyone recognises the benefits that ECDIS brings, but we have witnessed incidents caused through the misuse or misunderstanding of the technology. If followed, the recommendations contained in this information paper*

will help drive down the number of incidents associated with the use of ECDIS. I encourage all those who use ECDIS to read it and apply the recommendations."

The information paper, which is available to download for free from www.ocimf.org, is aimed at ship owners, operators, Masters, Navigating Officers and bridge team members including pilots, as well as ECDIS system manufacturers. Key chapters in the information paper cover ECDIS carriage requirements, ECDIS training and familiarisation, passage planning and alarm management.

Inséré 11/04/22 NIEUWS NOUVELLES Enlevé 11/05/22

Comeback van redersfamilie Saverys wakkert speculatie over Euronav weer aan



Euronav is een belangrijke olietankerredery.

MICHAEL SEPHIHA WIM DE PRETER

De Antwerpse redery CMB en Marc Saverys kochten de voorbije maanden 6,32 procent van de Belgische olietankerredery Euronav. De herintrede kan de speculatie over een deal met concurrent en mede-aandeelhouder Frontline weer doen oplaaien.

De investering van de redery en de redersfamilie Saverys volgt twee jaar na hun desinvestering in de olietankerredery. Hun belang zakte toen onder de kennisgevingsdrempel van 5 procent. 'De historische banden tussen onze familie en Euronav zijn uiteraard zeer sterk', zei Alexander Saverys, de CEO van CMB, toen. 'Maar ons belang is de voorbije jaren almaar meer verwaterd. We zitten niet langer in het management en beheren Euronav als een louter financiële participatie. Daarom deze verkoop, die niet hoeft te verbazen gezien de recente koersstijging van Euronav.'

Vóór die deal bezat de redersfamilie nog 5,2 procent van Euronav, wat al een halvering was tegenover 2015 toen ze nog meer dan 10 procent bezat. Voor zover bekend deden de Saverysen uiteindelijk alle aandelen van de hand. In mei vorig jaar nam Ludo Saverys na zes jaar afscheid als bestuurder bij Euronav.

Profiel

- **Activiteit:** grootste onafhankelijke olietankerrederij ter wereld.
- **Vloot:** 78 tankers.
- **Omzet 2020:** 1,23 miljard dollar.
- **Brutobedrijfswinst (ebitda):** 863 miljoen dollar.
- **Nettowinst:** 473 miljoen dollar.

Maar nu wordt Euronav in een transparantiemelding door CMB en Saverco, het investeringsvehikel van Marc Saverys, toch weer bestempeld als 'een aantrekkelijke investeringsopportunity'. De Antwerpse redersfamilie heeft haar belang uit het niets weer opgetrokken tot 6,32 procent. Houd je geen rekening met de 18,3 miljoen eigen aandelen in het bezit van Euronav, dan heeft CMB zelfs 6,89 procent van het kapitaal.

Uit een kennisgeving aan de Amerikaanse beursautoriteit - Euronav heeft ook een notering in de VS - blijkt dat CMB het belang van 13,88 miljoen aandelen opgebouwd heeft sinds half september 2021. Meer dan een kwart ervan - 3,88 miljoen aandelen - werd pas vorige week aangekocht.

CMB betaalde in totaal zowat 133 miljoen dollar (118 miljoen euro) voor de participatie in Euronav. Het grootste deel van dat bedrag werd gefinancierd uit werkkapitaal, maar CMB kreeg ook een lening van zowat 40 miljoen dollar (35 miljoen euro) van Belfius en KBC, blijkt uit de Amerikaanse beursdocumenten.

Toen de familie Saverys twee jaar geleden uit Euronav stapte, verdween ook een andere referentieaandeelhouder uit het kapitaal van Euronav. Châteauban, de investeringsholding van de familie Cigrang, verkocht toen alle aandelen in de oliescheepvaartgroep.

Scheepstycoon

Sindsdien kwam de Noors-Cypriotische scheepvaartmagnaat John Fredriksen - *the Warren Buffett of shipping* - aan boord. Met meer dan 9 procent is hij de grootste aandeelhouder. Fredriksen is ook de hoofdaandeelhouder van Frontline, een van Euronavs grote concurrenten.

Wat is scheepvaartmagnaat Fredriksen van plan met Euronav?

De intrede van Fredriksen leidde eerder al tot geruchten over een mogelijke fusie van Euronav en Frontline, die overigens al samenwerken in een charterpool. Euronav-topman Hugo De Stoop zei in december in De Tijd dat er al meermaals gesprekken geweest zijn over zo'n deal, maar zonder resultaat.

Dat ook de familie Saverys zich weer in het kapitaal van Euronav hijst, kan die overnamespeculatie weer aanzwengelen. In de Amerikaanse kennisgeving zegt CMB zelf dat het met Euronav en 'andere aandeelhouders' discussies heeft gehad over 'potentiële transacties', maar dat die gesprekken intussen gestopt zijn. Mogelijk is ook dat een verwijzing naar gesprekken met Frontline.

CMB geeft in de beursdocumenten ook aan dat het zich het recht voorbehoudt om een bestuurszetel bij Euronav te eisen en om met het bedrijf of met andere aandeelhouders in gesprek te gaan over bepaalde 'zakelijke transacties', zoals een fusie of een reorganisatie. Euronav wilde maandag niet ingaan op een vraag om verduidelijking van die passages. 'De familie Saverys is een langdurige aandeelhouder wiens aandelenpercentage regelmatig fluctueert', is het enige dat het bedrijf kwijt wilde.

Euronav-CEO Hugo De Stoop: 'Fredriksen kan me bellen, hij heeft mijn nummer'

Euronav zei eerder al dat het 'altijd bereid is te spreken' over een mogelijk samengaan met een andere speler. Ook met Fredriksens rederij Frontline. 'Als iemand wil praten, zullen we luisteren', zei CEO Hugo De Stoop.

Tijdslijn Euronav

- **1995:** Oprichting van de olietankerredery Euronav door de Franse reder Compagnie Nationale de Navigation (CNN) en de Compagnie Maritime Belge (CMB) van de familie Saverys. Elk bezit de helft van Euronav.
- **1997:** Euronav wordt de tankerafdeling van CMB.
- **2004:** Euronav splitst zich af van CMB en wordt een onafhankelijk bedrijf met een eigen notering op Euronext Brussel.
- **2015:** Euronav trekt ook naar Wall Street om internationaal meer op te vallen.
- **2018:** Euronav neemt zijn sectorgenoot Gener8 over en wordt de grootste onafhankelijke tankerredery ter wereld.
- **2020:** Het belang van de Antwerpse redersfamilie Saverys in Euronav [zakt](#) onder de drempel van 5 procent. De olietankerredery is voortaan een louter financiële belegging.
- **2022:** Marc Saverys en CMB bouwen hun belang in Euronav weer op en bezitten samen 6,32 procent van het bedrijf.

Inséré 12/04/22 NIEUWS NOUVELLES Enlevé 12/05/22

NATO Cannot Stop Russian Warships From Entering The Black Sea

by Tuvan Gumrukcu (Reuters)



Turkey, a NATO member, cannot stop Russian warships accessing the Black Sea via its straits, as Ukraine has requested, due to a clause in an international pact that allows vessels to return to their home base, the Turkish foreign minister said on Friday. Ukraine has appealed to Turkey to block Russian warships from passing through the Dardanelles and Bosphorus straits which lead to the Black Sea, after Moscow on Thursday launched a full-blown assault on Ukraine from land, air and sea.

Under the 1936 Montreux Convention, Turkey has control over the straits and

can limit the passage of warships during wartime or if threatened, but the request has put the NATO member in a difficult position as it tries to manage its Western commitments and close ties with Russia. Speaking in Kazakhstan, Foreign Minister Mevlut Cavusoglu said Turkey was studying Kyiv's request but said Russia had the right under the Convention to return ships to their home base, in this case the Black Sea. So even if Turkey decided after a legal process to accept Ukraine's request and close the straits to Russian warships, he said, they would only be prevented from traveling in the other direction, away from their home base into the Mediterranean.



*The Russian navy's diesel-electric Kilo-class submarine, **ROSTOV-ON-DON**, moves through Turkey's Bosphorus Strait en route to the Black Sea*

"If countries involved in the war make a request to return their vessels to their bases, that needs to be allowed," the Hurriyet daily quoted Cavusoglu as saying. Cavusoglu added that Turkish legal experts were still trying to determine whether the conflict in Ukraine could be defined as a war, which would allow the convention mandates to be invoked.

Ukraine's ambassador to Turkey, Vasyl Bodnar, said on Friday Kyiv was expecting a "positive response" from Ankara to its request. Cavusoglu also reiterated Ankara's opposition to imposing economic sanctions against Russia, a stance that has set Turkey apart from most of its NATO allies which have already announced such measures. President Tayyip Erdogan later said that reaction from NATO and Western countries to Russia's assault had not been decisive, adding he hoped a virtual NATO summit on Friday would lead to a more determined approach from the alliance.

Turkey has cultivated good ties with both Russia and Ukraine. Read full story It has said the Russian attack is unacceptable and that it supports Ukraine's territorial integrity but has avoided using words such as "invasion" to describe what is happening. Ankara has pursued cooperation with Moscow on defense and energy but has also sold drones to Ukraine and inked a deal to co-produce more. It also opposes Russian policies in Syria and Libya, as well as its annexation of Crimea in 2014.

Source : Reuters (Reporting by Tuvan Gumrukcu; Editing by Gareth Jones and Catherine Evans)

Inséré 13/04/22 HISTORIEK HISTORIQUE Enlevé 13/05/22

Du Diolkos au canal de Corinthe (I)

Pol Corvez



Percer l'isthme de Corinthe pour raccourcir la route entre la mer Égée et l'Adriatique en évitant de contourner le Péloponnèse, cette idée-la remonte l'Antiquité. Mais faudra attendre vingt-cinq siècles pour voir se concrétiser ce chantier titanesque, dont la réalisation s'étalera sur une décennie (1883-1893).

Passer de la mer Égée à la mer Ionienne par le canal de Corinthe est une expérience mémorable. Encaissé entre deux murailles minérales, le passage n'est large que d'une vingtaine de mètres. Du fait de cette étroitesse, on craint à tout moment

d'aller "repeindre" les rochers. En fait, la surpression engendrée par le déplacement du bateau crée, en quelque sorte, un coussin de sécurité qui le maintient dans l'axe du canal. On se sent petit et écrasé par ces murs accores, dont certaines parties surplombent l'eau de près de 80 mètres. La formidable présence des dieux grecs se fait palpable dans ce paysage grandiose. Le plaisancier de passage s'émeut de se trouver l'un des nœuds névralgiques du monde tant antique que moderne, la fois commercial, politique, historique et religieux, où se sont aussi affrontées les cultures. Lepante par exemple, site de la victoire sans lendemain de l'Occident sur l'Empire ottoman, en 1571, n'est éloigné que d'une centaine de kilomètres, vers l'Ouest. On se dit également que ce canal est sans doute la réalisation humaine qui a demandé le plus de temps à être parachevée. Imagine vers 20 avant notre ère par Periandre, tyran de Corinthe, il a fallu attendre 1893 pour que les premiers navires l'empruntent.

Une cite au cœur d'un réseau d'échanges

"Corinthe, disait Strabon, historien grec contemporain de Jésus-Christ, possède deux ports qui, la rapprochant, l'un de l'Asie, et l'autre de l'Italie, lui facilitent les échanges entre deux contrées naturellement fort distantes. Or, anciennement, le navigateur éprouvait de grandes difficultés pour affronter non seulement le détroit de Sicile, mais encore, à cause des vents contraires, la haute mer au-dessus du cap Malee [à l'extrémité Sud du Péloponnèse], ce qu'atteste le proverbe: en doublant le cap Malee, dis adieu à ton foyer !"



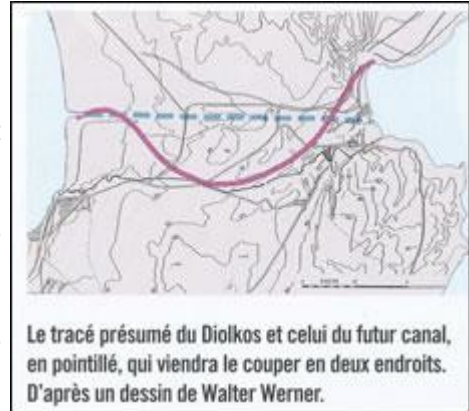
Le port de Corinthe, avec ses entrepôts et son temple, a inspiré cette mosaïque de plaquettes de verre (III^e siècle), découverte dans la province grecque de Kenchreai.

La Corinthe antique devient progressivement la cité la plus importante et la ville portuaire la plus riche de la Grèce, quoique victime de séismes et d'invasions à répétition : Romains, Goths, Normands, croisés de Villehardouin, Ottomans, Vénitiens... Son opulence, elle la doit à son artisanat - la céramique -, à son agriculture - elle cultive le blé - et surtout à sa situation. Car elle se trouve idéalement placée au cœur d'un véritable réseau de communications. L'isthme constitue un passage obligé pour les échanges terrestres entre le Péloponnèse et le continent. Par ailleurs, la cité, antique patrie de Sisyphe, auquel on attribue d'ailleurs sa fondation, mais aussi d'Œdipe et de Diogène, est la "ville des mers jumelles", l'Adriatique et la mer Égée.

Corinthe importe du blé d'Égypte, d'Italie et de Sicile et exporte des céramiques et du bronze surtout, mais encore de l'huile, des olives. Sa prospérité repose en grande partie sur le contrôle qu'elle exerce sur le commerce de la Méditerranée occidentale. En 146 avant J.-C., les Romains anéantissent Corinthe puis la reconstruisent. À l'époque romaine, la cité est renommée pour être audacieuse, interlope, et avoir adopté des mœurs licencieuses et totalement décadentes. L'historien Édouard Will a estimé sa population à cinquante mille habitants vers l'an 400 - vingt-huit mille de nos jours. La cité se développe au point d'envoyer des colons fonder d'autres villes, en Sicile et en Albanie, entre autres. De plus, Corinthe n'est pas seulement un centre commercial, c'est un grand port militaire qui abrite sa flotte des deux côtés de l'isthme.

Au temps de Strabon, les navires sont de faible déplacement, de l'ordre de 21 tonneaux en moyenne. Il paraît donc profitable de faire transporter les marchandises par voie terrestre, à dos d'homme et d'animaux, à travers l'isthme. Le gain de temps, par rapport au contournement du Péloponnèse, se révèle d'autant plus intéressant que l'on réduit aussi les risques liés aux intempéries et aux pirates. On peut penser que les plus riches des marchands armateurs disposent d'autres navires sur la rive opposée - qu'ils en soient propriétaires ou qu'ils les nolisent -, sur lesquels les marchandises sont transbordées. Cependant, même si peu à peu la logistique se rationalise avec la création d'entrepôts, il n'est pas étonnant que l'on ait très tôt rêvé d'éviter cette rupture de charge. C'est ainsi que les Corinthiens en viennent à réaliser le Diolkos, une voie de halage permettant aux navires de traverser l'isthme.

Le Diolkos, chemin de halage et de portage. Totalement occulté par le canal qui lui a succédé en tant que lien entre les golfes de Corinthe et de Saronique, le Diolkos - du grec dia, "à travers", et holkos, "portage" - est sans doute le plus ancien ouvrage de ce type dont les traces sont encore visibles aujourd'hui. Il est fort possible que le halage terrestre des embarcations sur des rondins de bois à travers l'isthme ait précédé la réalisation du Diolkos. Quoi qu'il en soit, cette "traversée" s'est trouvée grandement facilitée par l'initiative de Périandre, qui aurait entrepris de paver de dalles de grès, très dures, ce chemin de halage et de portage des navires. La chaussée, large de 3,50 à 6 mètres, longue de 8 kilomètres environ, est creusée de deux "sillons" de 22 centimètres de large, espacés d'1,52 mètre. Ce rainurage sert à guider les chariots de portage.





À chaque extrémité du Diolkos, une cale facilite la sortie de l'eau des navires, au fond quasi plat. Ceux-ci sont d'abord roulés sur des rondins, puis treuillés sur un chariot à double essieu; en attestent les poulies retrouvées sur le site. Hommes et bêtes de somme halent la charge jusqu'à la cale située à l'autre extrémité du chemin. Des marques d'usure de la pierre par des cordages, relevées en différents points de la voie, indiquent l'usage de cabestans. Si le tracé du Diolkos fait encore l'objet de controverses, les historiens s'accordent sur le fait qu'il était certainement incurvé, pour éviter des dénivelés trop importants. Il est probable aussi que l'on déchargeait les navires de leurs marchandises avant le treuillage, pour les acheminer séparément de l'autre côté de l'isthme. Le Diolkos a joué un rôle non négligeable dans les guerres antiques. Les historiens grecs rapportent plusieurs transbordements afin d'accélérer le mouvement des troupes. Comme Octave, après sa victoire à Actium sur

Antoine et Cléopâtre, en 31 avant notre ère, qui ordonne à une partie de ses deux cent soixante liburnes — navires légers — de traverser l'isthme. Ou Sparte en 428, qui emprunte ce chemin de halage pour attaquer promptement Athènes. Le Diolkos a peut-être permis aussi, en 868, de transférer dans les meilleurs délais une flotte byzantine forte de cent dromons — vaisseaux à rames.

Pline et Strabon parlent du Diolkos comme d'une sorte de "ligne régulière" qu'empruntent les navires marchands. On peut penser qu'il a servi au transport de pierre, de monolithes et de bois jusqu'au règne d'Auguste (27 av. J.-C.-14 apr. J.-C.), qui scelle sa désaffection. La dernière référence à son usage remonte malgré tout au Me siècle. Mais dès 400 av. J.-C., il est moqué dans une pièce d'Aristophane, qui s'aventure à comparer la lenteur des mouvements du sexe d'un homme à celle des échanges sur le Diolkos ! "Hé ! l'homme, tu as là un isthme : tu tires l'objet en haut et en bas plus souvent que les Corinthiens !" Dès cette époque, les navires de charge, dont le tonnage ne cesse d'augmenter, peinent à emprunter cette voie.

C'est à la fin du XIXe siècle, lors du percement du canal, qui la coupe en deux endroits, que l'archéologue allemand Habbo Gerhard Lolling découvre des fragments de l'ancienne chaussée. D'autres fouilles ont été effectuées depuis lors. Après la Seconde Guerre

Ci-dessus : photographié en 1978, voici l'un des rares segments encore visibles du chemin de halage, avec, bien apparents, les deux sillons où s'engageaient les roues des chariots de portage des bateaux.

Ci-contre : des dalles du Diolkos gravées de caractères et monogrammes grecs.

mondiale, des travaux de restauration du canal, engagés par les États-Unis dans le cadre du plan Marshall, ont certainement détérioré l'antique chemin, de même que la construction des différents ponts qui enjambent désormais la voie d'eau. Les quatre-vingts premiers mètres du Diolkos sont accidentellement mis au jour en 1958 par des bulldozers de l'armée, lors d'exercices. Seuls quelques vestiges sont encore visibles. Des caractères gravés sur quelques dalles

renvoient à l'écriture de l'époque de Périandre. Certaines autres parties pourraient sans doute être exhumées, car les déblais du canal ont pu les recouvrir partiellement.

Reste que le Diolkos est en grand danger. À son extrémité Ouest, depuis des décennies, les dalles se délitent et glissent dans l'eau, où elles se détériorent. Le ressac occasionné par les gros navires trop pressés — officiellement la vitesse est limitée à 6 noeuds — accroît cette dégradation, en érodant les rives du canal. Les cales et la chaussée se détruisent rapidement. Aucune opération de sauvetage ni même de préservation n'a jamais été entreprise, hormis quelques récents travaux de consolidation. Néanmoins, une campagne de sensibilisation a été lancée en 1989, et une pétition pour la réhabilitation de cet ouvrage unique, adressée au ministre de la Culture grec, circule sur Internet*.

Entre conflits d'intérêts et crainte des dieux

Six petits kilomètres à creuser entre les mers Égée et Ionienne pour ouvrir un canal... Comme tout projet d'envergure, celui-ci est longtemps source de désaccords. Si pour certains le statu quo ante est souhaitable, d'autres considèrent le projet comme une chance de profits supplémentaires. Armateurs et négociants (les emporoi) ont tout intérêt à ce que le trafic augmente. Toujours à l'affût d'une réduction des coûts et des risques, et donc d'une augmentation de leurs bénéfices, ils voient dans le percement de l'isthme une opportunité particulièrement avantageuse. La navigation en serait grandement écourtée et facilitée. En effet, on gagnerait près de 150 milles sur les 276 milles qu'implique le contournement du Péloponnèse, soit cinq à sept jours de navigation. L'intérêt du canal est également évident pour les marins, car il épargne une navigation qui doit se faire en partie contre le vent et le courant. Cela oblige les navires du temps, piètres bouliniers, à faire force de rames. De plus, ainsi que Strabon le mentionne, doubler le cap Malée peut s'avérer dangereux, comme l'a constaté Ulysse au cours de son odyssée.

L'accélération du trafic permettrait en outre de multiplier les trajets, et donc les profits. La sécurité des navires en serait accrue, puisqu'on n'aurait plus besoin de les treuiller et de les faire monter sur des chariots transbordeurs, opérations mettant les coques à rude

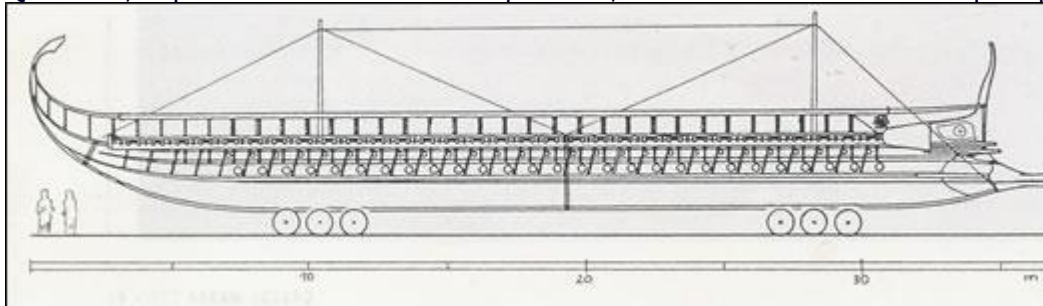
épreuve. Les avaries sont fréquentes, les réparations onéreuses, sans parler des retards d'acheminement. Ouvrir un canal, c'est aussi diminuer les risques de marchandises avariées ou pillées dans les entrepôts. Enfin, les frais de halage et de portage disparaîtraient purement et simplement.

Pour leur part, les propriétaires ou les concessionnaires du Diolkos, ainsi que des entrepôts qui le bordent, sont évidemment hostiles à tout changement. D'autant que la main-d'oeuvre est bon marché, puisqu'il s'agit, soit d'esclaves, soit des hommes d'équipages des navires empruntant le Diolkos. Les commerçants riverains, quant à eux, ont tout intérêt à

Ci-dessous: une trirème grecque reconstituée par J. S. Morrison et J. F. Coates et complétée par Walter Werner, montée sur un chariot. Les deux personnages donnent l'échelle du navire, fort imposant.

ce que marins et passagers continuent à séjourner dans la région et à y dépenser leur argent dans le manger, le boire, le coucher et les divertissements. Un canal où les navires ne feraient que passer risquerait de mettre fin à leur prospérité.

Les prêtres, eux, craignent de perdre beaucoup de leurs prérogatives et de leur influence. Qui donc, à part les résidents et les pèlerins, viendrait encore aux temples pour y prier?



Ou pour y déposer quelques pièces ou quelque

offrande propitiatoire ou de remerciement aux dieux, prébendes qui tombent évidemment dans l'escarcelle des prêtres ? Sans parler des mille prostituées sacrées, qui, selon Strabon, peuplent le temple d'Aphrodite, où "les patrons de navires, notamment, [viennent se] ruiner à plaisir". Les prêtres n'ont aucune intention de se priver de cette manne. Faut-il dès lors s'étonner que les augures voient ce projet d'un mauvais œil? Enfin, les réticences métaphysiques des Grecs à modifier la nature, jouent également contre le creusement d'une voie d'eau artificielle. La Pythie de Delphes, interrogée au sujet du percement d'un autre canal, celui de Cnide, répondit : "Si Zeus en a fait une presqu'île, c'est qu'il ne voulait pas qu'elle devienne une île."



Ci-contre : cette reconstitution, fantaisiste mais pleine de vie, d'un halage sur rondins dans l'isthme de Corinthe est d'une facture similaire à celle des images que l'on trouvait naguère avec ravissement dans les livres d'histoire des écoliers, voire au dos de certaines plaquettes de chocolat.

Les politiques hésitent. Faciliter le passage entre les deux mers permettrait de décupler les droits de transit perçus par la cité-État (entre un et cinq pour cent de la valeur des marchandises, selon l'époque). Par ailleurs, l'hubris, la démesure orgueilleuse et fatidique qui a valu tant de revers aux humains, est le péché

mignon de tous les ambitieux. En revanche, les responsables ont conscience qu'un canal aurait des conséquences désastreuses pour une partie de leurs administrés, les marchands, restaurateurs et artisans locaux en particulier, dont les revenus s'effondreraient, ce qui engendrerait une crise sans précédent. Les entrepôts, dont on sait qu'ils étaient nombreux, perdraient une bonne partie de leur utilité. Or les taxes prélevées sur ces magasins participent à la richesse locale, au point que, selon Héraclite, les taxes portuaires dispensent Périandre de lever des impôts. Les invasions ne vont-elles pas s'en trouver facilitées ? Va-t-on provoquer le courroux des dieux de l'Olympe ? Et puis, comment percer un tel obstacle, dépassant par endroits de près de 80 mètres le niveau de la mer ? Comment déblayer les gravats ? Les mathématiciens chiffrent le projet : l'ouvrage mobiliserait de cinq à six mille esclaves pendant des dizaines d'années. Le temps n'est pas un problème insurmontable, mais la main-d'œuvre en est un de taille : il faut trouver des esclaves, les équiper, les loger, les nourrir, les surveiller, prévenir révoltes et épidémies... L'arrivée massive de milliers d'esclaves augmenterait sensiblement la population, avant de brutalement retomber à l'achèvement des travaux.

Inséré 14/04/22 DOSSIER Enlevé 14/05/22

LOIs – worth more than the paper they’re printed on?

We reconsider the risks and benefits of exchanging Letters of Indemnity (LOI) under standard and extraordinary vessel operations.

Skuld recognizes a noticeable rise in the use of Letters of Indemnity in day-to-day operations in the industry, and, consequently, a great rise in the number of queries from our mutual members and assureds seeking Skuld advice or assurances on the drafted language. Skuld is always prepared to address these queries on a case-by-case basis, but in the meantime wishes to provide some reminders hopefully far in advance of parties needing to resolve a commercial dispute at a final hour.

An LOI provides the very practical function of allowing one party on an ad hoc basis to take on specified risk(s) in performing a particular operation or set of operations involving risks that he or she may not otherwise be legally obligated to bear. The parties in the most ideal circumstances can continue to enjoy a cooperative commercial relationship with this promise of indemnity memorialized in a legally enforceable writing.

Please note that this information is not meant to replace Skuld’s important October 2019 Enforceability of LOIs – a practical guide, provided by our colleague Aislinn Fawcett. Instead, we follow up and highlight concerns already addressed within this guide, with respect to inherent risks with enforceability and the potential conflict with traditional club cover.

Members as prospective recipients of an LOI

The risks undertaken pursuant to an LOI are traditionally those that lie outside of club cover, either as extraordinary risks explicitly excluded under conditions of cover or in some circumstances only available for cover subject to prior risk assessment and express confirmation by club management in writing.

Skuld understands the commercial pressure that members and assureds face when negotiating LOI terms, because the reassurance they stand to gain in accepting an LOI from their counterparty is effectively a substitute for prejudiced or missing cover. By the same token, a breach of this promise can represent a great liability not only for the underlying risk, but also legal defence, no matter whether this breach is committed deliberately and wrongfully or as consequence of unfortunate circumstances.

Skuld is regularly notified of disputes where a promisor of indemnification is not willing or able to honour his or her promise. Despite how advantageous its terms, an LOI’s promise that cannot or will not be honoured in short course quickly becomes the focus of a costly, drawn-out legal dispute between not only the parties to this LOI, but also several other sets of counterparties in the contractual chain trying to enforce their own rights on back-to-back LOI terms.

For reasons above, the enforceability of an LOI as a contractual agreement is paramount to this commercial decision. As discussed in Skuld’s October 2019 practical guide, common challenges to the validity of an LOI is the LOI’s signatory valid authority and claims that the LOI cannot be enforced on the grounds that it promotes illegality—for example, that one or both of the parties knowingly or negligently engaged in facilitating fraudulent activity against the interests of an innocent third party. These are only common examples, but of course claims and defences will vary depending on the governing jurisdiction.

Skuld always reminds members and assureds of their obligation to make commercial decisions as a “prudent uninsured,” especially for risks that may not be covered. Despite the ongoing obligation that members and assureds recognise and responsibly act against risk of extra liability exposure, due diligence is always required to assess the strength of the commercial relationship between the parties and the enforceability of promises exchanged between them.

Aside from the legal enforceability of its terms, an LOI must also be practically enforceable. The promising party must be creditworthy, or have enough assets to willingly—if not under force of law—honour this promised indemnity. As discussed in Skuld’s October 2019 practical guide, a first-class bank’s co-signature guaranteeing the credit of the indemnifying party is the “gold standard” for evaluating the promisor’s creditworthiness. However, obtaining same will often not be feasible under the circumstances.

With respect to the specific terms of agreement, it goes without saying that the recipient of a promise of indemnification must negotiate for inclusion of the broadest indemnifying language possible.

Members as prospective offerors of an LOI

Much advice on LOIs has already been given on the risks and pitfalls of club members and assureds as parties receiving the promise of indemnification. However, it is just as important for Skuld to point out potential pitfalls for those making a promise of indemnification to take on certain risks. Promising indemnification to another party for some extraordinary risk-taking operation outside of already approved terms nearly always corresponds to increased exposure to liability, often in contravention of the terms of club cover.

This is especially common with respect to the carriage of cargo, for example where special risks to be undertaken will expose members or assureds to loss of special rights or defences under the Hague or Hague-Visby Rules, or similar rules of carriage. Skuld’s terms of cover exclude risks for actions taken negligently or deliberately in breach of these rules. Among these rules are the omnipresent seaworthiness obligations and strict conformity to rules concerning the issuance of bills of lading. Invalidly issuing clean bills of lading or issuing claused bills that otherwise do not accurately conform to the facts of the shipment are chief among the root of carriage-related disputes where club cover might be prejudiced.

In highlighting these concerns above, Skuld wishes to make clear that a member or assured promising indemnification for risks undertaken in contravention of Skuld rules or terms and conditions will not automatically be protected under Skuld cover by reason that it has received an LOI on back-to-back terms. Put in another way, the LOI that a member or assured receives for a non-covered risk is effectively a substitute for prejudiced cover, and an LOI on back-to-back terms does not revive this cover. When members or assureds are considering promising to indemnify a counterparty and take risks outside of the terms of Skuld cover, it is essential to timely contact Skuld to seek special guidance, approval based on current cover terms, or a quotation for additional cover (where available). If this is not followed, it is possible that the club may be limited in providing assistance or support. Please note that this Skuld advice is meant for general guidance purposes only and should not be relied upon as legal advice or a formal position with respect to club cover. In the case of any doubt related to Skuld’s support for Letters of Indemnity in your specific matter, we invite you to contact your dedicated claims handler or underwriting representative.

Source: Skuld

Inséré 15/04/22 NIEUWS NOUVELLES Enlevé 15/05/22

Danish Navy Sets Three Suspected Pirates Free

The Danish frigate Esbern Snare has provided three captured pirates with a free rubber dinghy and an outboard so that they can return to shore, removing the political risk of bringing them to Denmark to stand trial. A fourth, who was injured during arrest and delivered to a hospital in Ghana for treatment, has been brought to Denmark for further medical care (and a trial) because international obligations required it, the government said in a statement. The four men were captured after a firefight between Danish forces and a group of suspected pirates on Nov. 24. After spotting a suspicious skiff in international waters of the Gulf of Guinea, Esbern Snare launched a helicopter to investigate. The helicopter crew spotted ladders and other pirate equipment in the skiff, so the Snare gave pursuit and launched a boat with a boarding party. The suspected pirate skiff did not stop when ordered, and Danish forces fired warning shots. In response, the skiff's occupants opened fire on the helicopter and the boarding team. The Snare's boarding team returned fire, killing four, injuring one and capturing three unharmed. An additional suspect went over the side during the exchange and is presumed dead.

Esbern Snare brought the four survivors aboard and held them pending arraignment and trial. The injured man had to have his leg amputated, and after three rounds of surgery on board, he was evacuated to a hospital in Ghana for higher care.

The suspects' legal status has been in limbo for more than a month while Danish authorities discuss how (and whether) to bring them to Copenhagen for trial. In particular, Denmark was concerned that it might be legally impossible to deport them to their home country after the criminal proceedings (and any resulting prison sentences) were finished. Having pirates stay in Denmark indefinitely is not desirable for the government, and it could create a dangerous incentive for others to commit similar criminal acts with the aim of getting prosecuted in Denmark.

On Thursday, Minister of Justice Nick Hækkerup said that he has resolved the matter by having Danish prosecutors drop charges of attempted manslaughter against the three uninjured pirates aboard Esbern Snare. An indictment would have meant that they would have to be brought to Denmark to stand trial - an undesirable outcome. They have "on that basis been released at sea," Denmark's Justice Ministry said in a statement.

"We have no interest in getting the persons in question to Denmark, where they would have to serve a possible sentence, and where we also risk that they would not subsequently be able to be deported," said Hækkerup. "They have no connection to Denmark, and the crime they have been charged with has been committed far from Denmark. They simply do not belong here. And that's why I think it's the right thing to do."

Foreign Minister Jeppe Kofod said that it was not possible to hand over the suspects to a nearby coastal government for trial. The same is true for the injured suspect: the Danish government could find no legal way to release the injured man locally, so he will be brought back to Copenhagen to stand trial.

"Due to our international obligations, it was crucial to get guarantees for the future fate of the suspected pirate, but unfortunately this has not proved possible," said Hækkerup. "This presumably means that he will be prosecuted in Denmark for attempted manslaughter of Danish soldiers."

Though Esbern Snare's anti-piracy mission has not gone quite as planned, Denmark's minister of defense said that it had partly achieved its goals. "There is no doubt that with Esbern Snare's presence in the Gulf of Guinea, we have already sent a very clear signal to the organized criminals behind hostage-taking and other attacks on merchant ships in the area," said Minister of Defense Trine Bramsen. Royal Danish Navy Deputy Commander Adm. Carsten Fjord-Larsen told DR that the three uninjured suspects were given a small inflatable boat and an outboard motor, then released. "It is safe equipment, understood in

the sense that it can transport them safely to the coast," he said. "But it is not stuff that can be used for piracy." The bodies of the four deceased pirates are still aboard the frigate, and the final disposal of their remains is still under discussion.

Source : MAREX

Inséré 17/04/22 DOSSIER Enlevé 17/05/22

Managing cyber risks of ECDIS

There have been concerns raised in the industry about cyber risks of 'operational technology' onboard ships, such as ECDIS. We talked to Navtor, one of the world's leading ECDIS technology companies, about how the risks can be best managed.

There have been concerns raised in the shipping industry about the cybersecurity risks of operational technology, such as the Electronic Chart Display and Information System (ECDIS). We talked to Navtor, one of the world's leading ECDIS technology companies and chart suppliers, about the best ways the risks can be managed.

The main cyber concerns are that the ECDIS operating system software can be corrupted or get a virus, a virus can be introduced using a USB stick, and the charts can be corrupted. But all of these risks can be mitigated easily by using modern technology and following procedures.

Perhaps more importantly, it should be possible to show this to other people with a stakeholding in maritime safety, such as insurers, authorities and charterers, that the ECDIS is being managed in a way which eliminates cyber risks.

To put people's concerns at rest, the whole system needs to be demonstrably secure. There is no means for any hack or corruption to occur in chart data as it flows between the hydrographic office, the electronic chart supplier and the vessel systems. There is tight control over what data can enter the ECDIS system so that only correct software updates, charts, chart updates and chart licenses are allowed. The ECDIS is running an up to date operations system with the latest patches.

But it is still important that everybody involved has some understanding of the risks, as with any other risk in shipping. It is important that seafarers have training in the basics of cybersecurity, says Anders Holme, CTO, NAVTOR.

Old operating systems

The biggest potential risk with ECDIS probably comes from the use of old equipment with operating systems which have not been updated.

Chart display systems are computers, which use the same operating systems which are in a PC.

The first systems, type approved in 1999, ran the Windows versions which were being used at the time.

You wouldn't use 1999 Windows systems in the office, partly due to the cybersecurity concerns, with systems no longer being provided by patches by Microsoft. Most companies would not allow this. Shipping companies should not do so either.

It is rare for ships today to use ECDIS systems with old operating systems, says Tor Svanes, CEO of Navtor. This is much to do with today's cyber risk management processes. Every ECDIS manufacturer must make sure they keep the ECDIS software updated, Mr Svanes says.

This can be done either with personnel who go onboard after a certain amount of time to update and check the systems, or it can be done remotely, as we do with our home and office Windows computers.

When shipping companies consider a new ECDIS supplier, the ease and security of the maintenance service should be a major factor.

There is an increasing trend for ECDIS companies to use Linux rather than Windows for the operating system, says Bjørn Kristian Sæstad, Chief Quality Officer & Chief Business Development Officer OEM at NAVTOR.

But there is no clear answer as to whether Windows or Linux are safer from viruses. Arguably, the Windows community has a higher vigilance about viruses, says Anders Holme, CTO of Navtor.

Perhaps the legal requirement to update ECDIS operating systems is not crystal clear, since once a system was given a "type approval" certificate, it is valid for life.

But there is a reasonably clear obligation, since ensuring up to date operating system software is one of the most important cyber security risks, which should be considered in any risk assessment, which shipping companies are required to do.

In addition, SOLAS Chapter V/27 says that nautical charts "shall be adequate and up to date". If the ECDIS is running older software, it may not be able to display the chart information fully, even if the chart files themselves are up to date. For example newer features like Particularly Sensitive Areas (PSSA) and Archipelagic Sea Lanes (ASL) may not display on older ECDIS software, according to a 2016 paper by Lucian Indries of the University of Oslo (Candidate number: 8008).

Further performance standards and guidance for ECDIS systems were published by IMO, including MSC.232(82) (2006), IMO SN.1/Circ.266/Rev.1 (2010) and IMO MSC.1/Circ.1503 (2015). It states that ECDIS software "should be kept up to date such that it is capable of displaying up-to-date electronic charts correctly according to the latest version of IHO's chart content and display standards." This language is "guidance" though, not legally binding.

USB sticks and connectivity

A second concern is that viruses can be introduced with USB sticks. This concern is heightened if an older Windows version is being used for the chart display system, because there are many viruses in circulation which can attack old Windows versions.

It is not usually practical to disable USB drives on ECDIS systems, because they may be the only way to update the software and put in new virus updates (although Navtor has an alternate system for chart updates, described below).

Many chart suppliers send chart updates by e-mail attachment, which means copying them into the ECDIS with a USB stick, or by a CD.

Data communication is also needed to 'unlock' new chart files, when a vessel is going to a new area. The chart is already stored onboard the ECDIS, but the shipping company pays for a permit to view the chart. For smaller distributors, these permits would typically be sent by e-mail, and need copying onto a USB stick.

But shipping companies should have strict procedures about how USB sticks can be used with an ECDIS, as should any service personnel who come onboard to update the software.

The USB stick used for updating ECDIS systems should not be used for anything else. "If you take that stick and use it for storing movies, pictures and whatever you do, then there is a risk," Mr Holme says. It also means a violation of procedures.

This memory stick should also only be inserted into computers with well managed security, such as virus scans and up to date operating systems.

ECDIS systems are not allowed to be connected directly to an internet communications system. There are strict rules about how they can be connected.

“Just to have one ECDIS connected to another ECDIS, even without the internet, is [subject to] very strict [regulation], whatever you do regarding communication,” says Bjørn Kristian Sæstad of NAVTOR.

Hacking chart data

A third concern is that the chart data itself can be hacked. For example, an enterprising and vicious hacker may wish to send chart data to a ship which indicates deep water in a part of the sea where, in reality, there is a shallow rock. So there needs to be a secure communications chain from the chart supplier to the ship.

A chart supplier such as Navtor does not verify the accuracy of the data itself – this is the responsibility of the hydrographic office which supplies it. In the same way, it is the hydrographic office’s responsibility to ensure that data on their paper charts is correct.

But the chart supplier will ensure that the data cannot be corrupted or hacked on its way to the vessel. Navtor’s data is protected using **S-63**, an International Hydrographic Organization (IHO) standard for encrypting, securing and compressing **electronic** navigational **chart** (ENC) data.

Chart mistakes and inaccuracies made by hydrographic offices are rare, but they do happen. In one example, “ a customer said there is something wrong here in the Port of Rotterdam. We took action and found the problem,” Mr Svanes says.

Note that when this happens, digital systems can be updated much faster than paper charts. “All vessels can be updated in hours,” Mr Holme says.

There is a secondary means of verifying that chart data has not been corrupted, because the ECDIS will show radar images overlayed on the chart. For example, the radar image of land will show on top of the chart showing land. If there is corruption with the chart data, they are not aligned.

The ECDIS will also sound an alarm if it identifies a problem with data input. “This is in the specification for ECDIS,” Mr Svanes says.

Electronic safer than paper

Some people may argue that the cybersecurity risks of ECDIS, although very small, mean they outweigh the benefits of using electronic charts over paper, or that paper charts should still be carried as a contingency.

But paper charts come with risks which electronic charts don’t have. “Paper can burn, or get water spilled on it,” says Navtor’s Anders Holme.

Updating digital systems, and receiving new charts, was also much easier to do than with paper charts during the COVID era, when it was harder to arrange physical deliveries to the ship, he says.

Backup to ECDIS

Under the ECDIS regulations in place since the 1990s, shipping companies cannot rely on just one ECDIS unit – they need to have a backup system. This can be a second ECDIS, or paper charts.

It would be easier for shipping companies if the backup could be a second ECDIS, so then they do not need to have to handle paper charts onboard.

Navtor provides a “planning station”, a software tool which can be used for planning routes, which uses the same ENC charts. A popular option is to use it with a 46 inch touch screen.

This planning station can also function as a third back-up, because it runs on the same software kernel and charts as the actual ECDIS system.

“Even if you have a double ECDIS and there is something wrong in both of them, you still have the planning station with the ENC. You have the backup to the backup,” Mr Svanes says.

Navtor's Navbox

Navtor provides its own device to manage the connectivity between the ECDIS and the satellite communications system and the cloud, called the "Navbox".

This is a physical device onboard the ship, which plugs into both the ECDIS and the satellite communications system.

It ensures that only bona fide chart updates, sent from Navtor, via Navtor's cloud system, can be uploaded onto the ECDIS. So it allows the ECDIS to be connected to a network in a secure way, avoiding the need for USB sticks.

The connection between the ECDIS and the Navbox is set up with secure APIs, which ensure that only the right chart content can be exchanged.

So we can describe the Navbox solution as end to end secure, without needing any extra policies / procedures.

The Navbox is certified to meet the IEC **61162-460 standard, for cybersecurity in** Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 460: Multiple talkers and multiple listeners – Ethernet interconnection – Safety and security.

The Navbox itself is a PC but which has its own mechanisms to only read certain content. It is possible to plug a USB stick into the Navbox, but it will only read the chart files from the USB stick.

Navbox is a component of a "fully enclosed solution" – connecting only to Navtor's "Navcloud", only with fully encrypted and authenticated communication. "you can't talk to it through any other channels," says Mr Holme. And the data communication Navtor makes to the Navcloud is also very strictly controlled.

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Carriage of containers on bulk carriers



*The 2018 built 62051 DWT **ZHONG YUAN HAI YUN KAI TUO** enroute from Da Chan Bay in China to Santos in Brazil*

Are conventional bulk carriers suitable to carry containers? This question has been raised by several industry bodies in recent weeks and in this article we will look at the technical and legal implications of such conversions. The transportation of containers on bulk carriers is not a new trade phenomenon and our article published in 2000 covers some of the issues in such conversions. In today's article we will look at some technical and legal aspects of this trade and more importantly, share some of the issues that owners and their crew are likely to face.

The obligation of seaworthiness

A vessel owner is obliged to provide a seaworthy ship to carry goods by sea. Contracts of carriage include both bills of lading and charterparties. Under common law, the seaworthiness obligation is absolute and non-delegable. Broadly speaking, seaworthiness is the fitness of the vessel to - encounter the ordinary perils contemplated for the voyage, and - carry her intended cargo.

As an example, the NYPE charterparty requirement is for the vessel to be "tight, staunch, strong and in every way fitted for the service". The seaworthiness obligation also extends to the competence of the crew on board the vessel.

Most bills of lading and charterparties incorporate a paramount clause such as the Hague/Hague-Visby Rules which reduces the standard of seaworthiness to one of due diligence. For example, Article 3.1 of the Hague/Hague-Visby Rules provides: "The carrier shall be bound before and at the beginning of the voyage to exercise due diligence to make the ship seaworthy, properly man, equip, and supply the ship, make the holds, refrigerating and cool chambers, and all other parts of the ship in which goods are carried, fit and safe for their reception, carriage and preservation."

This means that a shipowner must have taken all reasonable precautions to ensure that the vessel is properly manned, equipped, and suitable for the cargo service. Different jurisdictions may also implement different carriage of good by sea (COGSA) laws mandatorily by statute, which may impose a different standard of seaworthiness.

If a vessel which has all the necessary class certificates nevertheless has an incident caused by items verified by class, the liability would remain with the shipowner if the vessel is found to be unseaworthy following an investigation.

Given the claims values involved where cargo or containers are damaged, allegations of unseaworthiness inevitably arise after an incident irrespective of class approvals. Below, we identify and discuss some of the technical issues shipowners should consider to avoid allegations of unseaworthiness of a bulk vessel to carry containers and defend claims should they arise.

Can an owner refuse to carry containers on board?

Charterparties for bulk vessels almost always contain trading exclusions and cargo exclusions. Not surprisingly, owners of dry bulk vessels would not have contemplated the carriage of containers when entering into medium- or long-term time charterparties. Can owners refuse an order to load containers on board a bulk vessel where the charterparty does not expressly exclude them?

The position is uncertain. However, owners can look to the vessel description clause in the charterparty, which would usually indicate the contemplated trade. For example: "Vessel is a bulk carrier, fully fitted to carry grains and in a thoroughly efficient state to trade dry bulk cargoes" indicates that the vessel has been chartered to carry dry bulk cargoes, including grain in particular. It remains to be seen whether it might be arguable that this excludes carriage of containers (which will in any event depend on the terms of the particular charterparty) and it will be interesting to see whether this is raised in the future.

As discussed below, a conventional dry bulk vessel will need modifications to her design, approvals/permissions, and additional documentation before carriage of containers can be contemplated. In short therefore, a conventional bulk vessel may not be considered cargo worthy or seaworthy as-is, and owners may be able to reject the carriage of containers under a standard dry bulk charterparty.

Where a wide range of trades not specifically including reference to containerised cargo is covered by the charter, the owners would probably not be obliged to have fittings for containers. Of course, that is not the same as an ability to refuse to carry containers, but it does put some of the expense of doing so onto the charterer unless the ship has been expressly chartered for the purpose of carrying containers.

The argument that charterers would be obliged to provide and pay for (and remove, at their cost at the end of the charter period) any modifications required to allow carriage of containers can be further strengthened by the charterparty terms. See for instance NYPE 1993 cl.7: "The Charterers shall provide and pay for necessary dunnage and also any extra fittings requisite for a special trade or unusual cargo ..." It seems likely that carriage of containers on a drybulk vessel would be a special trade or unusual cargo. The Baltime form only requires that the ship has fittings "for ordinary cargo service" and again, it seems likely that fittings for containers would fall outside this description on a drybulk ship.

Are bulk carriers suitable to carry containers?

Our first response to the question of the carriage of containers on bulk vessels is that conventional bulk carriers are not designed to carry containers in the holds. If a bulk operator is required to carry containers, the vessel should have the necessary fittings, documentation, approvals, and a trained crew to be able to safely facilitate the trade.

To understand the processes involved in converting bulk carriers for the carriage of containers on board, we contacted a few of our Members who had successfully made this transition. Below are some important points to consider.

Securing arrangement and cargo spaces: The vessel securing arrangement is the starting point to decide whether the vessel is suitable for conversion. In most cases, a typical log carrier is the most suitable to carry containers given the existing securing arrangement and associated strength of the tank top and hatch covers. According to some class societies, folding type hatch covers are much better than side rolling hatch covers to

facilitate large enough openings into the cargo spaces during loading and discharging operations. If the vessel does not have a sufficient securing arrangement, this will need to be fabricated in the presence of expert supervision and all such modifications would require the administration's approval.

Structural strength: In addition to the securing arrangements inside and outside the cargo holds, the structural strength of the tank top as well as the hatch covers will also need to be verified to ensure that the collective weight of the stack does not exceed the maximum load/permissible point load (MT/m²) on the tank top and the hatch covers. This verification would need expert supervision and guidance to the master on the use of load spreaders and other dunnage to distribute the weight and safely optimise the stack weight distribution. All calculations related to the adequacy of the structural strength would depend on accuracy of the declared weights (VGM) of the containers.

Cargo securing manual: The cargo securing manual (CSM) for most bulk carriers may not incorporate the carriage of containers on board the vessel. This is an important aspect of vessel suitability as the CSM provides critical information on the strength of the lashings necessary for securing containers under specific GM (metacentric height) criteria. A vessel's suitability for the carriage of containers will require amendments to the CSM by incorporating lashing arrangements for the loaded containers under specific loaded condition(s) with ballast on board. This is likely to generate acceleration forces that may limit stack height of the containers and the CSM will provide some guidance on the securing arrangements accounting for the GM criteria.

Loading software: The loading software, commonly known as the "Loadicator" is a software version of the loading manual. The Loadicator on a conventional bulk vessel may not be designed to calculate the stability with containers as cargo and the cargo weight distribution may not be as homogenous as that of bulk cargoes. The other limitation of a standard Loadicator on bulk carriers is that it does not incorporate the requirements of the cargo securing manual which would invariably affect the vessel's ability to calculate stability and lashing requirements for the containers.

Carriage of dangerous cargo:

- Fire detection: SOLAS Chapter II-2 provides clear guidelines on the fire protection systems for cargo spaces for vessels over 2,000 GT but it does not cover fire detection inside cargo spaces. This is unique to bulk carriers as dedicated container vessels would have sample extraction smoke detection system and other means of fire detection inside cargo spaces.

If we couple this with the frequency of misdeclaration of contents of the container, the risk factor related to fire safety is high on conventional bulk carriers carrying containers as cargo, especially inside the cargo holds.

- Fire fighting: Fighting a fire inside a container comes with its own challenges. Given the widespread problem of misdeclaration, operators are recommended to equip their vessels with suitable means to fight a fire both inside and outside the cargo space. An extinguishing medium such as mobile water monitors and water mist lances, irrespective of whether the vessel has a document of compliance (DOC) for carriage of dangerous goods or not, could be effective in case of an emergency. As for fixed fire extinguishing systems for holds, most conventional bulk carriers that are approved to carry dangerous goods, will already have such a system installed.

Flag state/class approval process

Documents submissions: Owners must seek permission from both the vessel's flag state and classification society if containers are to be carried on a bulk carrier. Class and statutory requirements will possibly be applied on a "case by case" basis and will vary depending on the class society and the flag state administration.). The approval process could take a few days especially when done for the first time. According to one estimate, it took class 8-10 days to give final approval for the vessel to take first cargo of containers

on a bulk vessel. Furthermore, depending on the requirements of the class, owners may require approval for each voyage prior to loading to ensure that all strength and stability calculations are within the safe margins. Owners should also bear in mind that some port states might require submission of certain documents. Generally, the below listed items will likely have to be documented in order to obtain the necessary approvals which could be per voyage or on a more permanent basis:

- Container Stowage and Lashing Plan in line with CSS Code and/or Cargo Securing Manual (CSM).
- Structural drawings of new structural elements for the fixed securing equipment for cargo holds/deck/hatch covers.
- Revised loading conditions, departure and arrival, with containers as cargo to be submitted for review for each voyage.
- Any changes or modification to the vessel's stability manual and software.
- Probabilistic damage stability calculations.
- Owners should also apply for Document of Compliance (DOC) for the carriage of dangerous goods, if necessary.
- Owners should enter in a dialogue with their classification societies and flag states early to better understand the various requirements and approval process. It might also be a good idea to undertake a pre-assessment of the vessel to assess vessel suitability and the extent of modifications required.

The crew training and familiarisation

A well-trained crew on bulk carriers may not have the necessary familiarity with carrying containers. Therefore a mindset change will be needed on various aspects of safe carriage of containers on board as well as responding to emergencies. For this reason, some operators appoint port captains at the load port to ensure that cargo is loaded safely, secured as per CSM and that the vessel meets the stability criteria. While it certainly might be helpful, this cannot be a substitute for crew training and familiarization since they will be the ones executing the voyage. Let's look at some of the key points for operators to consider to familiarise their crew.

Knowledge of the cargo: There have been many casualties on container vessels due to the following conditions:

- the contents of a container were misdeclared by the shipper leading to a fire incident,
- cargo was not properly packed and secured inside the container leading to damage, spillage and fires; and
- stack collapses caused by the weight of the container not being accurately declared or heavier containers loaded above the lighter ones.

It is therefore important that the operator has in place good KYC (know your customer) procedures to vet the charterers, shippers, freight forwarders and any others responsible for accuracy in declarations and request them to follow the CTU Code. It is imperative that the crew is familiar with the owner's KYC policy and at the same time conversant with the markings and labelling of the containers in accordance with chapter 5.3 of the IMDG code – Marking and labelling of packages including IBCs.

Loading software: The crew needs to be very familiar with the software used for stowage, segregation, stability and lashing. It may be that more than one software product is used to satisfy all the requirements in which case the crew should know how each one of these programmes work.

A small change in weight onboard, such as to the quantity of ballast in one of the tanks can have a considerable effect on the forces (shearing, torsional and bending) acting on the vessel and the GM (metacentric height). As such, it is important to make sure that accurate weights are entered for the cargo, ballast, fuel and so on This will largely depend on the accuracy of the declared weight of the containers.

Finally, the GM of the vessel loaded with containers will vary a lot depending on whether the heavier load is in the holds or on deck. Accordingly, the vessel may be tender (low GM) or stiff (high GM). The vessel will behave very differently in both these conditions. We have

discussed the effects of this on the lashings in one of our loss prevention posters (accessible [here](#)).

On container vessels it is often the case that the visual drafts differ by a few centimetres from the calculated drafts in the loading computer. Crew should be aware of this, and an excessively large variation in the drafts will indicate that cargo weight has been inaccurately declared. Such would also affect the vessel's stability and it might be unsafe to depart without making proper enquiries.

Lashing:

Different kind of lashing and securing materials will be in use, such as base locks for the first tier, fully or semi- automatic twistlocks for tiers above, bridge fittings to secure the adjacent top corners of containers athwartship, lashing bars, turnbuckles and even chains. Lashings would also depend on the size (length and height) of the containers, for example, the lashing pattern for a 20ft container would be different than for a 45ft high cube container. Crew also need to be aware that the lashings for the seaside or corner stacks would not be the same as for the stacks toward the middle. All of these peculiarities will be detailed in the class approved cargo securing manual (CSM). Crew should therefore familiarize themselves with the requirements of CSM which is the single most important document for vessels engaged in carrying containers.

Container lashings are usually carried out by the stevedores and it is important that the crew of the vessel informs them of the required lashing pattern as mentioned in the CSM. On container vessels it is not uncommon to post a copy of the lashing pattern adjacent to each bay and also brief the foreman of the requirements. When calculating the lashing arrangement, it should be borne in mind that containers come in different sizes in terms of length (such as 20, 40, 45, 48 and 53 feet) and height (standard and high cube). Where possible, the loadicator (and its different modules) should be able to cater for these different sizes.

In our experience some of the shortcomings that have led to containers falling overboard in the past have been:

- Unapproved lashing equipment of lower strength in use;
 - All four corners of the container not sitting properly on twistlocks;
 - Twistlocks missing or not locked / left in open position;
 - Lashings not tightened during the voyage;
 - Lashing pattern as detailed in CSM not followed;
 - Shortage of lashing equipment onboard leading to some containers not being lashed; and
 - Securing (such as welded container sockets, lashing eyes etc.) and lashing equipment damaged or in poor condition.
- Dangerous cargo: If any dangerous cargo (DG) containers are loaded onboard they must comply with the IMDG Code including such requirements pertaining to stowage, segregation and placarding.. Given the risks of fires in containers, owners / managers should consider implementing risk-based stowage that has been adopted by a number of container operators and incorporate it in the loading software used. Since the conventional bulk carriers are not equipped with smoke detection system for cargo holds, DG cargoes should not be loaded in the holds. If a fire were to break out, the crew should have been trained in how to respond to such an incident.

Moorings:

With containers loaded on deck the vessel's windage area will be significantly greater. This will result in higher stress on the vessel's mooring during her port stay as well as during towage in or out of the loading terminal. Owners will therefore need to consider, in consultation with the classification society and perhaps the port / terminal, if the mooring arrangement needs to be modified to ensure safety of operations during the port stay. The crew will need to be familiarised with the mooring arrangements prior to arrival at the load port. A revised 'equipment number calculation' by the classification society may be needed

depending on whether owners are considering getting approvals for carrying containers permanently or not.

The voyage

Voyage planning: On a container vessel weather routing is a very important part of the voyage planning process. Heavy weather, resulting in parametric and synchronous rolling, has been a common factor in nearly all claims related to container stack collapses which Gard has been involved in over the years. Readers interested in knowing more would find our insight 'Why do containership stacks collapse and who is liable?' useful. Advanced weather routing software and services are available, and operators should consider adopting these technologies for the safe execution of the voyage. Appropriate weather limiting factors must be defined or rather re-defined, such as the maximum wave and swell height, as these factors will be different depending on whether the vessel is carrying bulk cargo or containers.

Navigation:

- Vessel manoeuvring: Where containers are loaded on deck, the vessel's windage area will be greater. Consequently, the ship will behave differently at sea and during berthing and unberthing, especially when the wind speeds are high or there are strong gusts. Additional tugs may also be needed to assist vessel manoeuvring during berthing / unberthing operations. The watchkeeping officers should consider the higher windage area affecting the manoeuvrability of the vessel.
- Lookout: Containers loaded on deck can obscure visibility of the watchkeepers and interfere in safe lookout. The vessel's loading software should be able to advise the crew whether the SOLAS requirements for minimum visibility are being met or not.

Monitoring during voyage: During the voyage, the crew will need to actively monitor the lashings as they are likely to slacken during the voyage due to vessel movements. In addition to the lashings, the vessel will also need to monitor stability conditions during stages of the voyage. Bunker consumption during passage will affect the stability of the vessel which will need to be compensated with ballast, especially if the vessel has a low GM at departure from load port.



The **COSCO SHIPPING XING WANG** spotted westbound navigating the Singapore Strait

Owner's protective charterparty clauses

Keeping in mind the risks identified above, owners may wish to consider protective clauses in their charterparties and in bills of lading to mitigate the risks. The first thing to note is that the Hague/Hague-Visby Rules oblige the carrier to properly load, handle, stow, carry, keep, care for and discharge goods carried on board the vessel. The Hague/Hague-Visby Rules expressly excludes cargo carried on deck if:

- the contract of carriage expressly states that the cargo is to be carried on deck; and
- the cargo is in fact carried on deck.

Where the Hague/Hague-Visby exclusion applies, the carrier will not be able to rely on the defences available under Article 4 of the Hague/Hague-Visby Rules, including not being able to rely on the lower due diligence standard of seaworthiness. Owners should bear in mind that deck cargo is less protected than cargo stowed in cargo holds, and there is an increased risk of damage which owners could be responsible for. On the flip side, since the minimum standards in the Hague (Visby) Rules do not apply to deck cargo, the carrier is at liberty to exclude liability for unseaworthiness resulting in loss of deck cargo.

The 2019 case of **The Elin** deals with an exclusion clause in bills of lading where general cargo was carried on deck, and subsequently lost overboard due to heavy weather. The cargo interests argued that the cargo was lost as a result of the carrier's negligence and/or unseaworthiness of the vessel. The bill of lading contained the following clause: 'loaded on deck at shipper's and/or consignee's and/or receiver's risk; the carrier and/or Owners and/or Vessel being not responsible for loss or damage howsoever arising.'

The cargo interests argued that this clause did not have the effect of excluding liability for unseaworthiness and negligence, applying the case of *R v Canada Steamship Line* [1952] AC 192 which had been favourably applied by Courts in Singapore and Canada. The English Court however declined to apply *R v Canada Steamship Line*, instead holding that the words "howsoever arising" was sufficiently clear so as to extend to exclude liability for unseaworthiness and negligence. Owners should therefore ensure that they incorporate clear and precise wording into the bills of lading issued on their behalf, and into their charterparties. These clauses ideally should specifically exclude unseaworthiness and negligence. An example clause could be: "Cargo is loaded and carried on deck entirely at Charterers' and/or Shipper's and/or Consignee's and/or Receiver's risk and responsibility; the Carrier and/or Owners and/or Vessel shall not be responsible for loss or damage to cargo carried on deck howsoever arising, including but not limited to unseaworthiness or negligence on the part of the Carrier and/or Owners and/or Vessel."

The owners should also seek an indemnity from charterers in respect of loss of deck cargo, as is the case in many standard form charterparties (see for example NYPE 1993 cl.13(b)), to protect them in circumstances where they become liable for a claim to which the terms in the bill of lading do not apply (for example, a claim in bailment, see further below).

Charterers' bills of lading – a solution?

Charterers' bills of lading are signed by charterers as the "carrier" of the cargo, and not on behalf of the owners or master of the vessels. The intended effect is to direct all claims made under the bill of lading to the charterers as the named carrier.

Be that as it may, the owners of the vessel as the physical carrier of the cargo, would be considered the bailor of the cargo during the voyage, with a corresponding obligation to properly care for the goods in their possession. Owners therefore could still face claims in bailment from a cargo claimant. These claims would be governed by the law of the jurisdiction in which they are brought and are difficult to avoid. Owners may wish to consider incorporating Himalaya clauses into the charterparty, as well as an indemnity from charterers into their charterparties, for claims arising from the carriage of containers on deck.

Insurance cover

When looking at P&I cover or H&M cover issues, owners should evaluate whether the carriage of containers on board their bulk vessel constitutes an 'alteration of risk'. Members should contact their underwriter for a discussion on possible cover implications. The risk evaluation by the underwriters would depend on the merits of each case and would certainly take the class and flag approvals into account.

Recommendations

We have above highlighted some of the technical and contractual risks for bulk carriers that are involved in a transition to carry containers as cargo. The risks mentioned are by no means exhaustive but give some indications as to what to expect. The below recommendations summarize the key points. Due diligence of operators: Getting class and flag approvals after making the necessary modifications is only the first step when making a transition to carry containers. Approvals alone would not guarantee safe carriage. For example, crew must be trained and ready for the new operations. Contractual considerations: It is prudent for owners to insert protective clauses and indemnity clauses in their charterparties and bills of lading where containers are intended to be carried on deck. Where charters' bills of lading are issued, Owners may still face claims in bailment. Owners should therefore ensure that their charterparties and bills of lading contain a Himalaya clause, allowing them to rely on any defences available to charterers as the contractual carrier under the bills of lading.

Limitations of the container trade: There are a many lessons to be learned from container vessels for bulk operators wishing to make the transition. Misdeclaration of dangerous cargo, misdeclared weights, improper lashings and poor packaging and securing of the cargo inside the containers are some of the key risks to guard against. Crew training and familiarisation: Crew who have not had any exposure to carrying containers will need to be trained and familiarized by operators to ensure that the voyage can be executed safely. Some of the areas where this will be particularly important are the loading software, container lashings and navigation.

Source: GARD

Inséré 19/04/22 NIEUWS NOUVELLES Enlevé 19/05/22

NAVY NEWS



BELGICA (IMO: 9871294) inbound Antwerp dd. 15/03/2022 is a Research/Survey Vessel that was built in 2021 (1 year ago) and is sailing under the flag of Belgium. Her length overall (LOA) is 71.4 meters and her width is 16.8 meters. Vist Antwerp for first time. **RV BELGICA**, the new 71-meter-long research vessel, is ready to play a key role in Belgian and European marine research in the coming decades.

The new RV **BELGICA** sets off on expeditions to ensure continuity in the support of marine sciences and guarantee compliance with our country's national and international obligations. In this way, the ship takes over the important role of her predecessor **RV A962 BELGICA** (launched in 1984 and received a second life as an Ukrainian research vessel since September, 2021) to monitor the state of Belgian and surrounding marine waters (water quality, marine life, environmental impact of human activities, e.g. wind farms, sand extraction, etc.). The international dimension of science will further be highlighted in RV Belgica's agenda through, for example, European funded programs (such as the Eurofleets network which gives European researchers access to a broad range of European and international marine infrastructures for marine research). Additionally, private chartering and assignments for other end users will be possible as well. The RV **BELGICA** will set off from Zeebrugge on multi-day and multi-week campaigns for up to three hundred days a year. The operating area includes the North Sea, the Northeast Atlantic Ocean, the Mediterranean Sea and the Black Sea, with an Ice class for summer operations in arctic areas and a 30 day autonomy.

The RV **BELGICA** monitors the quality of the North Sea by constantly collecting all kinds of data about the biological, chemical, physical, geological and hydrodynamic processes which occur (monitoring). Scientists take samples of water, soil and living organisms. They test new fishing techniques, investigate the influence of sand extraction on the seabed and study the effect of wind farms on sea life. New capabilities of this vessel are mapping and analyses of the full water column (incl. fauna), sea floor and subsurface up to 5000 m water depth besides being a platform for the use of existing large European Marine Research Infrastructures, such as Autonomous Underway Vehicles (AUVs), Remotely Operated Vehicles (ROVs), Unmanned Aerial Vehicles (UAVs), seismic systems, sediment coring and rock drill devices. As modern research vessel, RV **BELGICA** remains at the

forefront of sea-related science and technology and also meets the needs formulated by ERVO & the European Marine Board (EMB_Factsheet_PP25_Research_Vessels.pdf) to help ensure that Belgium & Europe can remain world leaders in marine science and exploration.

Inséré 19/04/21 BOEKEN LIVRES BOOKS Enlevé 19/05/22

Boekennieuws



CptnZeppos, lid van Watererfgoed Vlaanderen, heeft maar één missie: Mensen de kans geven om hun droom waar te maken door te reizen aan boord van een vrachtschip.

Eén van de passagiers, **Ward Hulselmans** schreef het boek: "**Enkele reis realiteit**".

Zijn avonturen als passagier aan boord van de Elbfeeder (Antwerpen - Dublin - Cork - Antwerpen) en de MSC Alessia (Antwerpen - Sines - Piraeus - Istanboel) schreef hij neer in zijn dagboeken, die nadien belandden in dit nieuwe boek.

Ward was beroepsjournalist en scenarist, en staat bekend voor zijn successeries Niet voor publikatie, Heterdaad, Stille Waters, Witse en Salamander. Voor de eerste keer stapte hij aan boord van een vrachtschip naar Ierland, vervolgens vaarde hij mee tot in Istanboel.

Bestel Ward's boek door 22,99 €/boek + verzendkosten binnen België €2,99 (verzending naar Nederland €4,50) over te maken op rekeningnummer

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Na zijn eerste reis aan boord van een vrachtschip schreef Ward Hulselmans: "Ik leun op de reling en krijg langzaam het gevoel van totale vrijheid..."

Inséré 21/04/22 DOSSIER Enlevé 21/05/22

Top Asian economies well positioned to capitalize on shipping decarbonization

Top Asian economies may need to spend the most decarbonizing shipping, but industry experts say they are well positioned to create business opportunities from these climate efforts. Taking a look at China, Japan, and South Korea, which together account for roughly a third of the world's CO2 emissions, ING analysts concluded the countries' mid-century net-zero pledges will cost them at least \$12.4 trillion in the transportation sectors alone.



Of the massive bill, \$4.38 trillion is estimated to be devoted to shipping, \$3.08 trillion to rail systems, \$2.73 trillion to road transportation, and \$2.22 trillion to aviation. The three countries are among the world's top 10 maritime trade nations by volume, and ING analysts assumed their seaborne cargo would be all carried by vessels running on ammonia generated from renewable energy "Marine transport looks tricky. Ammonia looks on paper to be the best bet, but it requires a lot of energy to make," according to the Dutch bank's Asia's Race to Net Zero Carbon report. "This could be expensive."

The scope of ING's study is limited to the capital costs in building sufficient electricity generation capacity that can power the three countries' transportation sectors. To simplify the calculations, spending on other parts of the supply chain is not taken into account. For now, green ammonia is produced from hydrogen generated from an electrolyzer powered by solar or wind power, and nitrogen separated from the air.

"The most likely alternative fuel source we know about today is ammonia," ING analysts wrote. "When burned, it emits no CO₂." The analysts stressed the methodology is based on their preferred sectoral approach and admitted other abatement means—such as purchases of carbon offsets, and carbon capture and storage technology—are also likely to play a role in the transportation sectors.

"While net zero is a credible target for the whole economy, for sub-sectors such as transport, there seems little justification for trying to calculate the costs of only a partial adjustment first," the ING report said. The study also assumes airlines would fully adopt sustainable aviation fuel (SAF) produced from zero-carbon electricity, and that all vehicles and railways will be electrified.

Counting the numbers

China, Asia's largest economy and the world's second-biggest, has pledged to achieve carbon neutrality by 2060. Japan, Asia's No. 2 economy, and South Korea, the fourth-ranked economy by size in the region, have both committed to the same goal by 2050. According to Norway-based DNV, one of the world's largest ship classification and certification societies, the countries' transportation sectors emit 3% of all GHG emissions globally.

China will need another 433 GW of renewable generation capacity at a capital cost of \$3.68 trillion to create green ammonia for its seaborne freight in the next 40 years, ING analysts estimated. "It is extremely costly to shift completely...to green ammonia" from LNG and the oil-based fuels that shipowners are currently using, they said. ING also forecast another

\$2.92 trillion will be required to build 344 GW of capacity to supply green power to China's rail system, and \$2.02 trillion to be spent on the 6.23 million GWh/year in producing SAF for airlines. However, for passenger cars, the country is expected to just need \$516 billion for another 61 GW of generation capacity. «This surprisingly low result stems from the inherent efficiency improvements of BEVs [battery plug-in electric vehicles] compared to the current fleet and additional efficiency gains for BEVs by 2060,» ING said.

ING analysts separately calculated that \$588 billion is required to invest in an additional 216 GW of capacity to create green ammonia for Japan's maritime trade, even if more efficient, hybrid H2-enhanced engines are used. In addition, the country's aviation sector needs another 62 GW of capacity with a capital cost of \$168 billion, and 60 GW that will cost \$150 billion for its rail segment. Japan's passenger cars will only require 20 GW, implying a cost of \$54 billion.

As for South Korea, ING estimated \$109 billion needs to be spent on 44 GW of generation capacity to decarbonize its seaborne trade. Its aviation sector faces a bill of \$31 billion for 17.4 GW of capacity. The country's rail network, already 85% electrified, only requires \$5 billion in capacity expansion costs.



The **KOTA PUSAKA** handling boxes at the Brani container terminal in Singapore

Is it that clear?

Tristan Smith, reader in energy and shipping at UCL Energy Institute, agreed that land transportation could be cheaper than shipping to decarbonize due to direct electrification. "This is because you do not have any of the losses first with turning electricity into hydrogen/ammonia and then converting the hydrogen/ammonia back into mechanical and electrical energy onboard the ship," he told Net-Zero Business Daily.

"Because of the efficiency differences in primary energy use, sectors unable to directly electrify will require more investment per unit of energy use," he added. But Smith questioned whether it would actually cost less to reduce emissions from air transportation than its maritime counterpart, with SAF in the form of synthetic hydrocarbon fuels produced from renewable energy not expected to be commercially available until 2030s. Analysts believe airlines will have to use crop- or waste-based biofuels for the near term. "There has been a sustained narrative that aviation will need SAF, when in practice the same availability and sustainability constraints [as in the past] will either severely limit the potential of SAF, or make it very expensive," said Smith.

He contrasted it with shipping, for which he said hydrogen-derived fuels are more advanced.

"If a more balanced appraisal of the respective roles of hydrogen and biofuels were applied, the investments for decarbonizing aviation could likely be of a greater magnitude than those associated with decarbonizing shipping," he added. When looked at from a different

time frame, land-based transportation modes also needed significant capital investments to decarbonize as well, classification society Lloyd's Register's Decarbonisation Programme Manager Charles Haskell suggested. «There may be certain applications where road transportation could be seen as cheaper to decarbonize, and the transition could also be simpler [from now on], given the industry has had significantly more investment over the past 10 years in comparison to shipping,” he said.

Abundant opportunities

However, the analysts agreed that the large investments required to decarbonize shipping would actually generate more business and employment opportunities in the three countries. «All this spending is actually business and government investment. It contributes to GDP,” ING said. “One firm's cost will be another firm's revenue. Aggregate activity could well rise rather than fall as a result. «China, Japan, and South Korea produce more than 90% of the world's ocean-going cargo carriers. IHS Markit said Chinese shipyards held a 43.3% share of the global shipbuilding orderbook as of early October and are on track to make 45% of the world's ships this year. “The volume of shipbuilding business will increase very rapidly in future, and low- or zero-carbon ships will occupy a rapidly expanding part in their output,” said Martin Stopford, a director at consultancy MarEcon. “Of course, the shipbuilders and equipment manufacturers need to get the ships into the market, but there is much activity in both sectors at the moment.” Others pointed out that the move to zero-emission shipping would lead to positive changes across the energy and maritime supply chains.

“There shall need to be a large-scale investment in renewable electricity generation, production technologies, and infrastructure for storage and distribution, and this is not just limited to shipping,” Haskell said. “Many of the skills and competencies lie within shipbuilding.” While the decarbonization drive will create new, growing markets, Smith said governments should step in to mitigate the transitional pains. The number of jobs related to oil-based marine fuels is expected to fall.

“I do not see the scale of shipping's decarbonization as a downside—even if it may be daunting, it is a lot of new jobs and opportunity,” he said. “But that has to be carefully managed to ensure that retraining and employment in one sector is not unfair relative to new opportunities in another.”

“Most importantly, it needs clear signals and policy clarity—otherwise employment and investments cannot be planned, and [this risks] unemployment and assets becoming stranded and causing economic damage,” he added. The Chinese, Japanese, and South Korean governments have all unveiled policy measures to support their shipbuilders in constructing vessels with zero emissions later this decade. Beijing and Seoul are willing to provide financial incentives, while Tokyo is focusing on coordination among domestic yards. A successful move into zero-emission shipping can win more clients in the overseas market too. Government-run China State Shipbuilding owns Switzerland-headquartered Winterthur Gas & Diesel, one of the few companies in the world currently capable of developing marine engines running on zero-carbon fuels.

“Due to China's national GHG targets, we are seeing an increasing number of large state-owned companies investing in decarbonization, and who possess a clear ambition to be leaders in this field,” said Tore Longva, principal consultant with DNV's maritime division. “Beyond the international shipping sector, we expect an emergence of more pilots and initiatives geared towards the decarbonization of domestic shipping in China, which will also serve to boost the uptake of alternative fuels and energy efficiency technologies by international fleets,” Longva added.

Multiple fuel solutions

Since International Maritime Organization member states agreed on a target to halve GHG emissions from cross-border shipping by 2050 compared with 2008, debate has been ongoing over which zero-carbon fuel will power ships in the future. There has been growing

interest in ammonia due to its high energy density and existing supply chain. In June, Japanese trader Itochu launched a joint study with Trafigura, Equinor, Anglo American, and some other parties on the usage of ammonia as a marine fuel. However, no ammonia-fueled ships have been built to date. Many shipowners have for now opted for a switch to LNG from oil-based fuels, onboard energy-saving devices, and voyage optimization to reduce emissions. DNV data shows 615 LNG-powered ships are currently in operation or under construction. Unless there is sufficient production of zero-carbon synthetic natural gas later on, experts do not expect the prevailing approach to meet the mid-century target. Some countries have even called for zero emissions from shipping by 2050. "Safety, finance, and the environment are all considerations which need more time—hopefully before 2030—for fuller investigation before shipping can arrive at a limited set of definitive fuel solutions," Longva said. "The cost of producing and distributing fuels and onboard technologies will reduce over time, but still, we expect the cost to stay significantly above today's costs," he added. Shipowners' efforts in exploring the best zero-carbon fuels could actually pay dividends in the long run, according to Smith "Generally, a period where there are many options being considered, as long as they are genuine options, is helpful and can increase innovation and help to reduce costs for the transition," he said. "As long as these options are being discussed and assessed in a robust way with lifecycle emissions and scalability fully transparent and considered, there is not a problem with this. "The need for rapid ramping up of investment in shipping's energy production and supply chain is greater towards the middle and end of this decade, but it will then rapidly need to scale...Shipping has a bit of time to have a more open exploration before it needs to finalize," Smith said.

Source: IHS Markit

Inséré 23/04/22 HISTORIEK HISTORIQUE Enlevé 23/05/22

Du Diolkos au canal de Corinthe (II)

D'un empereur à l'autre, les premières tentatives

Toutes les sources s'accordent à dire que Périandre est le premier à avoir envisagé le percement de l'isthme, vers 600 avant notre ère. Les difficultés techniques le découragent rapidement, tout autant que les oracles, qui lui déconseillent formellement ce sacrilège. Selon Will, l'esprit du projet tenait davantage du souci de protection territoriale que de l'aménagement maritime, une île étant plus aisée à défendre qu'une presqu'île. Mais pourquoi creuser un canal profond de plusieurs dizaines de mètres quand de simples douves auraient sans doute suffi à se protéger ? Vers l'an 400 de notre ère, les Corinthiens ont d'ailleurs fini par édifier un mur de plusieurs mètres de hauteur — l'Hexamilion — pour fortifier leur isthme.



Extrait de *The Imperial Bible Dictionary* publié en 1866, cette gravure anglaise de William Miller, d'après S. Bough, représente la ville de Corinthe, son isthme, et des montagnes plus aiguës que nature. Dès 1830, première année de son indépendance, arrachée par les armes aux Ottomans, la Grèce présente un projet de percement, qui échouera, comme les précédents.

En 307 avant J.-C., le général Démétrios Ter Poliorcète songe à son tour à percer un canal, et commence même les excavations. Mais ses ingénieurs égyptiens prétendent que la différence de niveau des eaux entre la mer Égée et la mer Ionienne entraînerait un raz-de-marée et des courants infranchissables. Cela pourrait submerger la côte et les îles alentour. Il jette l'éponge. Un peu plus tard, Alexandre le Grand s'intéresse au projet, qu'il abandonne pour une raison inconnue, peut-être tout simplement sa mort. Presque trois siècles s'écoulent. Jules César ambitionne lui aussi, sans succès, de laisser son nom au canal de Corinthe. C'est du moins ce que rapporte Suétone, dans sa *Vie des douze Césars*. Après lui, Caligula songe à lancer les travaux, mais abandonne rapidement la partie quatre ans avant de mourir.

Si les Grecs ont la science, les Romains maîtrisent la technologie. C'est de fait un autre Romain, Néron, qui s'intéresse sérieusement le premier à la réalisation de l'ouvrage d'art. Il étudie les propositions antérieures et envoie des géomètres en Grèce. Ceux-ci sont parfaitement outillés : chorobate (niveau à eau), groma (croisillon de relèvement à quatre fils à plomb), metra (mesure d'arpenteur), perpendiculum (fil à plomb), norma (équerre) et decempeda (planchette de 10 pieds). Ils effectuent des prélèvements et des analyses géologiques, procèdent à des sondages de terrain, et proposent plusieurs projets à l'empereur. Celui-ci tranche, et inaugure les travaux en personne, en l'an 67. Il creuse symboliquement le sol à l'aide d'un pic — ou d'une bêche — en or, et emporte lui-même les déblais dans un panier. Cela fait, il rentre, satisfait, à Corinthe, dit Lucien, "persuadé d'avoir dépassé tous les travaux d'Héraclès".

La même année, le futur empereur Vespasien reçoit la légation de la Judée pour mater la révolte juive, qui dure depuis un an et se terminera par la destruction de Jérusalem en 70. Il fournit à Néron six mille prisonniers de guerre juifs, choisis parmi les plus forts et les plus jeunes. Ceux-ci ouvrent les extrémités du canal, commencent à déblayer le sol, creusent une tranchée de 3000 mètres de longueur et de 40 mètres de largeur. Ils forent également vingt-huit puits de 30 mètres de profondeur, dans la partie centrale du tracé, pour sonder le terrain et préparer les travaux ultérieurs. Mais Néron doit retourner à Rome pour mater la rébellion de Galba. Peu de temps après, il est lui-même jugé pour crimes.

Le Sénat l'ayant démis de ses fonctions, il se suicide en 68. Après sa mort, les travaux cessent.

Ironie de l'histoire, le tracé choisi par les ingénieurs du XIXe siècle reprendra exactement celui de Néron, qui s'est révélé le plus économique et le plus fiable ! Les puits de sondage qu'il avait fait creuser ont également été utilisés. Ensuite, on prête à l'empereur Hadrien (76-138) le désir de remettre des ouvriers à l'ouvrage. Ce grand bâtisseur en aurait été dissuadé par sa crainte d'irriter Poséidon. Vers l'an 161, le rhéteur et mécène Hérode Atticus caresse le même rêve. "Tous les accomplissements de la vie s'oublieront.

Les outils et les machines les plus modernes sont utilisés. Les excavatrices à vapeur, ainsi que la dynamite, dont Alfred Nobel a déposé le brevet en 1875, rendent enfin la tâche possible, suscitant des lignes enflammées, en 1883, dans le New York Times : "Ne sied-il pas que ce canal, dont la construction a débuté sous l'égide du monstre Néron, s'achève sous celle de ce nouveau monstre de la science : la dynamite ?" Une autre édition loue, en 1886, les prouesses techniques des travaux d'excavation menés simultanément sur trois niveaux de chaque côté : les roches tombent dans des wagonnets à flanc de canal pour être évacuées à l'extérieur du site. Au demeurant, les ouvriers en contrebas ne sont pas à l'abri des chutes de pierres. Par ailleurs, sans tarder le journal émet des doutes quant à la rentabilité du projet.

En 1889, la société gestionnaire tombe en cessation de paiements et est dissoute. Les investisseurs, échaudés par la faillite de la compagnie chargée du percement du canal de Panamá, hésitent à financer plus avant celui de Corinthe. Au lieu des 24 millions de francs prévus, les dépenses atteignent presque le double au bout de deux ans, alors que 8200 mètres cubes seulement ont été terrassés; il en reste un quart de million à extraire ! L'année suivante, la nouvelle Société hellénique du canal de Corinthe reprend la concession. Béla Gerster continue à diriger le chantier. Le 1er octobre, le travail peut reprendre. Comme l'ouvrage doit, selon le nouveau contrat, s'achever au plus tard le 1er avril 1893, entre mille quatre cents et deux mille cinq cents ouvriers sont embauchés. Accidents divers, éboulements, infections et maladies endémiques coûteront la vie à de nombreux terrassiers, souvent contraints de travailler dans l'eau durant cette dernière phase des travaux.

1893 voit donc enfin l'achèvement du canal de Corinthe. Les cinq ans de retard qu'a pris le chantier sont de peu de poids face aux vingt-cinq siècles qui séparent l'événement du rêve de Périandre. L'ouvrage aura finalement coûté 60 millions de francs. L'inauguration a lieu le 25 juillet, en grande pompe. Le premier bateau à se présenter est français, le Notre-Dame du Salut. À la grande déconvenue des spectateurs, celui-ci heurte les parois à sept reprises... Certainement une facétie des dieux de l'Olympe. Une autre surprise attend les investisseurs. Le canal de Corinthe ne rencontrera pas le succès escompté et vivra au ralenti jusque vers 1910.



Transit d'un convoi allemand en 1941. Dans trois ans, l'occupant rendra le canal inutilisable en le comblant de ferraille.

En 1928, un séisme y éboule roches et terre. Pire, en août 1941, les Britanniques le bombardent pour bloquer les Allemands. Puis ces derniers l'obstruent de diverses manières au cours de leur débâcle de 1944: en le bombardant, en l'embouteillant de six locomotives et de cent trente wagons ! Il faudra quatre années pour le débarrasser de tout ce qui l'encombre. Ce grand nettoyage a été l'un des dix grands projets financés par le plan Marshall dans les années 1950. En 1961, puis à nouveau en 1966, on a dû le fermer quelques semaines

à cause de nouveaux risques d'éboulements.

Un trésor patrimonial mal mis en valeur

Les activités maritimes constituent, avant le tourisme, la première ressource économique de la Grèce, dont les armateurs contrôlent dix-neuf pour cent du commerce maritime mondial. Douze mille navires, la plupart transportant des touristes, empruntent chaque année le canal de Corinthe, qui est à sens unique, d'Est en Ouest. Seuls les bateaux de faible tonnage sont admis, à condition d'afficher moins de 18,30 mètres de largeur, 7,20 mètres de tirant d'eau et 58,80 mètres de tirant d'air. On y transite vingt-quatre heures sur vingt-quatre. Le péage coûtait 32 euros en 2008 pour un bateau de plaisance ou de pêche local, et 80 euros pour un bateau de plaisance étranger mesurant de 6 à 9 mètres. Pour les navires marchands et autres, cela varie selon le tonnage.

Seul le percement de l'isthme marquera durablement la mémoire des hommes", confie-il, lors d'un voyage sur le site, selon Philostrate. Mais, à l'instar de ses prédécesseurs, il recule vite devant l'ampleur de la tâche... ou l'ire des dieux.

Les Vénitiens s'y attelleront aussi, l'importance de leur empire maritime étant susceptible de faire d'un tel canal un ouvrage tout à fait rentable. Cependant, sans doute meilleurs marins et marchands que terrassiers, ils abandonnent au bout de quelques jours le forage entamé sur la côte Ouest. Ils reviendront à la charge plus tard, mais sans parvenir à leurs fins. De leur côté, durant leur occupation de la Grèce, les Ottomans ont certainement étudié eux aussi le projet, mais il est resté lettre morte.

Dix ans de travaux pour des milliers d'ouvriers



En 1883, un chantier colossal a permis de concrétiser le canal de Corinthe, dont l'idée est née vingt-cinq siècles plus tôt. On ne connaît pas précisément son coût humain, mais maladies, éboulements et déraillements de wagonnets ont rythmé l'éreintant labeur des milliers d'hommes auxquels on doit cet ouvrage d'art.

Plus près de nous, en 1830, le Français Virelet d'Aoust, membre de la commission scientifique dite "de Morée", nomme un comité ad hoc afin d'étudier un projet de percement de l'isthme présenté par le gouvernement grec peu après l'indépendance du pays. Le canal s'y affirme comme une revanche nationaliste sur une domination ottomane longue de quatre siècles. Mais les finances ne suivent pas, et c'est une fois de plus un échec. En 1869, l'achèvement d'une autre réalisation pharaonique, le canal de Suez, incite les

Grecs à reprendre l'étude du canal. Le gouvernement promulgue une loi sur l'ouverture de l'isthme de Corinthe, et en confie la réalisation à deux entrepreneurs français, E. Piat (banquier) et M. Chollet (ingénieur), mais l'affaire sera sans lendemain, faute d'investisseurs.

En 1880, le général italien Türr, architecte d'origine hongroise et concurrent de Ferdinand de Lesseps à

Panamà, fait étudier le projet par un compatriote, l'ingénieur Béla Gerster. Il obtient l'année suivante une concession d'exploitation de quatre-vingt-dix-neuf ans. En 1883, Türr fonde la Société internationale du canal maritime de Corinthe avec un banquier français

nommé Reinach. Les travaux sont inaugurés le 23 avril, en présence du roi de Grèce, Georges Ter. Le canal est censé ouvrir à la navigation dans cinq ans.

Le chantier est divisé en quatre sites. L'équipe administrative et scientifique compte quatre-vingt-neuf personnes. Mille huit cents ouvriers sont engagés, dont mille "principaux", épaulés par des manoeuvrés non qualifiés en majorité grecs, italiens, monténégrins et arméniens. Certains ont déjà travaillé à Suez. Pour d'autres, Panama sera le prochain grand chantier. Le nombre de travailleurs occupés sur le site est variable, plus faible, en septembre, quand les fièvres — sans doute paludiques et typhoïdiques — sont à leur paroxysme : quatre cents en 1882, trois fois plus un an plus tard, mille en octobre 1884.

Le canal de Corinthe a été nationalisé en 1980. En janvier 2001, le ministère des Finances a lancé un appel d'offres pour la concession d'exploitation, provoquant une grève des employés, inquiets d'une privatisation totale. Sea Containers Services Ltd, une compagnie maritime basée aux Bermudes, a obtenu le contrat. Celle-ci, outre ses activités de location de conteneurs, a également des intérêts dans l'immobilier, la presse et les plantations. Cette société a confié l'exploitation du canal à sa filiale Periandros SA, créée à cet effet, pour une période de trente ans, renouvelable tous les dix ans. La mise était de 1 million de dollars, sans compter les 3 millions d'investissements nécessaires durant les cinq premières années.

Periandros SA est également chargée du développement touristique de la zone du canal, pour l'instant mal mise en valeur. On peut aisément passer le canal de Corinthe sans même le voir. Plusieurs projets sont en cours ou à l'étude, comme celui d'un petit musée du Diolkos. La construction d'une marina et d'un terminal ferry, à l'Ouest, est envisagée. Il est question aussi de développer les excursions sur le canal et sur les rives voisines. Le gouvernement pense à une liaison ferroviaire directe avec Athènes. Contrairement à Suez et Panamá, il n'est pas, pour l'instant, question d'élargir la tranchée.

La renverse du courant se produit à peu près toutes les six heures. Ce courant, généralement de 2,5 noeuds, dépasse rarement les 3 noeuds. Plus fort d'Ouest en Est, il est dû à la différence du niveau de la mer entre le golfe de Corinthe et celui de Saronique, de l'ordre de 50 centimètres. Le canal est fortement affecté par les vents dominants de Noroît. Les marées sont irrégulières, et le marnage ne dépasse pas les 60 centimètres. Deux ponts routiers ainsi qu'un pont ferroviaire enjambent la voie d'eau. À chaque extrémité, une route côtière est équipée d'un pont submersible, l'un à Posidonia et l'autre à Isthmia. La chaussée s'immerge à moins 8 mètres en quelques minutes pour laisser le passage aux navires.

Chasse-marée n° 215 Juillet 2009



Remerciements : à Walter Werner, à l'International Journal of Nautical Archaeology, Sofia Loverdou et Patrick Rocher. Bibliographie: Jean Cuisenier, *Le Pénée d'Ulysse*, Fayard, Paris, 2003. Béla Gerster, "L'isthme de Corinthe : tentatives de percement dans l'Antiquité", in *Bulletin de correspondance hellénique*, vol. VIII, 1884; G. Raepsaet, M. Tolley, "Le Diolkos de l'isthme de Corinthe: son tracé, son fonctionnement", *ibid.*, vol. XVII, 1993. Walter Werner, "The Largest Ship Trackway in Ancient Times : the Diolkos of the Isthmes of Corinth, Greece, and Early Attempts to Build a Canal", in *The International Journal of Nautical Archaeology*, vol. XXVI, n° 2, 1997. Édouard Will, *Recherches sur l'histoire et la civilisation de Corinthe*

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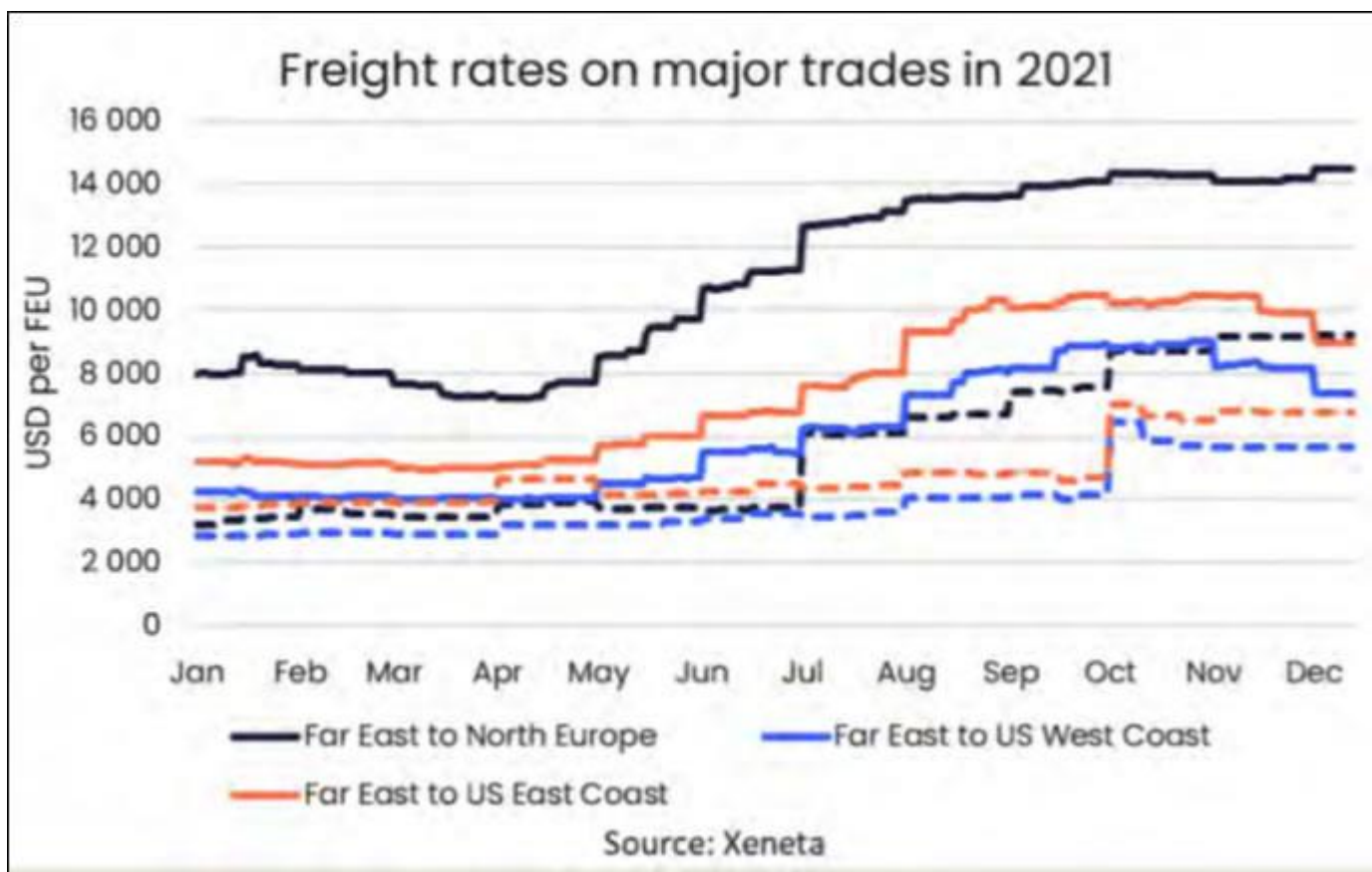
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Takeaways from a Staggering Year in Container Shipping (2021)

Among those involved in the industry, the importance of shipping is never in question. Without it, we wouldn't live in the world as we do today. However, its importance is rarely acknowledged outside the shipping bubble, and most people do not give ships a second thought so long as things run smoothly. Now, the situation is changing as global supply chains are no longer invisible to outsiders. Here is why:



*The **COSCO BELGIUM** inbound for Rotterdam Maasvlakte*
Container shipping this year has been thrown into a completely different place, first with the remarkable pictures of the Ever Given stuck in the Suez Canal and later the line of ships waiting in the San Pedro Bay filling mainstream media. However, what it really took to bring shipping out of the shadows was shockingly poor reliability and record-high costs, driven by the stop and then start nature of trade during the pandemic. The disruption in container shipping disrupted non-logistics departments and consumers due to delays, shortages, and spiralling costs. On the latter, the UN trade body (UNCTAD) estimates that increasing freight rates will lead to an average increase of 1.5% in consumer prices globally.



I: As Long As Reliability In Container Shipping Remains Low, Interest In It Will Remain High

Ensuring the flow of goods is integral to all parts of the companies involved in imports; if the logistics department can't guarantee the time and place of goods delivery, they can't sell them. What happens afterward, though? Will a return to higher schedule reliability mean a return to the shadows for shipping, even if transport costs remain higher than they averaged in the past decade? Probably.

Yet the disruption from these past years means it's unlikely for shipping to be forgotten quickly, especially within the companies where it can disrupt the wider business. Furthermore, with decarbonization, an ever-growing priority amongst consumers and importers, container shipping's slow progress so far on this front leaves it open to criticism and potentially negative publicity. No one is fully isolated in the global shipping industry. One outcome of shipping disruptions has been the public realizing how global and interconnected the world and container shipping are – Why does a backlog of ships in the US disrupt a European supply chain? Why does a container ship stuck in Egypt (the Suez Canal) affect consumers worldwide?



The **SPIL CAYA** transiting the Singapore Strait

Summing it up on a very high level, record-high US container imports, driven by US consumers buying Asian-produced goods at an unprecedented level, explain much of the extraordinary situation in container shipping. Other contributors to the industry chaos include pandemic-related port closures and disruption to hinterland connections. As ships are by their nature mobile assets, they chase the trades they can earn the most money on, leading to two outcomes. Firstly, if rates on one trade suddenly shoot upwards, as was the case in the Far East to US rates, rates on other routes follow the trend to keep them attractive to ship operators – otherwise, they just move the ship. Adding on to this effect, some operators decided that despite higher freight rates on their usual trade lane, they

still prefer to send their ships to the most lucrative market. Reverse cascading saw smaller ships, which had in past years been pushed down to secondary trades when larger ships were delivered, deployed on the transpacific trade lane.

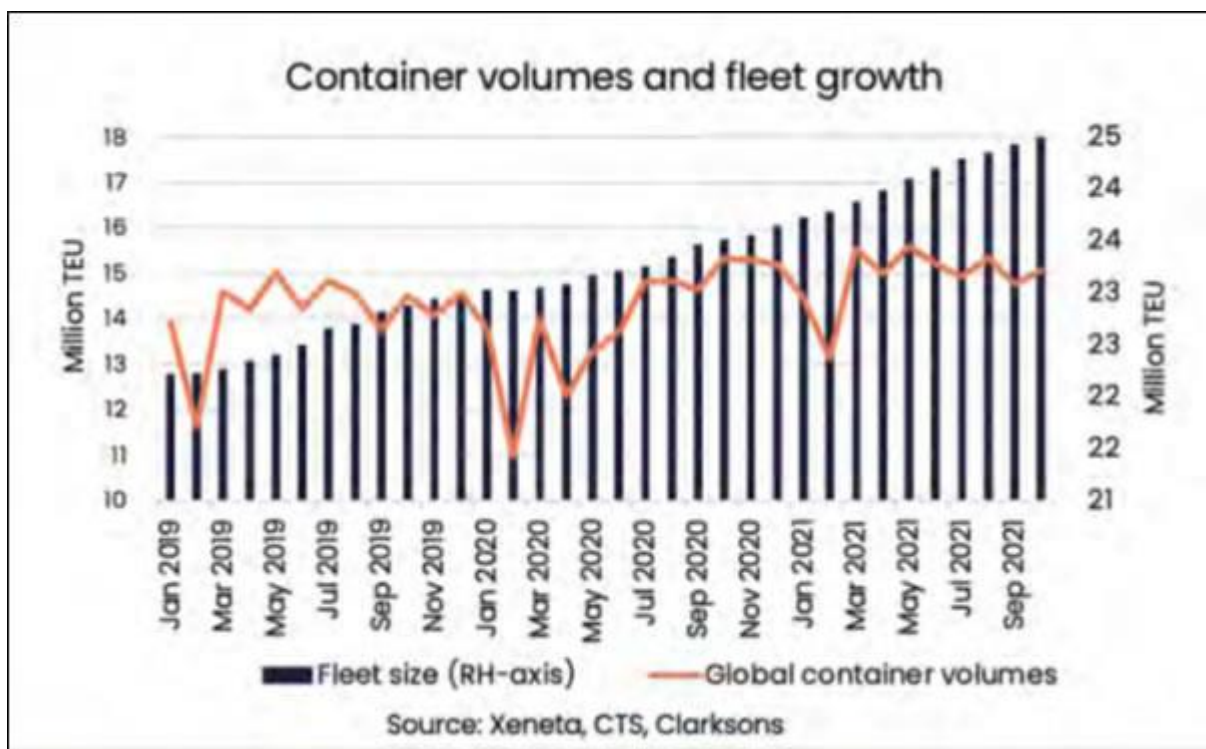
This, in turn, reduced the capacity on their previous trade lane driving freight rates up here while doing little to help solve the transpacific problems. The extra ships got stuck at anchorages, some of which set sail without the necessary agreements with terminals. Lastly, a delay at destination ports means that ships are often late to start their next scheduled (origin) departure, leaving carriers with a blank sailing option or finding another available ship. This left everyone scrambling to get hold of the spare capacity available on the charter market or taking ships out from another trade.



The **MARGARETE SCHULTE** departing from Rotterdam Maasvlakte

II: Capacity On The Water Is There, Bottlenecks On Land Need To Be Solved

The fact is that the actual ship capacity would have managed the demand if the conditions on land remained stable. Compared to 2019, rather than pandemic-affected 2020, volumes in the first ten months of the year grew by 5.5%. On the other side of the supply/demand balance, the capacity of the container ship fleet grew by 7.4% in the same period. In other words, the current situation in the freight market can't be explained by 'simple' market fundamentals. Instead, onshore bottlenecks and the resulting long waiting times at ports have soaked up a considerable amount of capacity, reducing the number of trips a ship can make. In the first ten months of 2019, a TEU of nominal capacity carried an average of 6.2 loaded containers. This number has fallen to 6.0 in the first ten months of 2021, not a massive fall, but enough to make a difference when scaled up to the whole fleet.



Many new ships, ordered this year, will be delivered from 2023 onwards and will add capacity on the sea. However, unless ports and hinterland connections can ensure the free flow of cargo, end-to-end, these extra ships will instead just join the queues outside the ports – just as we have seen with the extra loaders added on the transpacific in the past few months.

The directly pandemic-related disruption such as port closures in China will remain a threat as long as the virus circulates and -perhaps more importantly- if China sticks to its zero-COVID strategy. The more significant problem that needs tackling is that the infrastructure can't cope with the higher volumes coming through, such as in the US. Large-scale spending into the whole onshore part of the supply chain is needed to tackle the above challenge, but it won't solve the problem overnight. The fact that capacity on the sea hasn't been the limiting factor this year means the new ships being delivered in 2023 won't solve the underlying problems brought to light this year



The **TSINGTAO EXPRESS** outbound from Antwerp passing Kruiningen-Kruseveer

III: Long-term Contracts, Reliability, And Relationships Are Key To Successfully Navigating This Year (And Next)

The tumult of the past year has redefined what a successful outcome is when it comes to managing logistics. Previously the commoditized nature of the market meant it was very much a question of securing the lowest possible price. However, when the supply of goods is threatened, price becomes secondary – with success primarily depending on the timely delivery of goods.

Reliability will be key to navigating 2022. Consider those shippers who fixed long-term contracts for this year at the end of 2020 or the start of 2021. Rates fixed at that time were high compared to historical rates but far from today's rates.

So long as these shippers kept to the number of contracted boxes, they were still enjoying relatively low rates. Their problem came when they had extra volumes. In the past, carriers were flexible on this, allowing the extra boxes onboard, but that flexibility was gone this year, leaving these shippers to fight for space on the spot market and swallow the higher rates. The more exposed you were to the spot market, the harder the past year has been. Revenue per TEU reported by some carriers in their earnings reports shows this difference between rates being fixed today and what most boxes onboard ships are shipped for. In Q3, Maersk reported average revenue of 3 561 USD/FEU, while Hapag Lloyd reported 2 234 USD/TEU.

Developing a good relationship with carriers, viewing it more as a strategic partnership than a game that can be won by securing the lowest price, will insulate shippers from some of the risks and black swan events that 2022 doubtless holds in store.

Stability and predictability can also be achieved by signing multi-year deals, that few carriers are currently pushing for, as it guarantees the capacity. However, to avoid paying today's rates after the market softens, these contracts must include some adjustment mechanism to reflect future market conditions. In today's market and with the prospect of signing these kinds of deals, keeping track of the market and having access to reliable data becomes even more important for shippers. Stay tuned for the second part of this blog series to explore more triggers and outcomes of the global supply chain disruptions so far. In the meantime, if you want to get access to rate intelligence that can help improve your

freight procurement strategy, contact us to find out how Xeneta can help you stay one step ahead of the volatile container shipping market.

Source: Xeneta

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