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Dans l'estuaire de la Gironde... L'Opération Coque de Noix

Il ne s'agit pas, cette fois, d'une grande bataille navale, d'un épisode de la guerre des convois ou de l'exploit de l'un ou l'autre navire corsaire. Il s'agit d'une opération de peu d'importance quant aux moyens mis en oeuvre, puisqu'elle ne mit en ligne que six kayaks en caoutchouc montés par douze hommes. Ces hommes n'étaient pas des marins, mais avaient avec la marine des rapports étroits, puisqu'ils appartenaient au Royal Marines. Mais comme leur objectif était la destruction de bateaux, l'opération Coque de Noix s'inscrit aussi dans le contexte de la guerre navale.

— Canoes sur le pont !

Dans la nuit glacée de Décembre, le commandant Hasler tremblait légèrement de froid et d'émotion sur le pont du sous-marin anglais « Tuna ».

Le raid, d'une audace stupéfiante, qu'il avait conçu, organisé, et qu'il fallait maintenant exécuter, commençait. Avec six canoes, il allait tenter de remonter la Gironde, d'entrer dans le port de Bordeaux, et de faire sauter au nez et à la barbe des Allemands tous les cargos ennemis qu'il pourrait.

Ce projet avait paru tellement enfantin et absurde aux autorités militaires britanniques que pendant des mois il n'avait même pas été pris en considération. Comment des canoés pourraient-ils, à partir de la pleine mer, remonter les 90 kilomètres de la Gironde et entrer dans le port alors que toute la région était hérissée de formidables défenses, sillonnée de patrouilles terrestres et navales sous la surveillance constante de la Luftwaffe, battue la nuit par de puissants radars et des projecteurs ? C'était tout à fait impossible.

Pourtant les navires allemands, dans leur repaire de Bordeaux, constituaient une grave menace pour les Alliés. Ils forçaient impunément le blocus américain et anglais et, grâce à eux, l'Allemagne était ravitaillée en matières premières indispensables.

Il fallait les détruire. Or on ne pouvait songer ni à une opération terrestre qui aurait exigé des forces considérables, ni à une opération navale : Bordeaux étant à l'intérieur des terres, ni à une opération aérienne qui aurait fait trop de dégâts dans la population civile. C'est ainsi que le Haut Commandement allié fut contraint de s'intéresser au fantastique projet du commandant Hasler, à l'opération « Coque de Noix ».

1. Volontaires pour mission dangereuse

Celle-ci débuta un certain jour de l'été 1942, lorsque le commandant Hasler, passionné de sports nautiques, ayant derrière lui dix ans de service, décoré pour sa belle conduite au combat en Norvège, en 1940, réunit une trentaine de fusiliers marins désireux de se colleter personnellement avec l'ennemi, quel que pût être le risque à courir.

Sans rien leur dire de l'opération projetée, on les soumit pendant six mois à un entraînement intensif dans la base navale de Portsmouth. Ils y apprirent à pagayer sans bruit, à embarquer dans un canoé sans le faire chavirer, à s'en servir aussi bien de nuit que par mauvais temps. On les habitua à se déplacer sous l'eau, une ceinture lestée autour

des hanches, un tuyau entre les dents pour respirer au moyen d'un appareil de sauvetage utilisé par les équipages de sous-marins.

On les parachuta, revêtus d'uniformes allemands, à six cents kilomètres de leur base, au nord de l'Angleterre, en leur laissant quarante-huit heures pour revenir à Portsmouth. On les entrains à franchir sans être vus les défenses sévèrement gardées de la base. Chaque mois, Hasler éliminait les hommes qui ne donnaient pas satisfaction.

On leur apprit ensuite à se servir des bombes « collantes » ou « mines ventouses » qu'ils devraient utiliser. Ces mines étaient pourvues d'un puissant aimant permettant de les fixer contre la coque d'un navire, habituellement en-dessous de la ligne de flottaison. Elles étaient munies d'un dispositif d'amorçage particulier constitué par une petite capsule d'acide qu'il suffisait de percer, le moment venu, au moyen d'une vis à ailettes. L'acide se répandait alors sur une membrane en matière plastique qu'il rongeait à une vitesse déterminée. Une fois la membrane percée, c'était l'explosion.

Le 1er Décembre, les hommes sélectionnés- ils étaient onze - embarquèrent sur le sous-marin « Tuna » et ce fut en mer seulement qu'Hasler leur expliqua pour la première fois en détail ce qu'il attendait d'eux. Une fois qu'il eut terminé, l'un d'eux posa la question que tous avaient en tête : Comment reviendrait-on ? Le sous-marin les attendrait-il ? Hasler secoua la tête : il leur faudrait saborder les canoës et rejoindre l'Espagne, après avoir traversé la France avec l'aide de la Résistance.

2. Le « Tuna » en Gironde

A 20 heures 22, ce 8 Décembre 1942, les hommes du commando apparurent sur le pont du « Tuna », à 7 kilomètres au large de l'embouchure de la Gironde, le visage et les mains couverts de graisse noire, bizarres et inquiétants dans leur équipement imperméabilisé que bosselaient les revolvers et couteaux qu'ils portaient. Dans la nuit très claire, un patrouilleur allemand évoluait à 600 mètres environ.

En passant par l'écoutille, un des canoës, le « Cachalot », se déchire. « Expédition terminée pour vous, dit le commandant aux deux hommes qui devaient le monter. Vous retournez en Angleterre avec le « Tuna ». Et de six canoes, il ne sont déjà plus que cinq.

Au même moment, les projecteurs s'allument sur le patrouilleur allemand qui vire lentement et se dirige vers le sous-marin. « Le radar nous a repérés, dit le commandant du « Tuna ». Faites vite ». Quelques instants plus tard, les cinq canoés s'éloignaient dans la nuit, à la limite de la zone balayée par les projecteurs. Le sous-marin s'enfonça et transmit à Londres le message convenu : « Opération Coque de Noix terminée à 21 heures », ce qui voulait dire que les canoës avaient été débarqués.

3. Vers Bordeaux à la Pagaie

Sur l'océan, il n'y a plus que cinq canoës. Ils piquent rapidement vers l'estuaire, portés par la marée montante. Il fait près de zéro degré. Les gouttes d'eau que soulèvent les pagaies et qui fouettent les visages sont autant de coups de poignard.

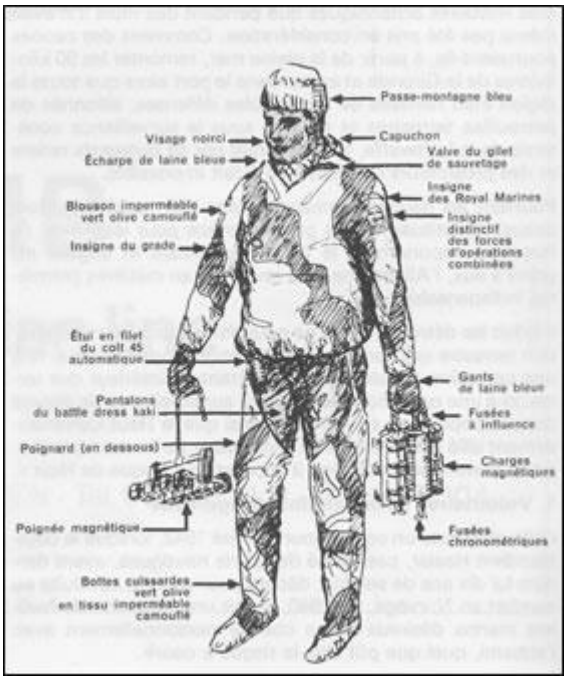
Au bout d'une heure, le commandant Hasler stoppe. Il entend une sorte de grondement de vagues vers lequel le courant, qui file à près de huit kilomètres à l'heure, les entraîne inexorablement. C'est un mascaret d'une extrême violence : la marée montante se heurte aux eaux descendantes de la Gironde. Elles forment une espèce de marée sur un bas-fond de sable.

Les cinq canoës foncent ; ils n'ont pas d'autre choix. Dans l'effort, chacun oublie sa terreur et les morsures de l'eau glacée qui submerge les équipages. Les canoës passent. Hasler se retourne et fait le compte : il en manque un, le « Coalfish ». Il donne un léger coup de sifflet imitant le cri de la mouette. Pas de réponse. Le « Coalfish » est perdu. On ne saura jamais ce qu'il est devenu. On ne retrouva pas les corps de Wallace et d'Erwart.

Les quatre canoës rescapés continuent. Les contours du phare de la Pointe de Grave deviennent visibles. Chacun éprouve un sentiment de soulagement. Mais presque aussitôt un nouveau et lointain grondement serre les cœurs. C'est un deuxième mascaret. Il est plus terrible encore que le premier. Les vagues déchaînées, hautes de plus d'un mètre cinquante, se bousculent. Un cri retentit au milieu du fracas. Le « Conger » a chaviré. Sheard et Moffat sont à l'eau.

Ils parviennent, néanmoins, à sortir leur canoé du tourbillon. Vomissant, épuisés, glacés, ils s'y accrochent pendant que les autres s'approchent. Examen du « Conger ». On ne peut l'écoper ; il est déjà trop plein. La marée, de plus en plus furieuse, précipite les canoës vers une plage hérissée de canons et de mitrailleuses allemands.

4. De six, il n'en reste plus que trois



Les voici dans la lumière éblouissante des vingt-cinq milles bougies du phare de la pointe du Grave. Ils vont être repérés. Il est déjà deux heures du matin. La nuit est presque à moitié passée. Ils ne sont même pas dans l'estuaire et trois canoës sur six sont déjà hors de combat. Hasler, pendant une seconde, a le sentiment que tout est perdu. Mais il donne calmement ses ordres.

Dans l'eau a deux ou trois degrés, Sheard et Moffat obéissent. Avec leurs poignards, ils lacèrent la toile du canoe pour le saborder. Puis, Sheard s'accroche à l'arrière du canoë d'Hasler. Moffat s'accroche à celui de son second, Mackinnon.

C'est une décision tragique qu'a prise Hasler. Il sait qu'en refusant d'abandonner à leur sort Sheard et Moffat, il risque de compromettre toute l'expédition. Il va les remorquer jusqu'à la plage. S'ils tiennent jusque-là, ils s'abattront à demi-morts de froid sur la grève et seront pris. S'ils sont pris, les Allemands seront alertés et le reste du commando sera sûrement capturé mais Hasler ne peut pas abandonner ses compagnons. Pas encore, du moins.

Les trois canoës avancent péniblement à la vitesse d'un kilomètre à l'heure. Le phare les éclaire horriblement. Chaque fois qu'il passe, ils font le gros dos, s'attendant à une pluie

d'obus. Ils traversent l'étroit passage entre la terre ferme et l'île de Cordouan. Ou un troisième mascaret les attend.

À coups de pagaies forcenés, les trois embarcations foncent de nouveau dans la tourmente. Hasler, à demi étouffé par les vagues qui déferlent, songe aux deux hommes qui sont dans l'eau. Mieux vaudrait qu'ils lâchent prise. Mais ils tiennent. Et le mini-convoi passe.

Enfin le courant les porte au-delà de la porte de Grave. Ils sont là, maintenant dans la Gironde et à l'abri du phare, mais glacés, épuisés, découragés. Ils ont pagayé sans arrêt pendant six heures trente. Il est trois heures du matin.

Il faut que Sheard et Moffat aient une constitution de fer pour être encore en vie. Hasler veut maintenant aborder quelque part et se cacher jusqu'à la prochaine nuit pour permettre à ses hommes de récupérer quelques forces. Mais il faut d'abord sortir de la zone dangereuse du port du Verdon, or il s'aperçoit avec horreur que le courant les entraîne irrésistiblement vers le port.

Il distingue dans la nuit claire, à 1500 mètres devant lui les vagues contours de la jetée et le feu bleuâtre qui en marque le bout. Ils vont être jetés sur le môle. Ils ne peuvent pas lutter contre le courant avec les canoés alourdis par les naufragés. Sous peine de compromettre le succès de la mission, il fallait abandonner tout de suite les deux hommes sans canoés. Ils ont leur gilet de sauvetage, ce qui leur donnait plus de chances de survivre en les abandonnant près du Verdon qu'en pleine mer.

Et le commandant s'entend dire, sachant qu'il ne pouvait plus rien dire d'autre, à son passager : « Sheard, je vous laisse, sans ça nous ne passerons pas. Essayez de nager jusqu'à la rive, ce n'est pas loin. Il le faut. Je suis désolé »;
Le visage de Sheard est secoué de tremblements violents. L'homme grelotte de froid. La voix halète :
— Je comprends Commandant, ne vous en faites pas. Merci de nous avoir traînés jusque-là.
Pour Sheard et Moffat, l'aventure était terminée. Ils lâchèrent le plat bord des canoes qui les avaient remorqués jusque-là et disparurent, presque aussitôt dans l'eau noire. Le corps de Moffat fut rejeté à 120 kilomètres de là sur la plage des Sables d'Olonne. Sheard disparut à jamais.

5. Plus que deux...

— Les trois canoes restants, le « Cuttlefish », le « Crayfish » et le « Catfish » essaient péniblement de regagner le centre du chenal pour éviter la jetée. Soudain Hasler distingue la silhouette de trois contre-torpilleurs allemands ancrés à une centaine de mètres de la jetée. Il va falloir que les canoës passent entre celle-ci et les trois navires.
Hasler passe avec son coéquipier Sparks, couché sur le canoe, en pagayant avec les mains pour ne pas faire de bruit. Une lampe à signaux se met à clignoter sur un des contre-torpilleurs. Les deux hommes attendent la rafale. Mais elle ne vient pas. Et le premier canoé atteint enfin la sécurité au-delà de la jetée du Verdon.

Le « Crayfish », qui apparaît dans l'ombre comme un tronc d'arbre, rejoint sans encombre. On attend maintenant le « Cuttlefish ». La lampe sur le contre-torpilleur se remt à clignoter. Il y a un cri dans la nuit. Le froid est très vif. Silence de mort dur la Gironde. Hasler, au bout d'un temps, fait le cri de la mouette. Pas de réponse.

On apprendra plus tard que les deux hommes du « Cuttlefish » avaient été capturés et fusillés par les Allemands.
Et de six canoës au départ, au bout de dix heures de cette terrible nuit, il n'en reste plus que deux.

Les deux derniers canoës repartent. Leurs occupants sont plus morts que vivants, mais ils pagaient toujours. À 6 heures 30 du matin, une rangée de pieux à 200 mètres de la rive

sud-ouest sur laquelle se brise la houle du large manque de les faire chavirer. Ils n'ont plus qu'une heure avant le lever du jour pour trouver une cachette.

Enfin, à l'aube, après une heure d'exploration infructueuse, Hasler découvre un petit promontoire sablonneux : la pointe des Oiseaux. Les deux canoés s'y cachent dans de maigres broussailles et s'abritent sous un filet de camouflage. Il fait jour. Hasler et ses trois compagnons ont fait 42 kilomètres à la pagaie. Leurs chances de réussir sont infimes. Et pourtant leur exploit va mettre Hitler dans une rage folle.

A ce moment, les Allemands des postes de garde côtiers savent déjà que quelque chose est en train de se passer. Après que la station de radar ait signalé que le sous-marin avait de nouveau plongé, quelques heures plus tard deux Anglais étaient arrêtés. Visiblement, ils sortaient de l'eau. Les restes de leur canoé, qui s'est fracassé sur la seconde ligne de brisants seront retrouvés le lendemain.

Alors que le major Hasler s'arrête pour la première pause diurne, les Allemands ont déjà alerté les postes côtiers et les patrouilles d'avions de reconnaissance, leur annonçant que, le 8 Décembre, un petit groupe de sabotage britannique a été intercepté dans l'estuaire de la Gironde.

Pour les quatre rescapés, la première journée fut presque aussi pénible que la première nuit. Ils la passèrent dans une immobilité presque complète, sous leurs couvertures, trempés et glacés dans leurs vêtements couverts de boue.

Ils ne purent manger que des tablettes d'aliments comprimés. Leur tension était telle qu'ils ne purent que somnoler. Pour s'occuper, ils graissèrent leurs armes et vérifièrent leurs bombes sous-marines. À cinquante mètres d'eux, ils entendaient le bruit des pioches et les voix de soldats du génie allemands travaillant sur une petite digue.

6.La seconde étape

Pour la seconde étape de nuit, Hasler et ses équipiers démarrent à minuit. Ils doivent attendre que la marée montante commence à se ruer vers Bordeaux. Ils ont encore près de soixante kilomètres de Gironde à remonter. Cette fois, grâce à la balise du port, dans le chenal du fleuve, la navigation est plus facile. Ils n'ont rien d'autre à faire que de se tenir parallèlement à cette balise. Mais il fait de plus en plus froid : l'eau gèle sur les canoës, sur les gants et les visages. Les vêtements sont devenus des carapaces de glace. En traversant un chenal, les deux canoës manquent être coulés par un convoi de sept grands navires qui avait surgi soudain derrière eux. Ils échappent de justesse en pagayant comme des fous.

Une heure avant l'aube, ils trouvent pour s'abriter une petite île qu'ils baptisent « l'île déserte ».

La journée fut meilleure. Ils la passèrent au sec dans un fossé entre deux haies. Ils purent faire du thé grâce à leurs tablettes d'alcool solidifié. Un avion allemand les survola en rase-mottes, mais, apparemment, ne les vit pas.

7. Et la troisième...

Ils repartirent à deux heures du matin, la nuit suivante, toujours avec la marée montante. Pour mettre leurs canoës à flot, ils durent les descendre d'une falaise de boue glacée dans laquelle ils s'enfoncèrent jusqu'à mi- ventre.

À six heures du matin, ils essayent de débarquer. Ils voient des arbres et s'approchent ; ils sont à quelques dizaines de mètres d'un fortin allemand où guette une sentinelle. Ils cherchent en vain un emplacement jusqu'à 7 heures 30 et débarquent finalement n'importe où, à la pointe d'une île, dans un pré marécageux couvert de hautes herbes.

Sans sortir de leurs embarcations, ils jettent sur eux un filet de camouflage et ne bougent plus. Ce fut leur journée la plus inconfortable et la plus angoissante. Un mince rideau d'arbres les sépare d'une batterie anti-aérienne allemande. Toute la journée, il pleut sur leurs épaules. Ils ne peuvent ni cuisiner, ni fumer, ni parler, ni satisfaire aucun besoin naturel. De nouveau, un avion tourne en rond au dessus de leur tête. Des vaches, le matin, viennent former cercle autour d'eux et les regardent longuement.

Ce furent des statues qui reprirent à la nuit le chemin de boue qui les conduisait à la Gironde. La dernière nuit. Temps idéal : pas de lune, du vent et de lourdes averses bruyantes. Ils seraient plus glacés et trempés que jamais, mais, au moins, on ne les entendrait pas.

Vers dix heures du soir, deux grandes masses lumineuses surgirent dans la nuit : des cargos. Le cœur des quatre hommes battit et ils oublieront un instant leur épuisement. C'était Bassens-Sud, une des zones où ils devaient agir. Les deux canoës se glissèrent dans les roseaux à l'abri d'un vieux ponton et s'immobilisèrent.

8.Veillée d'armes

Ils y resteront le reste de la nuit et toute la journée du lendemain, à un jet de pierre des Allemands, au milieu d'une zone habitée. Des bateaux passaient tout près d'eux, des voitures klaxonnaient à une cinquantaine de mètres. Hasler et ses hommes, pendant ce temps, faisaient leurs préparatifs. Le bruit des grues et des bateaux leur permettait heureusement de parler et de se mouvoir sans être entendus.

Ils partiraient à l'attaque à la fin de la marée montante pour que le flux les porte jusqu'aux docks et qu'après leur action, le reflux favorise leur fuite.

Le « Catfish » d'Hasler descendrait jusqu'aux docks principaux de Bordeaux, à quatre kilomètres de là, sur la rive occidentale. Le « Crayfish » du caporal Laver suivrait la même route sur la rive orientale du fleuve. S'il ne trouvait pas de cible, il reviendrait à Bassens-Sud, détruirait les cargos qui s'y trouvaient, puis redescendrait la Gironde à la marée descendante, le plus loin qu'il pourrait, jusqu'à ce qu'il soit arrêté par la prochaine marée montante. Laver et son équipier débarqueraient alors, sarborderaient leur canoë et s'enfuiraient par la terre vers l'Espagne, comme ils pourraient. Hasler et son compagnon feraient la même chose de leur côté.

Les quatre hommes amorcèrent leurs bombes-collantes. Chacun en avait quatre qui devaient sauter neuf heures plus tard. Ils noircirent une fois de plus leur visage, puis se serrèrent vigoureusement la main en se souhaitant bonne chance. Il était 21 heures 15, ce 11 Décembre 1942, lorsqu'ils se faufilèrent dans les roseaux avec leurs canoes. L'heure H était arrivée.

Bordeaux était brillamment éclairé ; dans le port, à bord de chaque navire, on déchargeait des cargaisons à la lumière de lampes fixées à la tête des mâts, et les lumières se réfléchissaient sur l'eau comme dans un miroir. Les quatre hommes serrèrent le rivage, se laissant porter par le courant, tandis qu'ils reconnaissaient leurs objectifs. Après six mois d'efforts et de travail, on touchait au but.

9.D'un navire à l'autre

Hasler choisit un gros cargo et, pendant que Sparks maintenait le canoë en place, il utilisa un espar de deux mètres pour fixer une première bombe sous la ligne de flottaison du navire. Une seconde bombe fut ensuite collée à l'arrière et une troisième, au milieu, à hauteur du compartiment des machines.

Au bateau suivant, alors qu'ils venaient de placer deux bombes, ils crurent avoir été repérés par une sentinelle se tenant sur le pont. La sentinelle braqua le faisceau électrique

de sa lampe de poche dans leur direction. De toute évidence, elle n'était pas très sûre d'avoir aperçu quelque chose de suspect ; il était d'ailleurs difficile de repérer les hommes avec leurs mains et leur figure noircies, leur tête encapuchonnée et leur embarcation camouflée. Le canoë se glissa le long de la coque du navire. Les pas de la sentinelle résonnant sur le pont paraissaient les suivre. Parvenus à l'arrière du cargo, nos hommes se tinrent cois pendant une vingtaine de minutes, dissimulés par la voûte de la plage arrière. L'Allemand finit par éteindre sa lampe et le courant porta le « Catfish » jusqu'à un nouvel objectif.

Hasler voulait encore atteindre un troisième gros cargo. Il n'hésita pas à se glisser entre la coque de celui-ci et celle d'un autre navire. Mais l'une et l'autre oscillaient au gré des vagues et seule une rapide manœuvre empêcha les deux hommes d'être écrasés entre les deux bateaux. Ils parvinrent à fixer deux bombes au flanc du cargo et terminèrent leur ouvrage en plaçant leur dernière charge sous l'arrière d'un pétrolier.

Il s'agissait à présent de filer en vitesse pour sauver sa peau.

En longeant la rive, les deux hommes se dirigèrent vers la mer ; ils pagayaient depuis une heure environ quand un bruit de clapotis les contraignit à se précipiter à l'abri des roseaux. Ce fut un soulagement pour eux de constater bientôt qu'il s'agissait de leurs camarades du « Crayfish » qui, de leur côté avaient miné deux cargos à la jetée Bassens avec leurs huit bombes-collantes.

Ces membresdu commando, capturés par les Allemands vont être fusillés.

10. Chacun pour soi

Les quatre hommes doivent maintenant se séparer. Le plan d'évasion prévoyait qu'ils devaient regagner la Grande-Bretagne, via l'Espagne et Gibraltar, deux par deux. Hasler donne un dernier ordre à l'équipage du deuxième canoé : « Débarquez ici et agissez selon les instructions que vous avez reçues ». Puis les canoés se séparent.

Hasler et Spark ne devaient jamais revoir leurs camarades du « Crayfish ». Après la guerre, au cours d'un procès de criminels de guerre nazis, on apprit qu'ils avaient été faits prisonniers et fusillés, de même que cinq autres participants de l'opération « Coque de noix ». Le sixième s'était noyé, on ne retrouva son corps que longtemps après.

Au matin du 12 Décembre, les Allemands ne sont pas peu surpris de voir des bateaux sauter, les uns après les autres, dans le port de Bordeaux. Quatre bâtiments, déchirés par plusieurs bombes-collantes, coulent au fond du port. Un forceur de blocus et un pétrolier sont gravement endommagés.

Hasler et Sparks ne se retrouvèrent à Londres que cinq mois plus tard. Aidés par la Résistance française, ils avaient réussi à franchir les Pyrénées puis ils avaient traversé l'Espagne et gagné finalement Gibraltar. Mais bien avant leur retour en Angleterre, on avait appris au quartier-général de Mountbatten les résultats de leur entreprise dans le port de Bordeaux.

Après la guerre, on apprit qu'un groupe de résistants français avait organisé, la pose d'une série de bombes-collantes sur les navires de charge ancrés dans le port de Bordeaux. Les premières devaient être placées dans la nuit du 12 au 13 Décembre 1942.

On juge de la surprise des dockers du port, au courant du plan, lorsque le matin du 12 Décembre, vingt quatre heures avant l'opération qu'ils avaient eux-mêmes projetée, plusieurs explosions secouent le port et six navires coulent dans le bassin. Le résultat de l'opération « Coque de Noix ».

Par J.M. de DEcker
Neptunus février 1983

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Sticky Case of Indonesia, Seized Iranian Oil Tanker, and Legal Jurisdiction

The two giant freighters floated "dark" in the open ocean not far from Indonesia. Their positioning transponders switched off, neither tanker displayed a national flag – but one ship was known to have claimed Iranian registration, the other to have made at least eight visits to Venezuela in recent years.

And between them pumped thousands of barrels of oil.

In July this year, Indonesian authorities intervened in this ship-to-ship oil transfer being carried out within Indonesia's exclusive economic zone (EEZ). With assistance from Malaysia, one ship was seized, **ARMAN 114**, a tanker claiming Iranian flag registration. However, the tanker known as **S TINOS**, also referred to as Lilu, and found to be Cameroon-flagged, managed to escape. Neither tanker had submitted a ship-to-ship oil transfer plan to the Indonesian authorities, as required by Indonesian law and the International Convention for the Prevention of Pollution by Ships (MARPOL).

This scenario presents a classic case of "dark ships" used in schemes to circumvent rules or sanctions. While the act of ships going "dark" by disabling their Automatic Identification Systems constitutes a direct breach of the International Convention for the Safety of Life at Sea (SOLAS), it does not necessarily confer enforcement power upon coastal states, as the flag state maintains exclusive jurisdiction and control over the safety features of the vessels. So, the case raises a fascinating question about whether Indonesia, in its capacity as the coastal state in this case, had the jurisdiction to seize the tankers? The incident under scrutiny involves a "ship-to-ship transfer", which refers to the transfer of cargo between two seagoing vessels, as opposed to "offshore bunkering", which entails refuelling another vessel's fuel bunkers to power its engines. Unlike offshore bunkering, a ship-to-ship transfer within an EEZ is arguably an activity in relation to which the United Nations Convention on the Law of the Sea (UNCLOS) does not explicitly allocate rights or jurisdiction to either the coastal state or other states (Article 59 of UNCLOS).

If both tankers had been flying a flag, the assessment would centre around establishing which state holds jurisdiction over the EEZ ship-to-ship oil transfer: the flag state or the coastal state. Yet, this scenario was irrelevant. This is because both tankers can be assimilated to vessels without a nationality (stateless vessels) due to their failure to display a national flag. This stateless classification applies not only to vessels that fly no flag, but also to those bearing fraudulent or multiple registries.

Under UNCLOS, the primary responsibility for the implementation of international standards and regulations pertaining to ships rests with the flag state. Upon registration, a ship is entitled to fly the flag of the corresponding state (flag state), thus placing itself under the jurisdiction of that state. In cases where ships lack a nationality or are assimilated to stateless vessels, they forfeit the ability to claim the protection of any state (Article 92(2) UNCLOS). Furthermore, a crucial aspect of this case is the reported occurrence of an oil spill when both tankers attempted to escape into Malaysian waters. While the exact spill location remains unclear, it is likely that the incident occurred within Indonesia's EEZ, given the tankers' attempt to flee amid ongoing oil transfers. The hurried escape led to the detachment of the hose connecting the two tankers, resulting in the spill.In standard situations involving duly registered foreign vessels, coastal states have limited enforcement jurisdiction over pollution originating from ships within their EEZ. This is because UNCLOS upholds the primacy of enforcement jurisdiction by the flag state (Article 228(1) of UNCLOS). UNCLOS sets some high thresholds to safeguard foreign ships from coastal state enforcement jurisdiction pertaining to ship-source pollution in the

coastal state's EEZ. Coastal states must suspend their own proceedings and transfer the case to the flag state if the flag state initiates proceedings within specified time frames (Articles 4(1), 4(2), 6(4) of MARPOL, and Article 228 of UNCLOS). This is unless there exists "clear objective evidence" of "major damage" or a "threat of major damage" to the coastal state's interests or fisheries resources (Article 220(6) of UNCLOS, and Article 2 of MARPOL). However, since the two tankers can be assimilated to stateless vessels, the restrictions on the enforcement jurisdiction of coastal states over such ships might not be applicable. Consequently, Indonesia as the coastal state could seize and initiate legal proceedings against them. Any penalties imposed by Indonesia would be confined to monetary penalties (Article 230(1) of UNCLOS). Finally, despite reports that Arman 114 left Iran's Qeshm and Larak Islands in June 2023, carrying around 1.9 million barrels of crude oil following multiple ship-to-ship (STS) operations, Iran's oil ministry has denied any connection between this cargo and Iran. While Iran disclaims ownership of the cargo, some might argue that Iran has not explicitly denied Arman 114's registration under the Iranian flag.

In a scenario where Iran does not contest Arman 114's Iranian flag status, the fact that both Iran and Indonesia are parties to Annex I of MARPOL becomes pivotal. This annex pertains to the prevention of oil pollution, both from operational measures and accidental discharges from ships, including those occurring during ship-to-ship transfers of oil cargo between oil tankers at sea. Under MARPOL, state parties are obliged to prohibit violations and establish appropriate penalties for any MARPOL violations occurring within their jurisdiction (Article 4(2) of MARPOL). In accordance with MARPOL, Indonesian law requires oil tankers seeking to conduct ship-to-ship operations in Indonesia's EEZ to provide advance notification. While MARPOL requires 48 hours' notice (Regulation 42 of MARPOL Annex I), Indonesia mandates a shorter 24-hour notice (Article 6(8) of Transport Minister Regulation No. PM 29 of 2014). Additionally, Indonesian law requires that oil tankers engaged in ship-to-ship operations must carry an approved plan detailing the procedures, which must be endorsed by the country's Transport Ministry (Directorate General of Sea Transportation). Moreover, these vessels are also obligated to document and maintain records of each ship-to-ship operation for a three-year period onboard (Regulation 41(1) of MARPOL Annex I; Article 6(8) of Transport Minister Regulation No. PM 29 of 2014).

Indonesia may retain the option to initiate legal proceedings against the tanker by asserting that the oil spill resulting from the ship-to-ship operations poses a "threat of major damage" to Indonesia's interests and fisheries resources (Article 220(6) of UNCLOS and Article 2 of MARPOL). If this argument falls short, the enforcement power would remain with the flag state. It means that Iran could institute proceedings within a six-month window to address the violations of its tanker (Article 228 of UNCLOS), and Indonesia would be required to provide Iran with pertinent information and evidence regarding the tanker's violations of MARPOL (Article 4(2) of MARPOL). If Iran refrains from exercising its enforcement jurisdiction, Indonesia as the coastal state can pursue legal action against the tanker. This course of action would come with the obligation of notifying both Iran and the International Maritime Organisation about any measures or proceedings taken in response to the tanker's MARPOL violations.

Source : MAREX

Inséré 07/02/24 NIEUWS NOUVELLES Enlevé 08/03/24

US calls for multinational naval force to protect shipping in the Red Sea

THE situation in the Red Sea is a worrying development for international shipping and trade and a US-led initiative to form a multinational naval force could help to deter further attacks and ensure the safe passage of vessels. President Joe Biden is attempting to rally US allies to put together a multinational naval force to protect shipping in the Red Sea and in the Bad Al-Madeb Strait from Houthi threats, according to UK's Seatrade Maritime News. US concerns were heightened following a Houthi spokesperson's claim, last Saturday, that the movement will target any ship that is heading for an Israeli port regardless of which flag it is flying. "If Gaza does not receive the food and medicines it needs, all ships in the Red Sea bound for Israeli ports, regardless of their nationality, will become a target for our armed forces," a Houthi spokesperson said. The White House said that a protective force is a "natural response" after Houthis launched missile and drone attacks on vessels transiting the Red Sea. In its latest report the US CentCom reported that the French multi-mission frigate, Languedoc, had brought down two Houthi fired drones, the drones were said to have been fired from Yemen. The 20-mile-wide entrance to the Red Sea's southern entrance between Yemen, Eritrea and Djibouti, the Bab al-Mandeb or the gate of tears, has become the focus of Houthi drone and missile attacks on commercial shipping and, at the extreme northern end of the narrow waterway is the southern reach of the key Suez Canal waterway. According to the maritime consultancy Alphaliner Houthi Rebel attacks on vessels transiting the Red Sea have led some operators to re-route container ships to the much longer, but much safer route around Africa's Cape Horn. "Recent acts of violence ranged from boarding the vessel at sea and taking the crew hostage to land based drone strikes against transiting merchant ships," said the consultant. Alphaliner said the majority of attacks had taken place in the Bab al-Mandeb Strait, and that up to December 4, 12 container vessels had been diverted from the Red Sea Route to the Cape of Good Hope, with another six ships expected to also divert to Cape Horn. «This mainly concerns vessels on Asia-Europe & Med services. Among the vessels that have already started their diversion are three units of 4,250 TEU, three ships of 5,000 - 6,000 TEU, four vessels of 15,000 TEU and one unit of 19,000 TEU," said Alphaliner. According to the consultant vessels operating at 18 knots that divert to Cape Horn such as a vessel from Shanghai-Barcelona voyage will increase its journey time from 21 to 32 days. And Shanghai-Rotterdam travel increases from 25 to 33 days.

Inséré 08/02/24 DOSSier Enlevé 09/03/24

Geopolitics, decarbonisation, and shipping’s future

At the London International Shipping Week headline conference, Yana Popkostova, the founder and managing director of the European Centre for Energy and Geopolitical Analysis, delivered a speech that delved into the complex relationship between geopolitics, decarbonisation, and the shipping industry. Popkostova’s expertise in energy and climate geopolitics provided invaluable insights into the challenges and opportunities that lie ahead She set the stage by highlighting the significance of considering geopolitics and decarbonisation in the industry’s resilience plans. According to Popkostova: “It’s important

for all of us to try to unpick today the Gordian knot of geopolitics and decarbonisation, and what it means for the industry." She also pointed out how the geopolitical landscape has been reshaped by events like the Ukraine conflict, leading to significant shifts in commodities, prices, and markets, both in hydrocarbons and green commodities. In her speech, Popkostova discussed the compounding challenges posed by climate change, supply chain transformations, and global debt, which contribute to geopolitical fragmentation and affect the security of economies and seaborne trade. Making specific reference to Russia, she said: "In the unfolding world, terminating the umbilical cord with Russian hydrocarbons is warranted, but it will far from secure energy security, not least for Europe as one of the most resource poor places on Earth, but also in view of the escalating climate emergency in our neighbourhood." While emphasising that decarbonisation is essential, she noted that it will dramatically transform commodity trading, trade routes, and infrastructure.Finding a balance between environmental stewardship and business profitability will be key to success.

Energy outlook

On the energy front, Popkostova highlighted the decline in coal and oil consumption, with gas also plateauing by the mid-2030s. LNG, however, is expected to increase its market share, disrupting a significant portion of seaborne trade. "This in practice will disrupt almost 40% of seaborne trade, which currently relies on energy products," she said. Uptake of clean technology and fuels will fail to compensate for the disruption, according to European Centre for Energy and Geopolitical Analysis' modelling.

She also pointed out that green commodity markets, including metals like copper, steel, and aluminium, face competition and deficits, leading to hidden inflationary pressures.In terms of compliance, Popkostova noted that pressure on ship owners to comply with sanctions regimes will expose the industry to increased scrutiny. "Suspending the provision of cargo services to Russia would make sovereign insurance coverage and sovereign vessels more widely used by non-democratic countries, particularly Russia, Iran and China and this is already the case today, but also India, Turkey, the Gulf states are increasingly using such vessels and sovereign insurance in order to circumvent sanctions regime, but also to test to a certain extent the remit of the G7 framework," she said.

In addition to the "challenges related to commodities", key jurisdictions such as the EU, the US and others are starting to focus on the emissions associated with shipping – the sector will become part of the EU ETS from January 1 next year. In addition to that, multinationals and key traders such as IKEA, Unilever, and Amazon have announced they will only use Net Zero ships in the future.

Hope for hydrogen

Popkostova, meanwhile, highlighted hydrogen as a viable option for decarbonisation but cautioned that the current hype is not always matched by tangible projects on the ground. "Some of our modelling shows that there can be a gap of about 15 vessels per year by 2030 in terms of ability to supply low carbon, hydrogen and ammonia," she said. Infrastructure development and practical initiatives are needed.

Additionally, as the industry moves toward green methanol and green ammonia, training personnel to handle toxic and highly flammable cargoes will be crucial. "And there is a lack of personnel actually able to handle the increased amount of those cargoes in the future," she added.

She stressed that hydrogen should be prioritised in national strategies to allow access to public funds, financial vehicles, subsidies, and grants for the industry. "So far, it seems to me that the record of the industry can be significantly optimised in terms of this organised

lobbying towards governments. Becoming a driver and beneficiary of the hydrogen economy can present a strong transformation opportunity that has to be harnessed," she said.

Popkostova also warned of the need to consider climate-related risks and cyber threats, emphasising that resilience extends beyond emissions reduction to preparedness for extreme weather events and cyberattacks. Further, intensified storms could lead to blockages of key choke points, such as the Suez or Panama canals, and compounding tensions in the Strait of Hormuz or the already highly charged and militarised South China Sea could potentially threaten freedom of navigation and disrupt key trade corridors. "Climate change could also compound preexisting conflict dynamics over scarce resources and intensify people displacement, disrupting supply chains and maritime safety."

North vs South

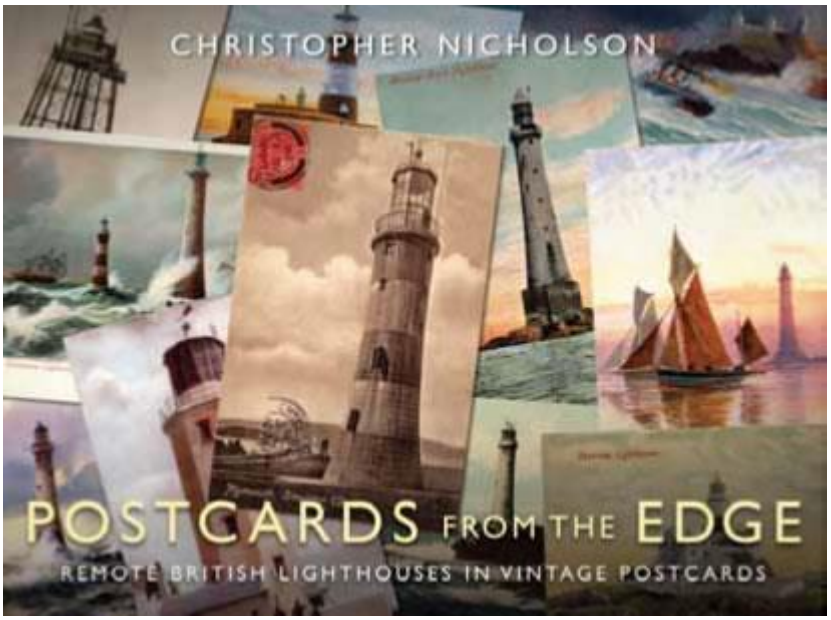
Asking shipping to check its moral compass, Popkostova pointed out that achieving Net Zero in the Global North while leaving behind the climate-broken Global South is hardly conducive to a thriving shipping sector. "Here the industry can lobby for accelerated infrastructure financing, lifting intellectual property rights and accelerating transfers to green technologies to developing countries. In addition, the sector can foster a facilitative role of transitions beyond invasive mining associated with environmental and human rights infractions. «In a final rallying call, Popkostova said that economic, geopolitical and energy transition uncertainties present cost, security reputational and business model waves to the industry that will require innovation in synergy with governments, traders, and civil organisations to navigate safely going forward. "Industry participants should emphasise the sector's existential role in attaining climate neutrality, rebranding from high emitter to a galvaniser of the Net Zero economy and enabler of the energy transition," she concluded.

Source: Baltic Exchange

Inséré 09/02/24 BOEKEN LIVRES BOOKS Enlevé 10/03/24

Postcards from the Edge"

B O E K B E S P R E K I N G by: Frank NEYTS



A marvelous title from Whittles Publishing reads **'Postcards from the Edge. Remote British Lighthouses in Vintage Postcards'**. Christopher Nicholson signed as the author.

We've been sending one another postcards for well over a century now - usually brief messages to our friends and family telling the about the weather on our holidays or where we're visiting next on our travels.

However, a hundred years ago we sent postcards with more serious messages – important, personal information about births, marriages and deaths, urgent requests for help, or just to keep in touch. The choice of subjects featured on postcards today is vast, but the lighthouse, a symbol of safety and reliability, has always been amongst the most popular. This book from Christopher Nicholson, author of the highly acclaimed "Rock Lighthouses of Britain", concentrates on vintage postcards featuring the remotest lighthouses of all.Within these pages are snapshots of the past and moments in time from the very edge of Britain – granite pillars rising from sea-swept reefs or lights on uninhabited storm-lashed islets dotted around the coasts of England, Wales and Scotland. These postcards are now valuable documents of social history – keepers posing with their families of being relieved at the end of their stint of duty. They also illustrate the changing appearance of the lighthouses, together with the appalling weather the keepers endured.

The author has been given unique access to the collections of private individuals and lighthouse authorities to compile a fascinating and nostalgic work that is enriched by interesting historical details – an engaging mix."**Postcards from the Edge**" (ISBN 978-1-904445-59-3) is issued as a paperback. The book counts 143 pages and costs 18.99. The book can be ordered via every good book shop, or directly with the publisher, Whittles Publishing, Dunbeath Mill, Dunbeath, Cairness IKW6 6EG, Scotland (UK), e-mail: **info@whittlespublishing.com , www.whittlespublishing.com.**

Inséré 09/02/24 NIEUWS NOUVELLES Enlevé 09/03/24

Taiwan's Evergreen suspends Israeli services

TAIWAN shipping giant Evergreen has announced it was suspending its Israeli cargo shipments with immediate effect due to the "escalation of the war", reports Agence France-Presse. It is the latest major shipping firm to suspend passage in the Red Sea following Yemeni attacks in the area. Due to "escalation of war situation in recent days, Evergreen

will suspend Israel import and export service due to rising risk and safety considerations with immediate effect until further notice," Evergreen said in a brief notice to its customers. Several of the world's largest shipping companies, including Maersk and Hapag-Lloyd, and energy giant BP have already suspended passage through the Red Sea's strategic Bab al-Mandab strait in response to a warning by the Iran-backed Houthi forces. The Houthis, who control much of Yemen but are not recognised internationally, said they were targeting vessels near the strait to pressure Israel over its devastating war with Palestinian Hamas militants in the Gaza Strip.Forty per cent of the world's international trade transits through the strait, which runs between Yemen, on the southwestern tip of the Arabian Peninsula, and the African continent.

The series of attacks has led a number of major shipping companies to avoid the maritime chokepoint and redirect their vessels around Africa, a longer and far more costly route.

Inséré 10/02/24 NIEUWS NOUVELLES Enlevé 10/03/24

Cost crunch prompts mass rethink of US offshore wind contracts

By Eduardo

Squeezed by rising global supply costs, offshore wind developers are seeking new power contract terms on at least ten East Coast projects in a further blow to President Biden's climate targets.

Last month, Orsted said it may report U.S. impairments of 16 billion Danish crowns ($2.3 billion) due to supply chain problems, soaring interest rates and a lack of additional tax credits impacting several offshore wind projects. Orsted, the world's largest offshore wind developer by capacity, had already warned of potential delays to U.S. offshore wind projects as it reconfigures projects to mitigate rising global costs and adapt to grid connection reforms.

The company may delay its 1.1 GW Ocean Wind 2 project in New Jersey and its 1 GW Skipjack project in Maryland. “We’re working through external challenges, including comprehensive reforms to the interconnection review process and unprecedented macroeconomic challenges, which may cause a shift in timing. We are reconfiguring these projects to minimize the impact," a company spokesperson told Reuters Events in July. Offshore wind developers have faced rising costs and interest rates since the COVID-19 pandemic that have sliced profit margins in agreed power contracts. Delivery delays are hampering some projects and a lack of transmission investment along with reforms by grid operator PJM to clear a bottleneck in the country’s largest power network are slowing grid approvals. Tax incentives in the Biden administration's Inflation Reduction Act will help the nascent U.S. offshore wind sector build out a domestic supply chain but developers of the first projects are exposed to global supply risks and offshore wind activity is on the rise in Europe.

Last month, Orsted said two suppliers are experiencing “challenges” that are delaying the delivery of foundations for three of its projects on the U.S. East Coast. Orsted is in talks with federal officials to qualify for additional investment tax credits (ITCs) above the 30% baseline provided in the inflation act but the company conceded that the discussions “are not progressing as we previously expected.” The group is seeking to gain additional 10%

tax credits available for domestic content and for projects that benefit former fossil fuel communities. Orsted aims to "qualify for at least 40% ITCs on all projects" and will continue to develop its three "near-term" U.S. offshore wind projects (Sunrise Wind, Revolution Wind 1 and Ocean Wind 1) and make a final investment decision on these in late 2023 or early 2024, it said. Orsted has already sought to control costs and increase the profitability of other U.S. projects. The state of New Jersey recently approved Orsted's request to secure tax credits from the inflation act for its 1.1 GW Ocean Wind 1 project and the Danish group has also asked the New York State Public Service Commission to amend the power purchase agreement (PPA) for its 880 MW Sunrise Wind project. The company cited "unanticipated, extraordinary economic events" including rampant inflation and disruptions in the wind supply chain exacerbated by the COVID-19 pandemic and Russia's invasion of Ukraine. It expects a reply by October or November.

In July, Rhode Island Energy said it had decided not to negotiate a PPA with Orsted and Eversource for the 884 MW Revolution Wind 2 offshore project, saying that the prices sought by the companies were too high. «Higher interest rates, increased costs of capital and supply chain expenses, as well as the uncertainty of federal tax credits, all likely contributed to higher proposed contract costs," Rhode Island Energy said in a statement. Several other developers including Equinor, Shell, EDPR, Engie and Iberdrola's Avangrid have asked for new contract terms on East Coast offshore wind projects.In all, developers are seeking new terms on at least 10 projects in renegotiations that will further endanger President Biden's goal of 30 GW offshore wind by 2030.

Margin squeeze

For years, wind developers sought lower costs to secure projects in the fast-growing offshore wind market. Even before the pandemic, participants questioned whether offtake prices in Europe could fall much lower. The rising cost of commodities and components since the pandemic has changed the cost landscape, pushing up the prices of wind and solar PPAs and hiking wholesale power prices to new levels. At the end of 2022, steel prices in North America and Northern Europe remained 52% and 69% above January 2019 prices, American Clean Power (ACP) association said in a report. In July, Avangrid agreed to pay $48 million to terminate PPAs with three Massachusetts utilities that had agreed to buy electricity from the company's 1.2 GW Commonwealth Wind project. An Avangrid spokesperson told Reuters Events that the company is also involved in negotiations with stakeholders regarding the PPAs for the 800 MW Park City Wind in Connecticut.

Last year, Avangrid warned rising component costs and interest rates had made Commonwealth Wind economically unviable.

Meanwhile, Equinor has asked New York state authorities to make changes to PPAs for its Empire 1, Empire 2, and Beacon Wind projects of total capacity 3.3 GW. Equinor has asked for a mechanism that adjusts the price according to inflation, an approach New York authorities took in the most recent offshore wind auction. In New England, South Coast Wind, a 50/50 joint venture between Shell and EDPR and Engie's Ocean Winds North America, terminated its PPAs with Massachusetts. The project is located in Rhode Island and South Coast Wind CEO Francis Slingsby told regulators in June that the PPAs were "low-priced, have no indexation and thus offer no way to overcome the significant and unforeseen economic challenges. «The company will rebid for those PPAs and continue to advance the 2.4 GW project, it said.

Ongoing contract negotiations between developers, utilities and regulators will lead to project delays and supply chain disruptions, the Business Network for Offshore Wind said in a recent report.

Local factories

The global cost challenges faced by developers increases the importance of a domestic U.S. offshore wind supply chain.

Around 2,100 turbines and foundations, 6,800 miles of cable, 58 crew transfer vessels and four to six turbine installation vessels are required to meet President Biden's 2030 offshore wind target, the National Renewable Energy Laboratory (NREL) said. The 10% tax credit for domestic content aims to accelerate factory build and many states are requiring developers to make commitments to regional supply chain development in power agreements. A number of new manufacturing facilities and vessels are now planned but major port expansions will be required to assemble and launch large turbine structures and it will take time to build out a comprehensive regional supply chain. A lack of wind turbine installation vessels remains a significant issue for developers and NREL has warned some components will require significant efforts to supply domestically, including steel plates to be rolled into monopiles or towers, mooring chains and electrical systems for offshore substations. The U.S. has laid the foundations for a strong offshore wind industry thanks to federal incentives, efforts to accelerate permitting and strong state demand for offshore wind, Sam Salustro, vice president of communications at the Business Network for Offshore Wind told Reuters Events. In the short term, states and developers will need to be flexible to ensure projects move forward. «Weathering this current storm and ensuring future economic turmoil do not roil the industry again requires smart policies and procurements out of states and a robust, domestic supply chain to help keep our projects on track," Salustro said.

Source : Reuters --Editing by Robin Sayles

Inséré 11/02/24 NIEUWS NOUVELLES Enlevé 11/03/24

Norwegian ferries ban EVs as fires are inextinguishable

NORWEGIAN ferry company Havila Kystruten, is changing is banning electric and dual fuel vehicles due to their heightened fire risk, reports Fort Lauderdale's Maritime Executive. "A fire in electric, hybrid or hydrogen cars will require external rescue efforts and could put people on board and the ships at risk," said Havila managing director Bent Martini.

He said his ships were built to meet all safety requirements, but believes the danger is too great from these new types of vehicles. The company currently operates cruise ships designed to also transport vehicles under contract with the Norwegian government. Havila reports it requested an external assessment regarding the transport of cars and motor vehicles on board the company's coastal cruise ships based on its experience with the first year of service and to explore the potential dangers. They retained Proactima, a management consulting firm, to carry out the risk analysis. "This is a pure safety assessment, and the conclusion of the risk analysis shows that a possible fire in fossil vehicles will be able be handled by the systems and the crew we have on board," said Mr Martini. Cruise ships, he said, have battery powered systems installed in separate, fireproof rooms, with specific fire protection systems. While the company will continue to transport fossil-fuel cars, they have also decided to limit the boarding and disembarking of private vehicles to only Bergen and Kirkenes, and not intermediate ports on the route. Insurer Allianz warned about the dangers that lithium batteries citing four main hazards, including

fire, explosion, toxic gases and the potential for thermal runaway from the transport of these batteries.

Inséré 12/02/24 HISTORIEK HISTORIQUE Enlevé 12/03/24

Sinking of HMS *Victoria* (I)

From Wikipedia

HMS *Victoria* HMS *Camperdown*

The **sinking of HMS *Victoria*** took place at approximately 15:30 on 22 June 1893, after HMS *Victoria*, the flagship of the Royal Navy's Mediterranean Fleet, collided with HMS *Camperdown* while on fleet manoeuvres in the Eastern Mediterranean. The collision caused significant damage to *Victoria*'s bow, with a large hole produced causing the ship to rapidly capsize. *Victoria* took approximately fifteen minutes to sink, with 358 members of the crew, including Vice-Admiral Sir George Tryon, lost in the disaster.

In 1893, the Royal Navy saw the Mediterranean Sea as a vital sea route between Britain and India, under constant threat from the navies of France and Italy. The impressive naval force that the British concentrated to protect these sealanes made Mediterranean Fleet one of the most powerful in the world. On 22 June 1893, the bulk of the fleet, eleven ironclads (eight battleships and three large cruisers), were on their annual summer exercises off Tripoli in the Ottoman Empire (now Lebanon).

Vice-Admiral Sir George Tryon, the commander-in-chief of the Mediterranean Fleet, was a strict disciplinarian who believed that the best way to keep his crews taut and efficient was by continuous fleet evolutions, which before the invention of wireless were signalled

by signal flags, semaphore and signal lamp. He had devised a new system of ship handling intended to depart from the system of flag signalling, which was limited in what could be imparted by whatever was in the existing signal book. His specialty was the "TA" system, which took its name from the signal that would indicate it was in operation. Tryon developed the "TA" system as a means for complex manoeuvres to be handled by only a few simple signals, but which required his ships' captains to use their initiative; upon his flying the flag signal "TA", all ships in the formation were to follow the movements of the flagship without the need to wait for or acknowledge any other signals. However, initiative was a quality that had become blunted by decades of naval peace since Trafalgar, and which was unwelcome in a hierarchical navy that deified Admiral Horatio Nelson while misunderstanding what he had stood for. A taciturn and difficult man to his subordinate officers, Tryon habitually avoided explaining his intentions to them, to accustom them to handle unpredictable situations.

The collision

In June 1893, the bulk of the Mediterranean Fleet departed Malta for the Eastern Mediterranean to take part in the annual exercises. On 23 June, having anchored at Beirut, the fleet weighed anchor and headed for sea, with the eleven major ships split into two columns, led by the flagships of the fleet commander and his deputy.

Disposition of the fleet

Tryon led one column of six ships, which formed the first division of his fleet, in his flagship *Victoria* travelling at 8 kn (9.2 mph; 15 km/h). His deputy – Rear-Admiral Albert Hastings Markham – was in the lead ship of the second division of five ships, the 10,600 long tons (10,800 t) *Camperdown*. Markham's normal divisional flagship – *Trafalgar* – was being refitted. Unusually for Tryon, he had discussed his plans for anchoring the fleet with some of his officers. The two columns were to turn inwards in succession by 180°, thus closing to 400 yd (370 m) and reversing their direction of travel. After travelling a few miles in this formation, the whole fleet would slow and simultaneously turn 90° to port and drop their anchors for the night. The officers had observed that 1,200 yd (1,100 m) was much too close and suggested that the columns should start at least 1,600 yd (1,500 m) apart; even this would leave insufficient margin for safety. The normal turning circles of the ships involved would have meant that a gap between the two columns of 2,000 yd (1,800 m) would be needed to leave a space between the columns of 400 yd (370 m) on completion of the manoeuvre. Tryon had confirmed that eight cables 1,300 m (4,300 ft) should be needed for the manoeuvre the officers expected, but had later signalled for the columns to close to six cables 1,000 m (3,300 ft). Two of his officers gingerly queried whether the order was what he intended, and he brusquely confirmed that it was.


Vice-Admiral Sir George Tryon

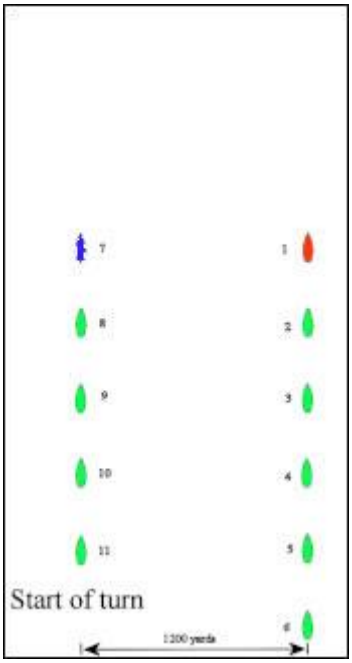
He ordered speed to be increased to 8.8 kn (10.1 mph; 16.3 km/h) and at about 15:00 ordered a signal to be flown from *Victoria* to have the ships in each column turn in succession by 180° inwards towards the other column so that the fleet would reverse its course. However, the normal "tactical" turning circle of the ships had a diameter of around 800 yd (730 m) each (and a minimum of 600 yd (550 m), although standing orders

required "tactical rudder" to be used in fleet manoeuvres), so if they were less than 1,600 yd (1,500 m) apart then a collision was likely.

As there was no pre-determined code in the signal book for the manoeuvre he wished to order, Tryon sent separate orders to the two divisions. They were:

"Second division alter course in succession 16 points to starboard preserving the order of the fleet." "First division alter course in succession 16 points to port preserving the order of the fleet."

The phrase "preserving the order of the fleet" would imply that on conclusion of the manoeuvre the starboard column at the start would still be the starboard at the finish. This theory was propounded in 'The Royal Navy' Vol VII pages 415–426. It is suggested here that Tryon intended that one division should turn outside the other; as the two columns began 1,200 yd (1,100 m) apart, turning outside the other, with a turning circle of 800 yd (730 m) would have left them at 400 yd (370 m) apart. This manoeuvre would have required that the two columns turn at separate times and/or with different speeds, rather than simultaneously with the same speed.



Tryon's flag-lieutenant was Lord Gillford, and it was he who received the fatal order to signal to the two divisions to turn sixteen points (a half circle) inwards, the leading ships first, the others of course following in succession. Although some of his officers knew what Tryon was planning, they did not raise an objection. Markham, at the head of the other column, was confused by the dangerous order and delayed raising the flag signal indicating that he had understood it. Tryon queried the delay in carrying out his orders, as the fleet was now heading for the shore and needed to turn soon. He ordered a semaphore signal be sent to Markham, asking, "What are you waiting for?" Stung by this public rebuke from his commander, Markham immediately ordered his column to start turning. Various officers on the two flagships confirmed later that they had either assumed or hoped that Tryon would order some new manoeuvre at the last minute.

However, the columns continued to turn towards each other and only moments before the collision did the captains of the two ships appreciate that this was not going to happen. Even then, they still waited for permission to take the action that might have prevented the collision. Tryon's flag captain, Maurice Bourke, asked Tryon three times for permission to order the engines astern; he acted only after he had received that permission. At the last moment, Tryon shouted across to Markham, "Go astern! Go astern!

Right
1: *Victoria* (red)
2: *Nile*
3: *Dreadnought*
4: *Inflexible*
5: *Collingwood*
6: *Phaeton*

Left
7: *Camperdown* (blue)
8: *Edinburgh*
9: *Sans* *Pareil*

10: *Edgar*
11: *Amphion*

By the time that both captains had ordered the engines on their respective ships reversed, it was too late, and *Camperdown*'s ram struck the starboard side of *Victoria* about 12 ft (3.7 m) below the waterline and penetrated 9 ft (2.7 m) into it. The engines were left turning astern, and this caused the ram to be withdrawn and to let in more seawater before all the watertight doors on *Victoria* had been closed. Two minutes after the collision, the ships were moving apart.

It was a hot afternoon, and a Thursday, which was traditionally a rest time for the crew. All hatches and means of ventilation were open to cool the ship. There was a 100 sq ft (9.3 m2) hole in the side of the ship open to the sea, but initially, Tryon and his navigation officer, Staff Commander Thomas Hawkins-Smith, did not believe the ship would sink, as the damage was forward and had not affected the engine room or ship's power. Tryon gave orders to turn the ship and head for the shore 5 mi (8.0 km) away so she could be beached. Some of the surrounding ships had launched boats for a rescue, but he signalled for them to turn back. Just two minutes after *Camperdown* backed out of the hole she had created, water was advancing over the deck and spilling into the open hatches. A party under Lieutenant Herbert Heath attempted to unroll a collision mat down the side of the ship to patch the hole and slow the inrush of water, but by the time they could manhandle it into position they were standing in water, and had to abandon the attempt. Five minutes after the collision, the bow had already sunk 15 ft (4.6 m), the ship was listing heavily to starboard and water was coming through the gun ports in the large forward turret. The foredeck became submerged, with the top of the gun turret forming a small island. Although the engine room was still manned and the engines running, hydraulic power for the helm failed so the ship could not be turned and there was no power to launch the ship's boats. Eight minutes after the collision, the entire fore end of the ship was under water, and the water was lapping the main deck. The stern had risen so that the screws were nearly out of the water.

Immediately after the collision, Captain Bourke had gone below to investigate the damage and close the watertight doors. The engine room was dry, but forward in the ship men were struggling to secure bulkheads even as water washed in around them. Already men had been washed away by incoming water or had been trapped behind closed doors. Yet still there had not been sufficient time to close up the ship to stop the water spreading. He returned on deck and gave orders for the men to fall in. The assembled ranks of sailors were ordered to turn to face the side, and then to abandon ship. *Victoria* capsized just 13 minutes after the collision, rotating to starboard with a terrible crash as her boats and anything free fell to the side and as water entering through the funnels caused explosions when it reached the boilers. With her keel uppermost, she slipped into the water bow first, propellers still rotating and threatening anyone near them. Most of the crew managed to abandon ship, although those in the engine room never received orders to leave their posts and were drowned. The ship's chaplain, Rev S. D. Morris RN, was last seen trying to rescue the sick: "In the hour of danger and of death, when all were acting bravely, he was conspicuous for his self-denying and successful efforts to save the sick and to maintain discipline. Nobly forgetful of his own safety, he worked with others to the end, and went down with the vessel ... seeing escape impossible he folded his arms upon his breast, and looking up to heaven, his lips moving in prayer, he died." The area around the wreck became a "widening circle of foaming bubbles, like a giant saucepan of boiling milk", which the rescue boats did not dare enter. Onlookers could only watch as the number of live men in the water steadily diminished. Gunner Frederick Johnson reported being sucked down three times, and said that while originally there were

30–40 people around him, afterwards there were only three or four. Lieutenant Lorin, one of the survivors, stated: "All sorts of floating articles came up with tremendous force, and the surface of the water was one seething mass. We were whirled round and round, and half choked with water, and dashed about amongst the wreckage until half senseless." *Camperdown* was also in a serious condition, with her ram nearly wrenched off. Hundreds of tons ofwater flooded into her bows, and her foredeck went underwater. Her crew had to construct a cofferdam across the main deck to stop the flooding. As with *Victoria*, the watertight doors had not been closed in time, allowing the ship to flood. After 90 minutes, divers managed to reach and close a bulkhead door so that the flooding could be contained. The ship returned to Tripoli at one quarter speed with seven compartments flooded.

Camperdown's damaged bow

The other ships had more time to take evasive action, and avoided colliding with each other. *Nile* was already turning to follow *Victoria* when the collision happened and came to within 50 yd (46 m) of her as she tried to turn away. Some of the surviving witnesses claimed the distance was even less. Similarly, *Edinburgh* narrowly avoided running into *Camperdown* from behind. *Inflexible* ended up stopped some 200 yd (180 m) from *Victoria*, and *Nile* 100 yd (90 m) away.

Of the crew, 357 were rescued and 358 died. *Collingwood* was that day responsible for providing a steam launch for the fleet, so her launch was ready and away within a minute of *Camperdown* and *Victoria* disengaging. Captain Jenkins had ignored Tryon's order for the rescue boats to turn back, and picked up the greatest number of the survivors. Six bodies were recovered immediately after the sinking, but although a search was instituted during the night and the following days, no more were found. Turkish cavalry searched the beaches, but no bodies were found there, either. The six were buried the following day in a plot of land provided by the Sultan of Turkey just outside Tripoli. 173 injured officers and men were transferred to the cruisers *Edgar* and *Phaeton* and taken to Malta. Commander John Jellicoe, the executive officer of *Victoria*, who had been bedridden with "Malta fever" for several days, was assisted in the water by Midshipman Philip Roberts-West, and shared the captain's cabin on *Edgar* after being rescued.

Tryon himself stayed on the top of the chart-house as the ship sank, accompanied by Hawkins-Smith. Hawkins-Smith survived, but described the force of the sinking and being entangled in the ship's rigging. He thought it doubtful Tryon could have survived, being less fit than himself.

Public response

HMS Victoria capsizing boats going to rescue crew" by Reginald Graham, 1893Artistic rendering of the collision between Victoria and Camperdown as it appeared in a French illustrated weekly

The news of the accident caused a sensation and appalled the British public at a time when the Royal Navy occupied a prime position in the national consciousness. News was initially scarce, and a crowd of thousands of friends and relatives laid siege to the Admiralty building awaiting news of relatives. Markham's initial telegram to the Admiralty had only named the 22 officers who had drowned, and further details were slow to arrive. Many immediately laid blame on Tryon, as the obvious "scapegoat". Later, as more information reached England, more considered questions arose as to how experienced officers could have carried out such dangerous orders. An appeal was launched in London – championed by Agnes Weston of the Royal Sailors' Rest – which raised £50,000 in three weeks to help the dependants of sailors who had lost their lives.

Of immediate concern was why one of Britain's first-class battleships – one of many of similar design – had sunk from a relatively modest injury when rammed at low speed. Although it was vital to determine exactly what had happened, conducting an inquiry in public was seen as risking the exposure of weaknesses in British ships to enemy navies. (Despite these misgivings, members of the press were eventually permitted to attend the subsequent court martial.) Although the ram as a weapon of war had already been

discontinued by the French and was then under debate as to its effectiveness, it was officially pronounced to be an effective and powerful weapon.

Court martial

A court martial was begun on the deck of HMS *Hibernia* at Malta on 17 July 1893 to investigate the sinking of *Victoria*, and to try the conduct of her surviving crew, chief amongst them Captain Bourke. All the crew (except three excused for illness) were required to appear as prisoners before the court. Members of Admiral Tryon's personal staff were not part of the ship's crew and so were not amongst the accused. The court martial was conducted by the new admiral appointed to command the Mediterranean fleet, Sir Michael Culme-Seymour. Seymour had been carefully chosen for the job both of restoring the confidence of the squadron, and as a safe pair of hands to conduct the enquiry. He was a respected admiral at the end of his career and had not expected further appointments. He came from a family which included several naval officers, was related to the First Lord of the Admiralty, his father had been Queen Victoria's chaplain, and he was recommended for the job by his friend Prince Alfred, who was concerned for his other friend Captain Bourke. Prince Alfred also recommended he take on as secretary his own former secretary, Staff Paymaster Henry Hosking Rickard, who was also appointed Deputy Judge Advocate. He had served the same role in previous courts martial, which was to advise on points of law and to impartially sum up the prosecution and defence cases. Captain Alfred Leigh Winsloe, an expert on signals and fleet manoeuvres, was appointed as prosecutor and had travelled out to Malta with the new admiral and his staff. Vice-Admiral Tracey, superintendent of the Malta Dockyard, plus seven of the fleet captains made up the court. A shorthand writer had to be obtained from Central News. Captain Bourke immediately objected that four of the judges were captains of ships which took part in the incident, including the captain of *Camperdown*, and these were replaced by other officers. A widespread theory at the time was that Tryon had mistaken the radius of the ship's turning circle for its diameter, and thus had allowed only two cables space instead of four, plus a safety margin of a further two cables between the two columns of ships. Bourke was questioned about this and stated that this explanation had not occurred to him at the time. However, he also begged the court to allow him not to discuss a conversation with Tryon, where he had pointed out before the collision that *Victoria*'s and *Camperdown*'s turning circles were each about 800 yd (730 m), whereas the admiral had ordered the ships to be spaced only 1,200 yd (1,100 m) apart. Despite Bourke's request not to discuss this point, he raised the matter himself in the court, which had not asked about it. Bourke reported that Tryon had instructed the distance between the ships should remain at six cables, but explained his own inaction in the face of this apparent threat to the ships by saying that he expected Tryon to produce some solution to this apparent mistake at the last minute. Bourke was questioned about Tryon's TA signalling and how this customarily operated. He replied that the admiral would normally go forward during TA, leaving the ships officers aft, whereas otherwise he would remain aft. On this occasion, Tryon had gone forward.

Gillford was called to give evidence, and once again reluctantly told the court that after the collision Tryon had said within his hearing, "It was all my fault". Hawkins-Smith confirmed this, saying he had been on the bridge with Tryon and Gillford after the collision, and had heard Tryon say, "It is entirely my doing, entirely my fault". Hawkins-Smith confirmed to the court that no one believed *Victoria* could sink as rapidly as she did. No one was asked whether it might have been wiser for the two ships to have remained wedged together, at least until all watertight doors had been properly secured, before separating them and thereby opening the holes in both ships.

The Victoria court-martial on board HMS Hibernia at Malta, "by means of a model of HMS Victoria, Admiral Markham pointed out and explained the manner in which the collision occurred, and its effect upon the two ships. The Graphic 1893

After two more witnesses, Markham was invited to answer questions as a witness, although his status as a potential future defendant meant the court allowed him later to suggest questions to be put to other witnesses. He explained his confusion when he first received the order to turn, and his refusal to signal compliance because he could not see how the manoeuvre could safely be carried out. He observed that he was aware the ships were passing the point at which they should have turned and a response was urgently required. He stated that he had finally complied, after Tryon had queried his delay, having decided that Tryon must intend to turn slowly, outside *Camperdown*'s turn, so the two lines would pass side by side in opposite directions. The two lines would then have reversed, "preserving the order of the fleet" as it had been before the turn. Markham was then read a memorandum circulated by Tryon just before the fleet had sailed which included the instruction: "When the literal obedience to any order, however given, would entail a collision with a friend...paramount orders direct that the danger is to be avoided, while the object of the order should be attained if possible." Markham observed that while he had not been thinking precisely of the memorandum, he had been thinking of the safety of his ship. When it became apparent that he was on a collision course he could not turn further starboard, nor turn to port as this would have broken "the rule of the road", so that the only thing he could do was full reverse. By mischance, only three-quarters reverse had been signalled. It was put to him that he might have turned harder to starboard, thereby avoiding the collision, but he responded again that this would have gone against 'the rule of the road'. When further questioned, he agreed that "the rule of the road" did not apply during manoeuvres. He also confirmed that throughout the turn he had been closely watching *Victoria*'s helm signals, which indicated how sharply she was turning.

Markham's flag captain, Charles Johnstone, was next to be questioned. He initially confirmed that he had only accepted the order to turn once Markham had produced his

explanation of how it might be carried out. Later, however, he admitted that at the time he commenced the turn he still did not understand how it might be concluded successfully. He confirmed that *Camperdown* had used only 28° of helm instead of the full possible 34°, and had not attempted to turn faster by reversing one of the screws as he might have done. The failure finally to use full reverse in the face of certain collision also remained unexplained. Lieutenant Alexander Hamilton and Lieutenant Barr were both questioned as to what they had heard of conversations amongst the senior officers, making it apparent that confusion continued over what to do at least up to the moment the order to turn was put into effect. Evidence was taken from many other witnesses.

To be followed

Inséré 13/02/24 NIEUWS NOUVELLES Enlevé 13/03/24

US Working on International Response to Houthi Attacks on Shipping

By John Davison and Phil Stewart

DUBAI/TEL AVIV, Dec 18 (Reuters) –

Attacks by Yemen's Iran-aligned Houthi militants on ships in the Red Sea are disrupting maritime trade and prompting U.S. efforts to build a coalition to deal with the threat, as freight firms reroute around the Cape of Good Hope to avoid the Suez Canal.

The Houthi group said it launched a drone attack on two cargo vessels in the area on Monday, the latest in a series of missile and drone strikes on shipping which it says are a response to Israel's assault on the Gaza Strip.
U.S. Defense Secretary Lloyd Austin, speaking on a visit to Israel, said Washington was building a coalition to address the Houthi threat and said defense ministers from the region and beyond would hold virtual talks on the issue on Tuesday.

Norway said it was ready to provide naval officers, while other NATO states said they were ready to consider support.

About 15% of world shipping traffic transits via the Suez Canal, the shortest shipping route between Europe and Asia.

Several major freight firms — including MSC — have begun to sail around Africa instead, adding costs and delays which are expected to be compounded over coming weeks, according to industry analysts.

London's marine insurance market widened the area in the Red Sea it deemed high risk on Monday, adding to premiums ships pay.

The war between Israel and Hamas, which began on Oct. 7, has sent shockwaves through the region and threatened to cause a broader conflict.

The Red Sea attacks have showed the ability of Middle Eastern paramilitary forces backed by Iran to upset global trade at a time when Tehran and its proxies are positioning themselves against the United States and Israel.

Combined, the companies that have diverted vessels "control around half of the global container shipping market," ABN Amro analyst Albert Jan Swart told Reuters.

Oil major BP temporarily paused all transits through the Red Sea and oil tanker group Frontline said on Monday its vessels would avoid passage through the waterway, signs the crisis was broadening to include energy shipments. Crude oil prices rose on those concerns on Monday.

"War risk insurance premiums are on the rise naturally, but as vessels gets rerouted around Africa shipping supply will be tighter as cargoes travel longer," Frontline CEO Lars Barstad told Reuters. "That would put rates under a strong upwards pressure." Norwegian energy group Equinor said on Monday it had rerouted "a few ships" carrying crude oil and liquefied petroleum gas (LPG) away from the Red Sea. The company declined to say how many vessels were affected.

Houthi attacks also pushed some firms to rethink connections with Israel. Taiwan's Evergreen Marine 2603.TW said on Monday it had decided to temporarily stop accepting Israeli cargo.

'SERIOUS THREAT TO INTERNATIONAL TRADE'

The shipping attacks have prompted the United States and its allies to discuss a task force that would protect Red Sea routes, a move that U.S. and Israeli arch-foe Tehran has warned would be a mistake.

"In the Red Sea we're leading a multi-national maritime task force to uphold the bedrock principle of freedom of navigation," Austin said during his Israel visit.

Norway said on Monday it was ready to contribute up to 10 naval officers to the U.S.-led task force. Italy said it was considering joining, while Denmark's Defence Minister Troels Lund Paulsen said Copenhagen would "participate" in helping to provide security, without elaborating.

Some observers pointed out that despite the Houthi group's claim to be hitting only Israeli-linked vessels, their targets include ships not headed to or affiliated with Israel.

"The Houthi – and by extension their main military backer Iran – are probably using their strike capability in the Red Sea to further exercise greater geopolitical influence in the region, in addition to influence on Israel's war in Gaza," said Jack Kennedy of S&P Global Market Intelligence.

KNOCK-ON DELAYS, HIGHER PRICES

The shipping diversions could result in significantly slower shipments and potentially higher prices for consumers.

Rico Luman, an analyst at ING, said at least a week of sailing time would be added for container liners. Typically, shipping goods from Shanghai to Rotterdam takes around 27 days via the Suez Canal.

"This will at least lead to delays in late December, with knock-on effects in January and probably February as the next round will also be delayed," Luman said.

The disruptions would likely affect supply of consumer goods ahead of the Chinese new year in particular, with delays leaving retailers with unsellable stock and ultimately driving up prices for consumers, said Marco Forgione, director general at the Institute of Export and International Trade.

French food group Danone said most of its shipments had been diverted, which will add transit time. "We… have mitigation plans in place which will be activated if the situation continues for the mid- to long-term," a spokesperson for Danone said. "This will include using alternate routes via sea or road wherever possible."

While freight rates will likely increase on these longer voyages too, carriers at the moment were seeking ways to utilize excess capacity, said Zvi Schreiber, CEO of global freight platform Freightos.

"It is unlikely that rates will spike to levels experienced during the pandemic," said Schreiber, referring to the economic effects of COVID-19 from 2020.

(Reporting by Toby Sterling, Phillip Stewart, Jacob Gronholt-Pedersen, Ben Blanchard, Alexander Cornwell, Helen Reid, Jonathan Saul, Josephine Mason, Mrinalika Roy, Kate Holton, Diana Mandia, Dubai newsroom; Writing by John Davison; Editing by Elisa Martinuzzi, Edmund Blair and Toby Chopra)

Inséré 14/02/24 DOSSIER Enlevé 14/03/24

Vanguard Submarine Arrives Home Absolutely Caked In Algae

BY : OLIVER PARKEN

The Royal Navy nuclear ballistic missile boat looked like a sea monster that had emerged from a long slumber at the bottom of ocean. Here at The War Zone, we've seen our fair share of naval vessels looking, how shall we say, worse for wear. Long deployments at sea, reduced crews sizes, and heavy operations tempos can lead to the formation of heavy rust and corrosion on surface combatants. Submarines, on the other hand, don't have the luxury of ease of access to most their structure to keep corrosion under control and the grime off even if they wanted to. Ballistic missile submarines whose job it is to go find a hole in the ocean to hide for long periods of time spend little time on the surface regardless.

Recent images of a Royal Navy Vanguard class nuclear-powered ballistic missile submarine (SSBN) taken by **Sheila Weir** — captured after the sub completed a six-month-long deterrent patrol — underscore the immense beating these leviathans of the deep can take while on mission for long stretches of time. The missile boat looks like a sea monster that has emerged from a long slumber at the bottom of ocean The photos in question were taken as the Vanguard class submarine returned to HM Naval Base Clyde, which is also known as Faslane, on the west coast of Scotland, . Which specific submarine within the Vanguard class this was — there are four in total — and where it ventured to during its six months at sea remain unknown. Secrecy surrounding the movements of these SSBNs is standard practice for the Royal Navy. One British SSBN always remains on patrol from HM Naval Base Clyde at any given time to ensure the country's second strike nuclear deterrence remains credible. Since 1998, the Royal Navy's SSBNs have provided the U.K.'s sole nuclear weapons capability.

What is immediately clear from the imagery is just how rough the sub looks. The surface of its hull is covered in a brownish-green hue, a very severe example of "marine [or bio] fouling" — the buildup of various marine organisms on vessels' surfaces. While anti-fouling paints can be applied to help prevent this, a technique the Royal Navy and U.K. Ministry of Defense continue to explore, the problem cannot be stopped entirely, as the pictures highlight.

It should also be noted that many of the hull's anechoic tiles are missing in the pictures, which is typical after the completion of a long deployment. Anechoic tiles are designed to absorb the sound waves of active sonar, as well as minimize the sounds emitted from the sub to reduce the chances of it being detected via passive sonar. The images clearly show areas of rust having formed beneath the missing tiles.

Comparing the pictures taken of a Vanguard class sub outbound from Faslane in late-August reveals just how built-up the marine fouling is. They also underline how the length of the patrol was responsible for the sub's disheveled appearance, rather than its age. Nevertheless, these boats are now at an advanced stage in their careers. The Royal Navy's four Vanguard class submarines all entered service in the 1990s, with an intended service life of 25 years. As we've indicated in the past, each boat has 16 missile tubes for UGM-133 Trident II submarine-launched ballistic missiles (SLBMs). However, only eight missiles are carried to comply with treaty regulations. Royal Navy SSBNs are able to carry a maximum of 40 warheads when conducting deterrence patrols, with each Trident missile able to carry multiple warheads, or multiple independently targetable re-entry vehicles (MIRVs).The U.K. is currently embarking on the replacement of its Vanguard class submarines with four Dreadnought class boats, costing around $43 billion in total. Those subs are expected to enter Royal Navy service in the early 2030s. Modernization of the Trident missiles, which will likely receive W93 warheads, will also occur. As noted earlier, while the exact movements of the sub during its six months at sea remain unclear by design, this has not stopped expert commentators from trying to identify aspects of its travels. Tom Sharpe, an ex-Royal Navy commander, posits that the new images indicate the sub undertook warm-water operations, in littoral/shallow shores and at very low speeds. Others have queried why the vessel was sent on patrol for six months, given that

deployments normally last just two to three months. Hans Kristensen, the director of the Nuclear Information Project, Federation of American Scientists, has questioned whether the lengthy time spent at sea denotes a problem with one of the Royal Navy's other SSBNs — at any given time, one is always on patrol, one is in refueling overhaul, and two are supposed to replace or join the vessel on patrol if needed. Kristensen also suggests the patrol could have been a maximum endurance demonstration of the sub's capabilities.

Source : defensenews

Inséré 15/02/24 NIEUWS NOUVELLES Enlevé 15/03/24

Over 100 Containerships Rerouted as US Weighs Red Sea Response

By Stefan Nicola (Bloomberg)

More than a hundred container ships are taking the long route around Africa to avoid violence in the Red Sea, creating extra costs and delays, as the US weighs up how to respond to the latest threat to the global economy. According to logistics giant Kuehne+Nagel, 103 container vessels are rerouting from the Red Sea around Africa. Companies are also starting to look at using rail and air routes instead as the waterway that carries 12% of global trade is deemed too perilous to pass. The attacks on commercial vessels by the Yemen-based Houthi militants amount to an escalation of the Israel-Hamas war, but not the one most analysts had been expecting. The Houthis are acting in support of Hamas — initially targeting ships linked to Israel — and the US and its allies are figuring out how best to respond without making the violence worse. As Washington tries to forge a common position — one option is strikes on Yemen — shippers are digging in for weeks of disruption. Insurance premiums are surging for those who do cross the Red Sea, freight rates are up and so are oil prices — all potential factors for more inflation just as central banks appeared to be gaining the upper hand. «Both options of increased premiums and rerouting around Africa will see a knock-on effect on the price of goods," said Toby Vallance, Executive Committee Member of the London Forum of Insurance Lawyers. The US and its allies are bringing together a new task force to tackle Iran-backed Houthis, though it's not clear when it will come into effect. They're also weighing up possible military strikes, but diplomacy remains the preferred approach for now, according to people familiar with the matter. Some countries, including Saudi Arabia, which borders Yemen, are wary that strikes will provoke the Houthis, who have a formidable arsenal of ballistic missiles, to become even more aggressive. Shippers are worried that even some of the solutions bring their own problems. Convoys, for example, imply delays. «It will slow down the trade because we will have to wait for a convoy to pass through" the region, Euronav NV Chief Executive Officer Alexander Saverys said in an interview with Bloomberg TV. The oil tanker giant has halted shipments via the Red Sea and won't go back until such military escorts are in place. The attacks have created potentially a worse — and more enduring — shipping emergency than the Suez Canal shutdown in 2021, when a ship stuck for a week snarled global trade for months. The disruption also comes just as the other main artery, the Panama Canal, is slowing down because of drought. Still, the global shipping system has more slack in it than it did when the Ever Given got stuck. And there are reasons to believe the disruptions will have only a moderate economic impact, Bloomberg Economics said on

Tuesday. «Most likely, the rerouting will mean higher prices — especially for countries most reliant on maritime trade through the Suez Canal — but with a far lower impact than the Covid-era spike in transportation and energy prices," the analysts said in a report.

Source : Bloomberg L.P.

Inséré 16/02/24 DOSSIER Enlevé 16/03/24

Panama drought and its impact on bulk shipping

The Panama Canal, a key player in global shipping, faces a dire crisis due to an unprecedented drought, casting shadows over trade dynamics and supply chains The Panama Canal, an 80-kilometre-long, man-made waterway connecting the Atlantic with Pacific Ocean, is experiencing a severe drought with water levels at record lows not seen since 2016. The passage has been in operation since 1914 and is a key maritime transit point for global trade with 13,000 vessels transiting the canal in 2022. Container ships and dry bulk carriers are the top two segments that transit the canal.

When a vessel transits the canal, around 50 million gallons of water is thrown out of the lake which needs to be replenished, but with less rainfall in the past few months, this is unlikely to happen. The authorities are working on possible solutions – reducing the cargo level, helping ships maintain draft levels and measures to reduce the amount of water lost from the lake.

To preserve fresh water in the Gatun lake, which is also the only fresh water source for Panama country, the Panama Canal authority imposed draft restrictions from 24 May at 45.5 feet, which was later revised to 44.0 feet for Neo-Panamax locks with water levels not improving and forecast to remain at five-year lows until October.

The Panama Canal Authority has also restricted the number of vessels transiting through the Panamax locks from the usual 23 slots to 14 slots – 10 large vessels and 4 regulars with premiums on heavier and larger ships. The imposed restrictions have increased the vessel backlog to a high of 162 vessels on 8 August, with the average waiting time rising to over 20 days. As the holiday season approaches, the movement of merchandise will soon pick-up, potentially leading to further congestion.

The current draft restriction of 44 feet is expected to remain so for the next 10 months. The draft restriction will increase the number of vessel trips required to move the same amount of cargo, squeezing fleet efficiency. Another solution is moving on alternative routes, such as the Suez Canal and Cape of Good Hope, which will again increase transit time and hurt fleet efficiency.

All three situations – waiting at the Panama Canal, reducing the cargo level and moving on alternate routes – will tighten vessel availability, leading to increased freight rates. Below we share the opinion of Drewry's research team about the impact of Panama Canal restrictions on various sectors.

Minimal effect on crude transits

Among crude tankers, only Panamax and Handysize vessels can transit the route. Of a fleet of 2,279 vessels in July 2023, only 118 vessels or 5.1% of the fleet is eligible to transit the area. Moreover, between 2020 and 2022, approximately 6.4 million tonnes of crude oil was shipped through the canal as per official reports, accounting for a mere 3.4% of the total trade from the southbound Atlantic towards the Pacific and less than 1.1% of the trade on the northbound route. Compared to the average of 2,130 million tonnes of crude seaborne trade between 2020 and 2022, the drought in the Panama Canal is likely to have a negligible effect on the crude tanker demand as well as the global oil demand. However, an indirect impact of the drought could be port congestions on alternative routes in case larger vessels would have to adopt different routes in the long run. This would also cause longer waiting times at the ports due to higher traffic, especially towards Asia.

US exports of products onboard MR tankers to be impacted

The Panama Canal is a critical channel for about 40% of global cargo, with the US representing a significant portion of its traffic. Around 83.9% of the US's seaborne refined product exports (which includes diesel, gasoline, naphtha and jet fuel) was destined for Latin America, of which 29.3% was heading to the Pacific Coast of Latin America in 2022 via the Panama Canal.The Port of Houston in US Gulf is a pivotal gateway for trade between North and Latin America through the Panama Canal. When it comes to Asian destinations, ships have several choices: they can go via the Panama Canal, the Suez Canal, or around the southern tip of Africa. Thus, the ongoing disruption will impact fuel exports to the Pacific Coast of Latin America, including Chile, Peru, Ecuador and El Salvador, which are developing countries with high growth prospects for jet fuel and petrochemicals. However, the global refined products trade will remain unaffected as it will only disrupt the trade to the Pacific Coast of Latin America. However, the ripple effect caused by more ships diverting their route to the Suez Canal could squeeze vessel availability and impact freight rates. As larger vessels cannot transit the Panama Canal, the impact will be felt the most in MR trades from the US to Latin America. The total number of vessels that transited the canal saw an early peak in July 2023 but the number fell in August 2023 which could be due to either shipowners avoiding the Panama transit or seasonality. However, the El Niño expected in the coming months and early 2024 could further prolong the supply-demand imbalance in America, further exacerbating the situation.

Panama Canal drought and LNG shipping

The Panama Canal is a critical strategic pass for LNG shipping, supporting the transportation of LNG from the USGC to Asian waters. On average, an LNGC takes about 25 days to sail from the USGC to Japan via the Panama Canal, compared with 38 days through the Suez Canal. The cost of shipping via the Panama Canal to Asia is also less when compared to the same via the Suez or Cape of Good Hope. In 2021, around 540 LNGCs passed through the Panama Canal. However, this number fell by about 30% in 2022, recording 374 transits. This reduced shipment was attributed to the shift in trading patterns amid the Russia-Ukraine war – which accentuated the prominence of US LNG shipments in Europe, curtailing the movement of LNGCs between the Panama Canal and the Pacific basin. The overall impact of the Panama Canal drought on LNG shipping has been limited so far as a reduced number of LNGCs are sailing between America and Asia, following a similar trading pattern seen in 2022. The LNGC position as of 12 September 2023. The impact on LNG trade due to Panama Canal restrictions is lower because of higher US-Europe trade. US cargoes to Asia still use the Panama route but are increasingly taking the Suez Canal for the ballast journey. However, some vessels reaching Asian waters via the Panama Canal face longer waiting times due to increased congestion which can turn severe in the coming months, likely due to less or no improvement in the Gatun Lake

(which provides water to move ships through the locks) amid insufficient rainfall in the near term. In that case, the situation can worsen with evolved El Niño. Under such circumstances, the Panama Canal Authority will introduce more stringent measures, significantly reducing the permissible number of vessels sailing through the canal. This will likely increase the competition among shipping sectors, including Chemical, Container, Crude, Dry Bulk, LPG and LNG. With the drought worsening, the competition for passage, duration of voyage and shipping costs will rise manifolds, increasing the feasibility of other routes via the Suez Canal or Cape of Good Hope. The situation for LNG shipping will change with the advancing of Australian strikes Although the impact of the Panama Canal drought has been minimal on LNG shipping, the situation can worsen if the Australian LNG strikes materialise. A reduction in LNG shipments from Australia will force Asian buyers to opt for spot purchases, resulting in shipments from farther destinations. However, restricted movement in the Panama Canal will entail more extended diversion of routes, creating tighter LNG shipping with the transit from America to Asia facing the heat.

The vague future of the Panama Canal threatens prospects for LNG projects

The rising concern about the unclear future of the Panama Canal amid climate change can impact the LNG market, hampering the prospects for LNG liquefaction projects, especially on North America's Pacific Coastline, which could serve Asia's growing demand in future (increasing regasification capacity in Asia). The deterioration of LNG shipping around the Panama Canal will also discourage investor confidence; as a result, we can see a deceleration in projects. The proposed projects on America's west coast will likely face significant headwinds. VLGCs taking longer routes bodes well for shipping rate outlook

The Panama Canal is a vital link in LPG shipping, providing the shortest path for the major US-Asia LPG and NGL trades, and congestion here, especially in winter, is known to create major inefficiencies for VLGC trade, leading to higher shipping rates and commodity prices. The current restrictions, build-up of vessels waiting to transit the canal and much higher canal transit auction fees (above $2 million) are prompting owners to use the Suez Canal, especially on the ballast legs amid a favourable US-Asia price arbitrage and recovery in the Asian petchem sector. While there are signs of weakening Asian demand, the restrictions at the Panama Canal have steadied the market with shipping rates still strengthening. We expect the squeeze in vessel supply created by vessels taking longer routes to bode well for the sector despite concerns related to the Asian petchem sector.

Panama congestion impacts dry bulk US-China and inter-Latin America

The charter rates in the dry bulk market improved for the sub-Capesize vessels in August amid increased congestion at the Panama Canal. The 1-year TC rates expanded in August after declining for three consecutive months as the additional waiting time squeezed supply. With the water level dropping in the canal due to the El Niño-led drought and restrictions being imposed on the number of vessels passing through the canal in a day, the tonnage waiting at anchorage has expanded significantly. Port days in August 2022 ranged from 0.3 day to 8.0 days, which doubled a year later in August 2023 to a maximum of 16 days. The number of vessels waiting in the Panama region rose substantially in August 2023 due to a significant backlog caused by the restrictions. The maximum time a vessel took to cross the passage was 10 days on average in August 2023, up from 3 days during the same period last year. Some vessels also took 16 days for the transit. The Panama Canal is a crucial choke point for various trade routes in the dry bulk market. While ample trade flows within Latin America through the canal (such as coal from Colombia to Chile and Peru), ships on long-haul routes like USG-China also use this passage. As the impact of the El Niño is likely to intensify in 2H23 and restrictions will remain in place, voyage costs are likely to rise. With the export season for US soybean kicking in next

month, trade on the USG-China route might be affected. Additionally, importing metal concentrates like lithium and copper from Chile and Peru by the EU can become more costly as voyage rates increase in 2H23. This might impact trade patterns, leading to higher trade of metal concentrates between Argentina and the EU.

Source: Drewry

Inséré 17/02/24 BOEKEN LIVRES BOOKS Enlevé 17/03/24

Ten exempel van anderen

B O E K B E S P R E K I N G door : Frank NEYTS

Bij uitgeverij Walburg Pers verscheen "**Ten exempel van anderen. De processen tegen opvarenden van de piratenschapen Trompeuse en Resolution in Suriname en op St. Thomas in 1684**". Bezorgd en ingeleid door Karwan Fatah-Black en Aart Ruijter. Het boek verscheen als deel 118 in de Werken van de Linschoten-Vereeniging. De piratenschepen Trompeuse en Resolution waren een van de eerste van het gouden piratentijdperk dat eindigde in de jaren 1720 met de iconische kapiteins als Edward Teach, Ann Bonny en Jack Rackham. De reputatie van kapitein Jean Hamlin en zijn bemanning was eind zeventiende eeuw afschuwwekkend. Hoewel Hamlin zelf uit de handen van de autoriteiten wist te blijven, gold dit niet voor een deel van de bemanningen van de Trompeuse en de Resolution. In Suriname en op het Deense ST. Thomas werden verschillende groepen voor het gerecht gebracht. Details over deze processen zijn grotendeels onbekend gebleven doordat de belangrijkste archiefstukken over de reis eeuwenlang weggestopt zaten in het archief van de Sociëteit van Suriname, een plek waarvan niemand wist dat het een schat aan gegevens over deze zeerovers herbergde. Zoals de bronnen in dit deel van de reeks Werken van de Linschoten-Vereeniging laten zien, lag de oorsprong van de Trompeuse nog in de wereld van de boekaniers in de Cariben, maar behoorde de roversgroep tegen het einde van hun reizen tot de nieuwe wereld van de piraten die hun werkterrein verplaatsten naar de Afrikaanse slavenkust, Zuid- en Noord-Amerika en op den duur zelfs voorbij de Atlantische Oceaan.

De verzameling ondervragingen van bemanningsleden die in dit deel zijn opgenomen maken wel veel duidelijk over de achtergrond van de zeerovers, het leven aan boord van deze schepen en hoe deze piraten hun strategie en werkterrein bepaalden. "**Ten exempel van anderen**" (ISBN 9 789462 494312) telt 183 pagina's, werd als hardback uitgegeven. Het boek kost 27,50 euro.

Aankopen kan via de boekhandel of rechtstreeks bij Uitgeversmaatschappij Walburg Pers, Postbus 4159, 7200BD Zutphen. Tel. +32(0)575.510522, e-mail: **info@walburgpers.nl** . 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 17/02/24 NIEUWS NOUVELLES Enlevé 17/03/24

Shipping lines levy Red Sea Cape route detour charge

SPOT rates have surged as carriers impose surcharges to cover the costs of rerouting vessels via the Cape route to avoid Red Sea Yemeni missile attacks, reports New York's Journal of Commerce. Eight of the world's top 10 container carriers are now sailing around the Cape of Good Hope, with Cosco and Hong Kong's OOCL becoming the latest to announce suspensions through the Suez Canal. Thus far, 121 containerships with a capacity of 1.6 million TEU were taking the longer route, according to Kuehne+Nagel, and that number is expected increase. With another 6,000 nautical miles and 10 days added to the standard 40-day Asia-Europe transit, carriers are now speeding vessels at a US$2 million per ship cost. Mediterranean Shipping Co (MSC) from January 1 will impose a "contingency adjustment charge" of $500 per TEU on shipments from Europe to Asia and the Middle East. Hapag-Lloyd said it will levy a $500 per TEU surcharge from Europe to Asia and Oceania. CMA CGM has already implemented a "Red Sea charge" of $2,700 per FEU for all cargo being shipped to or from Red Sea ports. "The rerouting of these vessels is a precautionary measure taken to navigate away from potentially unsafe areas," CMA CGM said in a customer advisory. "While we understand it may impact your logistics and supply chain operations, it is a necessary step which comes with a cost." CMA CGM and Hapag-Lloyd starting January 1 will impose a $1,000-per FEU peak season surcharge on cargo from all main Asian ports to the Mediterranean and North Africa. On Asia-North Europe, MSC, CMA CGM and Hapag-Lloyd will set FAK rates at $3,000 per FEU. Zim Integrated Shipping Services last week set its FAK rates for Asia to Israel and Turkey at $3,260 per FEU. Several ocean carriers, including Zim, also have "war risk" surcharges in place for shipments to and from Israel.

Shipping firms avoid Red Sea as Houthi attacks increase MARITIME authorities, insurers and unions have ordered, advised and cajoled ships to avoid the Red Sea and not be targets of Yemeni rockets fired in support of Gaza in its war against Israel, Reuters reports. Mediterranean Shipping Company (MSC) said on December 16 its ships would not transit through the Suez Canal, with some already rerouted via the Cape of Good Hope, a day after two ballistic missiles were fired at its vessel. Maersk stopped all shipments through the Red Sea until further notice, following a "near-miss incident" involving its ship. On December 19, Maersk said it would reroute its vessels around the Cape of Good Hope.Later it said it would stop doing so once the US-led naval coalition was in place and reduced risk. Until then it would impose extra charges on container transport on affected routes. French shipping giant CMA CGM on December 22 it had rerouted more than 25 vessels around the Cape of Good Hope. likely continue to grow. "Blank sailings and rate increases are expected to continue across many trades into Q1 of 2024," it said. The German container shipping line Hapag-Lloyd said on December 21 it would reroute 25 ships by the end of the year to avoid the Suez Canal and the Red Sea, adding it would take further decisions at the end of the year. Network Express (ONE), a joint venture of Japan's Mitsui OSK Lines, NYK and "K" Line said on December 19 it would reroute vessels away from the Suez Canal and the Red Sea. Instead, its ships will take the Cape route. Taiwan's Evergreen said on December 18 its vessels on regional services to Red Sea ports would sail to safe waters nearby and wait for further notification, while ships scheduled to pass through the Red Sea would be rerouted around the Cape of Good Hope. HMM, the South Korean container shipping giant said on December 19 it had from December 15 ordered its ships from Europe that would normally use the Suez Canal to reroute via the Cape of Good Hope for an indefinite period of time. Hong Kong's OOCL said on December 21 it had guided its vessels to either divert

route or suspend sailing to the Red Sea. The company, owned by Orient Overseas (International) Ltd (0316.HK), has also stopped cargo acceptance to and from Israel until further notice. Taiwan's Yang Ming said on December 18 it would divert ships sailing through the Red Sea and the Gulf of Aden via the Cape of Good Hope for the next two weeks.

Inséré 18/02/24 DOSSIER Enlevé 18/03/24

On the outside looking in A Maritime English lecturer goes to sea

As a lecturer in Maritime English, I had the extraordinary opportunity to sail for nearly two weeks on board the product tanker M/T Thun London in August 2023.

Jowita Denc

I learnt a great deal, and not only deepened my understanding of the field but also dispelled some of my misconceived notions about life at sea and aligned my perceptions with reality. For the last 15 years, I have been a teacher of Maritime English at Gdynia Maritime School and Gdynia Maritime University. Over this time, I have taught students of marine engineering and navigation as well as seafarers attending competency courses. However, despite my many years of teaching experience in the maritime sector, the recent two weeks have been an eye-opening lesson. It is not common for Maritime English lecturers to be given a chance to join a crew on a real merchant vessel. In fact, I have never heard of such an opportunity being available to my fellow teachers from Poland or abroad. We hear about former navigators or engineers teaching at maritime schools, but not teachers of English going to sea. This experience has allowed me to bridge the gap between my theoretical knowledge and the reality of seafaring in a number of aspects.

Onboard activities – deck

As I am expected to be able to discuss maritime issues with my students, I immersed myself into life at sea, carefully watching and gathering information about the operations of the deck and engine departments. When the crewmembers were on-duty I tried to be like a fly on the wall, staying out of the way and quietly observing – always with their permission. When they were off-duty or when the vessel was at anchor, like it or not, happy or not – they were under fire from my questions. To my delight, all the crewmembers were very kind and patient and their answers and explanations were extremely informative. As a landlubber, I found every aspect of the organisation of the ship very interesting, starting from the ship's conning, manoeuvring, berthing, anchoring, execution of helm orders, reporting to the VTS Station, witnessing the pilot embarkation and disembarkation.

The entire experience including the opportunity to get hands-on with selected shipboard equipment, and permission to join watchkeeping or safety rounds would not have been possible without the kindness of Captain Stroynowski, for which I am truly grateful. For the first time in my life, I had the chance to witness and admire the Captain's exceptional professionalism and precision. One remarkable example was when he smoothly manoeuvred the 150-metre-long tanker alongside the jetty with astonishing accuracy. What also impressed me was his remarkable ability to divide his attention during

monitoring the situation on the bridge and outside the vessel and giving loud and clear orders simultaneously. Despite the potentially awkward nature of the situation for him and for the whole crew, he never made me feel like an intruder, obstacle, or distraction. He made me feel like a guest crewmember instead. I genuinely valued his attitude to the situation and the way he generously shared his extensive knowledge in a friendly and welcoming manner.

Over the course of the voyage, I acquired a comprehensive understanding of the responsibilities associated with watchkeeping duties, both for officers and ratings. I gained greater knowledge of on-board procedures, shipboard safety and the operation of various shipboard equipment, including:

- Personal life jacket and personal protective equipment;
- Fire fighting equipment and life saving equipment;
- Personal muster points, muster list and roll call, fire alarm, abandon ship alarm;
- Code of Safe Working Practice;
- Deck machinery: mooring winch, windlass, crane, provision crane;
- Deck maintenance work;
- Navigational equipment: (ECDIS), Automatic Identification system (AIS), radar, Gyro Compass;
- Tanks, manholes, pipelines, manifolds and valves;
- Loading and discharging the cargo;
- Berthing and unberthing;
- Ship manoeuvring in the port, helm orders;
- Anchoring;
- Watchkeeping duties;
- Communication with VTS station;
- Pilotage

Onboard activities – engine

The Chief Engineer was my top-of-the-line marine engineering educator. He explained to me what the daily operation of the engine room looks like in a very detailed way. He shared with me his expertise on every indispensable piece of machinery in the engine room. All this was very exciting for me as a person who talks about marine engines, yet had never before seen them with the naked eye, let alone up so close. I was able to attend the morning rounds and observe the routine maintenance jobs done by the other engineers.

As a teacher of Maritime English, my role is not to deliver technical lectures or explain how to repair the machinery but to introduce the terminology and phrases indispensable for the job using authentic documents, reports, descriptions of selected pieces of shipboard machinery etc. However, students often encounter new terminlogy or engine room activities they are not yet familiar with, and might ask questions about sounding the tanks or the difference between a purifier and clarifier, for instance. Thanks to my time spent in the engine room, I feel more confident and believe I will be able to paint a vivid and more realistic picture of the actions and items, and will be more creative during discussions about the topics we cover in the classroom and while preparing my own teaching materials.

Throughout the time spent in the engine room I watched, learnt about and got hands-on with:

- Engine room equipment: main engine, steering gear, generators, boilers, purifiers, pumps, fresh water generator;
- Machinery maintenance;
- Workshop activities, tools and equipment;
- Electronic Engine Log Book;
- Safety in the engine room.

Insights and impressions

So, did anything surprise me? The vessel itself truly impressed me. I do not have the experience to compare Thun London to any other vessel, but I must admit the tanker surpassed my expectations in various aspects – the modern design, spacious bridge, comfortable cabins, vast engine room with modern machinery and compact, powerful main engine, and a table tennis table in the store room.

Comfort on the water was great indeed. The ship was very stable, and I had no chance to experience rolling or pitching. I did not suffer from seasickness at all. The only negative sensation was drowsiness and slight dizziness when the sea swell and current overlapped one evening. I was worried the sensation might be my company throughout the whole voyage as I kept yawning a lot – but fortunately not.

Cleanliness and tidiness were present everywhere. There was not a trace of grease, leakage, waste or dirt. A few washing machines and kilograms of washing powder supplied the needs of good housekeeping. The rules for waste segregation were diligently followed.

The rules for waste segregation were diligently followed. There was no rush observed. Working under pressure of time is a concern raised as a major problem by many employees today. In my humble opinion, the work on this vessel was very well organised: no chaos at all. The seafarers' teamwork and clear understanding of duties were truly excellent and on top there was always time allowed for a coffee break.

Traditional paper log books and various other paper-based aids to navigation are becoming a thing of the past. Unfortunately, the scale of the transition has not become apparent to all lecturers, including me. After two days of looking around for the deck log book I thought it must be kept somewhere safe. I could not wait any longer and asked. I found that these days paper-based items such as log books, charts, or reports have become outdated and are gradually replaced with digitised versions, and the records are to a large extent computer based. The shift requires ship's officers to be computer literate, and lecturers need needed in an increasingly digitised world. 'Safety' was indeed given top priority and emphasised regularly. Moreover, the crew is encouraged to self-study, watch the dedicated training films and reading the accident or incident reports published in the MF Shipping Group newsletters. Sharing the vetting observations, provoking the crew to discuss and analyse cases and highlighting the value of safety constantly contributes to make the crew be aware of dangers, stay alert and vigilant. The kind and respectful atmosphere among the crewmembers was apparent at all times. I noticed it in the very first conversation I heard on the bridge, when the 2nd mate asked over VHF: 'Could you please open valve number 2? Thank you'. Politeness was a standard among the crewmembers and reflected the high standards and levels of respect within their work environment, both on board the ship and in ship-to-ship/shore communications. Undoubtedly, cultural awareness and sensitivity were top priorities.

Maritime English

Briefly speaking, the regular model of language teaching and learning is all about finding a happy balance between reading, writing, listening, speaking skills and grammar. Here on board, where crewmembers are multinational and their vocabulary bank and accents differ, the art of communication and cultural awareness go beyond all the above- mentioned skills. Cooperation between crewmembers, comprehension, giving and understanding orders, giving feedback, engaging in chit-chats, small talks, telling jokes and stories is so natural and shows that language is a tool we use to pass on a message.

Standard Marine Communication Phrases are an obligatory component of curriculum at maritime schools. This standardised and universally understood set of communication

phrases and expressions is the foundation for proper communication, limiting the dangers to the vessel, people on board and the environment. Although occasionally students complain about learning the phrases by heart, I still believe this is indispensable, especially for those with poor command of English. Language on board the vessel does not have to be sophisticated with complex grammar structures. It does have to be clear and communicative, covering the wide range of terminology needed for the specific purposes such as navigation or engineering.

A unique experience

This unique experience of immersing myself in the practical aspects of seafaring and focusing on the use of Maritime English onboard proved to be invaluable. Having experienced this firsthand, I now feel much more confident and connected to the field and my students. I wish I had been given the opportunity at the start of my career. I strongly believe that such training should be available or even obligatory for all teachers of Maritime English.

I would like to thank Captain Alfred Naskret, the head of Gdynia Maritime School, Captain Kuba Syzman´ ski, Secretary General of InterManager and Karin Orsel, the CEO of MF Shipping Group, who supported me, provided with much valuable advice and enabled the fortnight on board.

Inséré 19/02/24 NIEUWS NOUVELLES Enlevé 19/03/24

Offshoregroep Jan De Nul bestelt grootste kabellegschip ter wereld

Koen Dejaeger

Bagger- en offshore-groep Jan De Nul heeft bij de Chinese scheepswerf CMHI Haimen een nieuw kabellegschip besteld. Met een gecombineerde kabeltransportcapaciteit van 28.000 ton wordt dat schip, genaamd de 'Fleeming Jenkin', het grootste kabellegschip ter wereld.

In een hoog tempo worden er windparken op zee aangelegd. Zo stelde BASF op vrijdag 29 september 2023 nog het Windpark Hollands Kust Zuid (HKZ) voor, een samenwerking tussen Vattenfall, BASF en Allianz. Jan De Nul surft mee op deze golf en dat vertaalt zich nu ook in een bestelling van een nieuw 'kabellegschip', het grootste ter wereld.

Het nieuwe schip dat Jan De Nul heeft besteld, heeft een gecombineerde kabeltransportcapaciteit van 28.000 ton en kan langere en zwaardere kabels installeren in ultradiepe wateren tot 3.000 meter. Met de kabelspanners kan het schip kabelspanningen tot 150 ton aan, dat is het gewicht van het Vrijheidsbeeld. Het is eveneens uitgerust met een krachtig 'dynamic positioning 2'-systeem, waardoor het stabiel kan werken in diepe, maar ook in ondiepe wateren, dankzij een extra derde boegschroef.

Offshore vloot

“We blijven geloven in de energietransitie”, zegt Philippe Hutse, directeur Offshore Energy Division bij Jan De Nul Group. “Na onze eerdere investeringen in het jack-up-installatieschip ‘Voltaire’ en het kraanschip ‘Les Alizés’ voor de installatie van de nieuwste generatie windturbines en hun funderingen, gaan we nu verder met dit prachtige kabellegschip. Dankzij zijn ongekende mogelijkheden zal Fleeming Jenkin perfect geschikt zijn voor de interconnector- en exportkabelmarkten.”

Daarmee zal de offshore installatievloot van Jan De Nul vier krachtige en diverse kabellegschepen tellen, naast twee offshore jack-up-installatieschepen, drie drijvende kraaninstallatieschepen, vijf rotsinstallatieschepen en twee multifunctionele schepen.

Uitstoot

Een dubbel uitlaatfiltersysteem haalt 99% van de nanodeeltjes uit de uitstoot. Het schip voldoet daarmee ook aan de strenge Europese Stage V-emissienormen voor binnenvaartschepen. De motoren kunnen werken op biobrandstof en groene methanol. De hybride elektriciteitsinstallatie aan boord draagt ook bij aan de vermindering van de CO2-uitstoot en een optimaal brandstofgebruik.

“‘Fleeming Jenkin’ combineert al onze inhousekennis van het ontwerpen en exploiteren van kabellegschepen en wordt ook uitgerust in nauwe samenwerking met onze klanten”, zegt Jan Van de Velde, director New Building bij Jan De Nul Group. “Het resultaat is een schip dat zeer efficiënt werkt en een veel kleinere ecologische voetafdruk heeft. We kijken ernaar uit om het project samen met CMHI te starten en samen te werken aan een vlotte bouw en tijdige oplevering. Op dit moment zijn contractbesprekingen gaande om essentiële uitrusting te leveren vanuit Europa.”

Het schip is vernoemd naar Henry Charles Fleeming Jenkin (1833-1885), Regius Professor of Engineering aan de Universiteit van Edinburgh en pionier op het vlak van offshore kabelinstallaties.

Inséré 19/02/24 Historiek Historique Enlevé 19/03/24

Sinking of HMS *Victoria (II)*

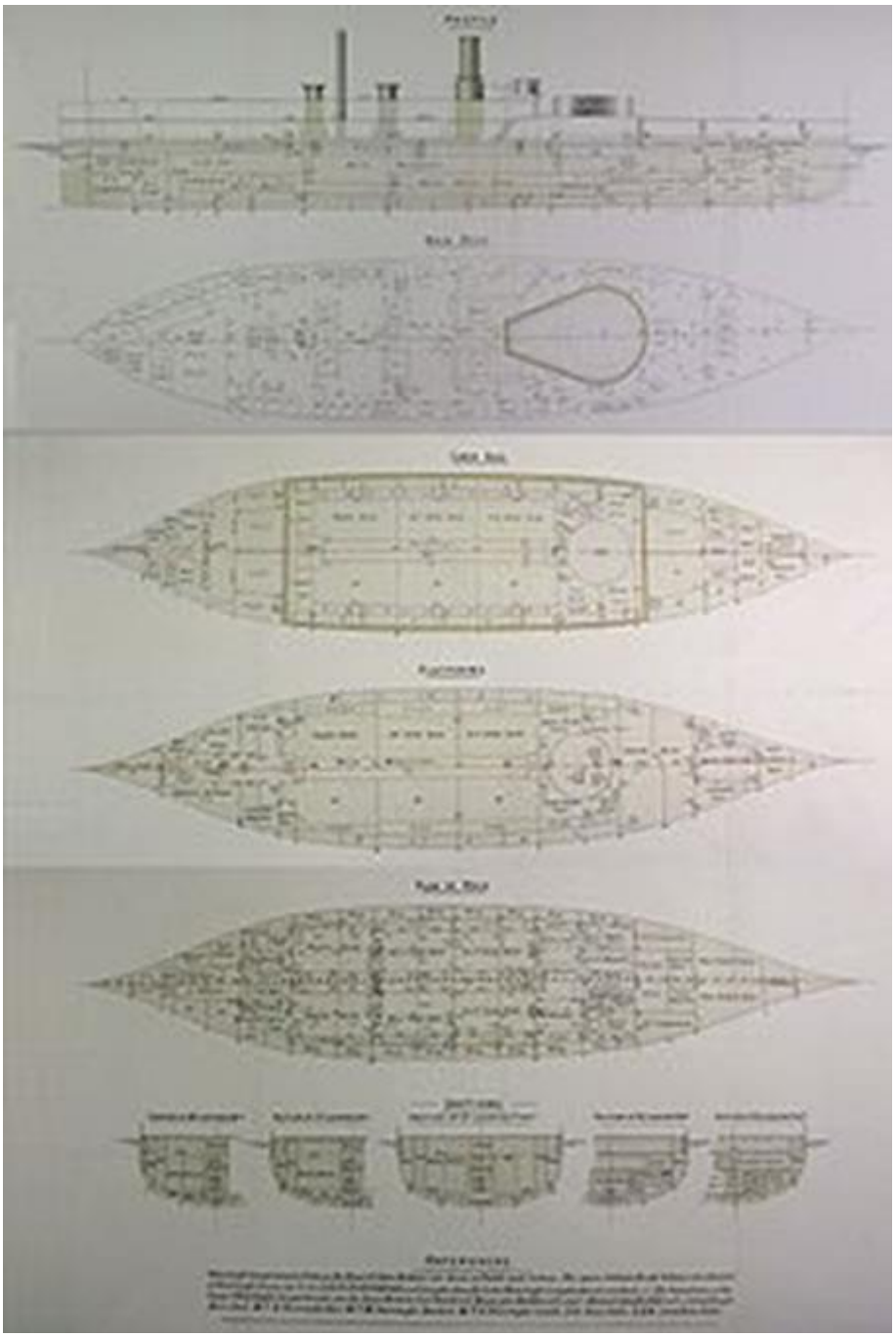
Admiralty technical report

Diagram showing collision point and penetration of *Camperdown* into *Victoria*

In September 1893 a report was published by the Director of Naval Construction, W. H. White, on how the ship had sunk, and it was submitted to parliament in November. It combined evidence from the survivors with the known design details of the ship. *Camperdown* struck approximately 65 ft (20 m) from the stem of *Victoria* at an angle of approximately 80°, just ahead of one of the main transverse bulkheads. *Camperdown* was travelling at about 6 kn (6.9 mph; 11 km/h), so the blow roughly equated with the energy of a shell from one of the 12 in (300 mm) guns then in service, the 45-ton breech-loading rifle (BLR). It pushed *Victoria*'s bow sideways 60–70 ft (18–21 m). *Camperdown* was most probably held back from driving further into *Victoria* by coming up against the protective armoured deck running across *Victoria* below water level. *Camperdown*'s stem penetrated approximately 6 ft (1.8 m) into *Victoria*'s side, while the underwater ram penetrated about 9 ft (2.7 m), 12 ft (3.7 m) below water level. Had *Camperdown* been travelling more slowly, then it was likely the damage from her stem would have been lessened, but the underwater ram might instead have torn a hole along *Victoria*'s relatively thin lower plating as she continued to move forward. A similar thing had happened in a collision between the German warships SMS *König Wilhelm* and *Großer Kurfürst*, causing the latter to sink. This did not happen because the two ships became locked together, although the momentum caused *Camperdown* to rotate relative to *Victoria*, tearing the hole wider.

After *Camperdown* disengaged, the initial inflow of water was limited not by the size of the hole but by the rate at which water could flow out of the immediately affected compartments into adjacent ones. It was noted that there had been insufficient time to close watertight doors, a process which took three or four minutes even when men were on duty and already prepared. The collision was followed by steady sinking of the bow and increasing list to starboard for about 10 minutes, by which time the bow had sunk 23 ft (7.0 m) from its normal height. Approximately half the length of the ship was submerged and the tip of the port propeller was raised above water level instead of 11 ft (3.4 m) below. The ship was heeled over sideways by about 20°. There was then a sudden lurch

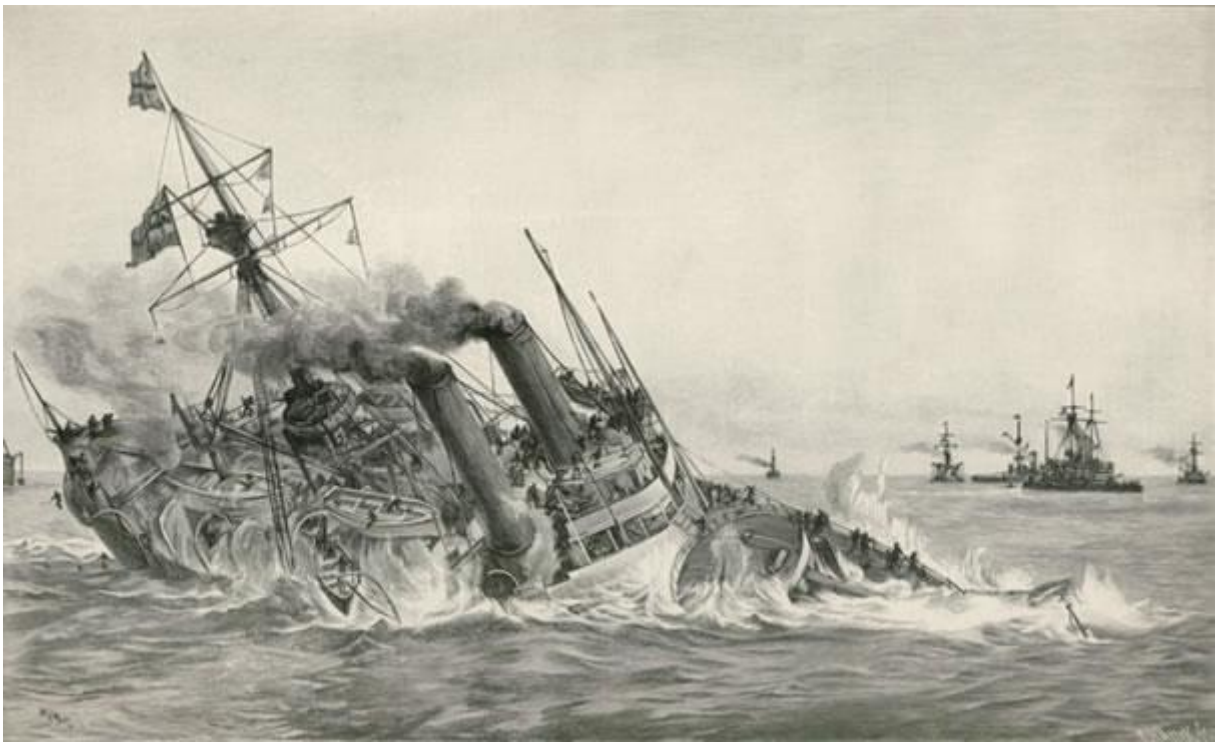
to starboard and the ship turned over. This was ascribed to water reaching open ports and doors on the gun turret and sides of the ship, which now started to flood new compartments on the starboard side. The ship started to capsize, slowly at first but with increasing speed, accompanied by increasing noise audible on the nearby ships as anything loose fell towards the low side, worsening the process. The ship was still underway at this time trying to reach shore. This tended to force the bow down and more water into the ship, while the rudder jammed hard to starboard tended to increase the heel.



Plan drawings of HMS Victoria

It was estimated from survivor reports that initially twelve watertight compartments were affected, causing a buoyance loss of some 680 long tons (690 t) at the fore end of the ship, mostly concentrated below the level of the armoured deck. Water then spread to other areas, eventually rising to fill the space below the main deck. There were no significant longitudinal bulkheads in the affected areas, which might have had the effect of keeping water out of the port side and thereby accentuating the heel, but the water naturally flooded the holed side first causing the imbalance. No water entered the stokeholds or engine rooms. It was determined that had the gunports and doors at deck level been closed so that water was prevented from entering this way, then the ship would not have capsized. These doors would customarily be closed if the ship was travelling in heavy seas, but were not part of normal procedure for closure in a collision. She might not have foundered at all, but this would have depended on whether various bulkhead doors had been closed or not, which was unclear. Had all doors been closed initially so that only the breached compartments were flooded, then the

ship's deck would have likely remained just above water level with a heel of around 9° and *Victoria* would have been able to continue under her own power.
The report denied that had *Victoria*'s side armour extended as far forward as the point of impact that it could have reduced the damage and saved the ship. It denied that automatic bulkhead doors would have helped, although these were shortly fitted to capital ships throughout the navy. It denied the ship was insufficiently stable, although modifications were then undertaken to the bulkhead arrangement of her sister *Sans Pareil*.



Outcomes

The court produced five findings
- That the collision was due to an order by Admiral Tryon.
- That following the accident everything possible had been done to save the ship and preserve life.
- No blame attached to Captain Bourke or any other member of his crew.
-The court strongly feel that although it is much to be regretted that Rear Admiral Albert H. Markham did not carry out his first intention of semaphoring to the Commander-in-Chief his doubts as to the signal, it would be fatal to the interests of the service to say that he was to blame for carrying out the directions of the Commander-in-Chief present in person.
- The court was not able to say why *Victoria* had capsized.

It was established that the ship would have been in no danger had her watertight doors been closed in time. Bourke was found blameless, since the collision was due to Admiral Tryon's explicit order but the judgement carried an implied criticism of Rear-Admiral Markham. Winsloe complained afterwards that he had not been permitted to properly make his case, and that there was more than enough evidence to convict Markham and others of his crew of negligence. Back in England, confusion reigned in the press as to whether the findings about Markham were an indictment or not, and whether or not it was the duty of an officer to disobey a dangerous order. The *Saturday Review* commented, "the court has evaded the real point with a slipperiness (for we cannot say dexterity) not wholly worthy of the candour we expect from officers and gentlemen." Captain Gerald Noel of *Nile*, who had given evidence critical of *Camperdown*'s actions, wrote to Markham observing

that things might have turned out better had he been on any ship other than *Camperdown*, and that in his opinion Captain Johnstone was incompetent. Charles Beresford and Admiral of the Fleet Sir Geoffrey Phipps Hornby published a joint letter in the *United Service Gazette* that: "Admiral Markham might have refused to perform the evolution ordered, and the *Victoria* might have been saved. Admiral Markham, however, would have been tried by court-martial, and no one would have sympathised with him as it would not have been realized that he had averted a catastrophe. Unconditional obedience is, in brief, the only principle on which those in service must act." This contrasted with a statement contained in the official signal book; "Although it is the duty of every ship to preserve as correctly as possible the station assigned to her, this duty is not to be held as freeing the captain from the responsibility of taking such steps as may be necessary to avoid any danger to which she is exposed, when immediate action is imperative and time or circumstance do not admit of the Admiral's permission being obtained.

The verdict of the court had to be confirmed by the Admiralty Board in London. They found themselves in a difficulty; although naval opinion seemed to have reached consensus that Markham was significantly to blame, and that it was not acceptable to allow a precedent which any officer causing a disaster by blindly following orders could cite in his defence, it was also felt impossible to severely criticise Markham without blaming Bourke for also failing to take action. As a compromise, a rider was added to the verdict, to the effect that Markham had no justification for his belief that *Victoria* would circle around him, and thus he should have taken action much sooner to avoid collision. Captain Johnstone was also criticised, both for failing in his own independent responsibility to safeguard the ships, and for failing to expeditiously carry out orders when the collision was imminent.

Markham and Johnstone both continued to feel aggrieved by the verdict, seeking to take the matter to a further court-martial to clear their names. It fell to Seymour to convince them that they had been dealt with lightly, and any further case could only go against them.] Markham completed the remaining months of his posting in the Mediterranean, but was then placed on half pay without a command. He received minor postings and achieved the rank of admiral before retiring aged 65 in 1906. Tryon's TA system – and with it his attempt to restore Nelsonian initiative into the Victorian-era Royal Navy – died with him. Whether or not Tryon had intended the system to be in effect at the time of the accident, traditionalist enemies of the new system used the collision as an excuse to discredit and bury it. To some extent, this was mitigated by the introduction of wireless communication some six years later.] Heavy reliance upon detailed signalling – and the ethos of reliance upon precise orders – continued within the navy right through to the First World War. Several incidents occurred where reliance upon specific orders or signal failures allowed lucky escapes by the enemy in that war, so that had the sinking not occurred and Tryon survived to continue his campaign, there might have been a significant improvement in British performance.

Five years after the incident, only *Camperdown* was still in active service, the rest of the then front-line battleships all having been relegated to guard duties as obsolete.

There is a legend that Tryon's wife was giving a large social party in their London home at the time his ship collided with *Camperdown*, and that Admiral Tryon was seen descending the staircase by some of the guests.

The memorial in Victoria Park, Portsmouth, to the crew killed in the accident.

There is a memorial to the crew killed in the disaster in Victoria Park, Portsmouth. It was originally erected in the town's main square, but at the request of survivors was moved to the park in 1903 where it would be better protected.

A scale section of *Victoria* – a popular exhibit on display at the World's Columbian Exposition in Chicago at the time of the accident – was subsequently draped in black cloth as a tribute to the loss.

In 1908, *Good Hope* and *Argyll* were given orders that might have led to a collision, but Rear-Admiral Percy Scott implemented a different course than was ordered, ensuring no risk of collision.

Tryon's intentions

No definite conclusion has ever been reached as to what Tryon intended to happen during the manoeuvre. Two possible explanations have been proposed.

The first is that Tryon was mistaken in the orders which he gave. It has variously been suggested that he might have been ill or indisposed in some way, supported by his curt comments to officers who queried him at the time, and his apparent inattention to the results when the manoeuvre commenced. Alternatively, that he was of sound mind, but mistook the turning circle of the ships involved. It has been suggested that a much more frequent manoeuvre was a turn of 90°, for which a space allowance of two cables per ship would have been correct. On this basis, the ships would have completed their turns inwards at a spacing of two cables, then re-traced their course to the correct point to turn to their final anchor positions. Whatever the possible reason for the initial mistake, some confirmation of this explanation comes from the reported statement of Lieutenant Charles Collins, who had been officer of the watch on *Victoria* at the time of the incident. Memoirs written by Mark Kerr related that Collins had confirmed to him that Tryon had admitted on the bridge that this was the mistake he had made. One historian has gone so far as to suggest that Tryon's incomprehensible letters to Lord Charles Beresford indicate that he "was suffering from some deterioration of the brain; that his fatal error was no mental aberration such as is to be expected of the young and inexperienced, but the consequence of a disease which at times clouded and confused his judgement and ideas."

The second possibility is that Tryon fully intended the order which he gave and – understanding the objections raised by his officers – still chose to put it into effect. Tryon had ordered an identical manoeuvre during different exercises in 1890, but on that occasion the turn was cancelled because the commander concerned declined to signal an acceptance of the order before it became too late to carry it out (in fact the man who had been in Markham's position on that occasion was Vice-Admiral Tracey, who now sat on the panel). Markham came up with his own suggestion as to how it might be possible to carry out the order, with one line of ships turning outside the other. However, he insisted that he believed Tryon intended to turn outside Markham's ships, despite the navigation signals being flown by *Victoria* that she was turning at maximum helm. It has been suggested that

unlike Markham's assessment, Tryon intended to take a tight curve and leave it to Markham to avoid him, by taking the outside position around the curve.

Support for this came initially from a journalist and naval historian William Laird Clowes who suggested that Queen's Regulations required "If two ships under steam are crossing so as to involve risk of collision, the ship which has the other on its starboard side shall keep out of the way of the other, which would place the onus upon *Camperdown* to take avoiding action. Clowes also maintained that in any contention between a ship carrying the commander and another, it was the responsibility of the other ship to keep clear from the path of his commander. Although this particular form of turn was not included in the official manoeuvering book, it was mentioned in other standard texts of seamanship. This view has been taken by others, who have added to the argument Tryon's behaviour, which was consistent with his having set a TA problem for his subordinate to solve and therefore followed his normal habit of not explaining his intentions or intervening until afterwards. Others have argued that the witnesses' accounts suggest Tryon accepted having made a mistake, and that had one column of ships passed outside the other instead of both turning inwards, they would then have been in the wrong formation to approach their normal positions at the anchorage. Debate has also centred upon whether the flag signals instructions "...preserving the order of the fleet" imply that afterwards the ships should be in two columns as before (i.e. *Camperdown* in the starboard column) or whether the signals only meant that each division should still be in one column with the same order of ships, but that it could have swapped sides with the other column.

Wreck site

After a search that lasted ten years, the wreck was discovered on 22 August 2004 in 140 metres (460 ft) of water by the Lebanese-Austrian diver Christian Francis, aided by the British diver Mark Ellyatt. She stands vertically with her bow and some 30 metres of her length buried in the mud and her stern pointing directly upwards towards the surface. This position is not unique among shipwrecks as first thought, as the Russian monitor *Rusalka* also rests like this. The unusual attitude of this wreck is thought to have been due to the heavy single turret forward containing the main armament coupled with the still-turning propellers driving the wreck downwards.

The 1949 Ealing comedy *Kind Hearts and Coronets* features a satire of the accident, in which Alec Guinness plays Admiral Lord Horatio D'Ascoyne, who orders a manoeuvre that causes his flagship to be rammed and sunk by another ship in his fleet. Guinness noted that his portrayal of the admiral was based on an officer he knew during his training during the Second World War.

Inséré 20/02/24 DOSSIER Enlevé 20/03/24

Why is the sea so hungry?

In the 1980s and early 1990s, the world's merchant fleet lost 130 bulk carriers, in some tragic cases with all hands. When asked why, the philosophical answer was often "because the safety culture in the marine transport industry is reactive, slow and delayed".

The speed of response often depends directly on the pressure that results from these losses and the public perception of them. In the case of tanker accidents, images of oil-drenched seabirds trigger public outcry which greatly increases the pressure to act. After the MSC Zoe accident, pictures of lost cargo at sea caused the flag states of the Netherlands and

Germany to spring into action. In cooperation with Australia – which at that time was dealing with a cargo loss from the APL London in its waters – a Joint Industry Project (JIP) called "Top Tier" was established. By contrast, the much greater cargo losses of more than 3,000 containers, in the northern Pacific in the winter of 2020 / 2021 were barely noticed by the public as few felt themselves to be personally affected.

However, the interest of the marine insurers was immediately aroused because, on the one hand, it is they who pay for the cargo loss and, on the other, these incidents represented the greatest cargo loss from ships in 15 years. Underwriters were not dealing with a loss of cargo from a single ship but with a series of accidents on large container ships. Did this string of accidents point to structural problems or inadequacies, or had the sea simply become hungrier due to climate change? Top Tier was set up to find the causes and propose possible solutions.

How could things get so bad?

Containership development has moved at a dizzying speed. In less than 50 years, cargo capacity has increased by a factor of 24, with the greatest progress occurring during the last 15 years. Despite all the technical resources available, development still involved a measure of trial and error. Initially the ships tended to be prone to hogging due to problems of longitudinal strength caused by a need for vast quantities of ballast water as the vessels themselves did not possess sufficient stability. This problem was solved with the arrival of the wider Post-Panamax vessels but they had problems of their own. The stability, which had been inadequate in the narrower ships, was now too great. In particular when carrying partial loads in coastal waters, problems could arise at GM values of over 10m, as has been confirmed by reports of extreme rolling motions.

As the size of the ships increased, so too did the height of the deck cargo: Simple stacks of five or six units became container towers of up to 13 superimposed units. Because the sheer size of the vessels appeared to confer greater security regarding stability, the requirements placed on the lashing systems were actually reduced around the year 2010. A somewhat laissez-faire attitude towards container weights and container stowage positions on board had also become commonplace.

Earlier general cargo vessels had cargo stowed below deck where it was enclosed, tightly stored, lashed down and protected. Deck cargo was frowned upon and something of a rarity, and in cases where it was used, high premiums were demanded because the risk was clearly fundamentally different. Nowadays, containerships transport up to 60% of their cargo on deck. Consequently, the ship no longer gives cargo the same protection as in the past. This task has to be performed by the container which is primarily stowed and secured at inland locations.Even though many parameters had shifted in ways that were not conducive to safety, container losses at sea were not unusually high because the ships were never 100% loaded; and the cargo securing systems were generally over-specified and able to compensate for safety shortfalls. This all changed in the winter of 2020 / 2021 due to the economic recovery in China. In just a matter of weeks, shipping space became scarce and every last stowage slot was taken. As a result, no reserve was maintained and the extreme storms of that winter laid the problems bare. The sea has not become hungrier for ships and their cargoes, even under the impact of climate change; however, it does not forgive all human mistakes. Top Tier is examining the causes and IUMI's Loss Prevention Committee is represented by the German Association. Hendrike Kühl from the IUMI Secretariat is also included as the results will be made available to IMO together with the corresponding recommendations. IUMI has taken on a new appearance over the last 10 years; it has become a much more vocal association whose opinions are sought and whose voice counts. This gives our members the opportunity to arrive at a position and advocate this in the light of our collective knowledge and experience. We have the responsibility and

duty to constantly make a ourselves heard and we are moving rapidly from being spectators to actors, not only on the issue of lost containers.

Source: International Union of Marine Insurance

Inséré 21/02/24 DOSSIER Enlevé 21/03/24

How AIS works and what it does

IALA regulates the global usage of AIS. Here, IALA Deputy Secretary-General Omar Frits Eriksson and Technical Operations Manager Minsu Jeon look at the evolution of AIS onboard ships and examine its uses on SOLAS and non-SOLAS vessels, as well as the pros and cons of this versatile piece of technology

Automatic Identification System (AIS) is a communications system that uses four worldwide channels in the VHF maritime mobile band to exchange navigation data. It came into being as a direct result of the need for heightened safety at sea. Following several maritime accidents, it became clear that a mechanism that could provide precise location details of ships was sorely needed, especially in traffic-intense zones or adverse weather conditions.

AIS automatically transmits key details about a vessel, including dynamic information, such as vessel position, heading, speed and rate of turn, provided by sensors onboard the vessel, plus static information, such as the ship's name, cargo and destination. There are numerous AIS devices, known as stations, which are identified by a unique Maritime Mobile Service Identity (MMSI)2. Each one uses an international open standard to communicate. AIS stations are designed to operate autonomously, without requiring human interaction, whether from ship or from shore personnel. They may be instructed to transmit in a different manner – for example, they may be interrogated (polled), or be commanded to transmit more regularly, or on a different frequency (assignment).

Legal aspects of AIS

Carriage of AIS is mandated under SOLAS. In addition, AIS is required domestically on non-SOLAS vessels by some administrations.

AIS on SOLAS vessels must provide:

- Information exchange between vessels within VHF range of each other, to increase situational awareness
- Information exchange between a vessel and a shore station, such as a VTS, to improve traffic management in congested waterways
- Automatic reporting in areas of mandatory and voluntary reporting
- Exchange of safety related information between vessels, and between vessels and shore station(s).

The development of AIS has expanded to include such devices as AIS for marine aids to navigation (AIS AtoN), AIS on search and rescue aircraft and AIS search and rescue transmitters4 (AIS-SART)

SOLAS vessels µ

SOLAS vessels must carry a Class A AIS transponder. These operate using SOTDMA broadcast mode (see break-out box) and transmit at a power level of 12.5 watts. Dynamic information, such as position and course, is transmitted every two to 10 seconds while underway, and every three minutes while at anchor. Static and voyage related information, such as the vessel's name and cargo, is transmitted every six minutes. Class A AIS transponders must have a DSC (156.525 MHz) receiver, external GPS, heading and rate of turn indicator, and can also transmit and receive safety-related text messages.

Non-SOLAS vessels

Non-SOLAS vessels may carry Class B AIS transponders. These operate using CSTDMA broadcast mode and transmit at a power level of two watts. Dynamic data is transmitted every 30 to 180 seconds, while static data is transmitted every six minutes. A DSC receiver and heading are optional. Transmitting safety-related text messages is also non-compulsory, and only available if pre-configured into the Class B AIS transponder. Due to the fact that position data is updated less frequently, it may be less accurate for these ships than for SOLAS vessels. Bear in mind that, while many non-SOLAS vessels (including yachts and fishing boats) do carry AIS transponders, many do not. Even if they do, they may be switched off, for example to keep fishing grounds a secret. Do not rely on AIS data to make decisions – it is there to help you, but you should use the radar and the window as your principal sources of information!

Benefits of AIS

- Enhanced safety: AIS assists in collision prevention. OOWs and maritime traffic managers can track the trajectory of proximate vessels, anticipate potential collision areas and take preventive measures in good time.
- Traffic management: AIS is invaluable for ports and harbours as it assists in organising incoming and outgoing traffic. This guarantees efficient berth allocation and refines traffic movements.
- Search and rescue: Should a ship face distress, AIS signals can direct rescue teams accurately, potentially saving lives.
- Data collection: Being digital, AIS data can be archived and studied, aiding in route refinement, fuel conservation and other maritime analyses.

Limitations and considerations

- VHF limitations: Given its dependence on VHF, AIS has a typical range of up to 20 nautical miles and in some circumstances more. However, satellite integrations are bridging this gap, introducing Satellite-AIS or S-AIS.
- Data precision: The accuracy of static AIS information hinges on the data input by the ship's personnel. Incorrect inputs yield inaccurate broadcasts.
- Over-reliance: Relying excessively on AIS can breed negligence. AIS should enhance, not replace, traditional navigation methods and watchfulness.

Into the future

AIS has proven instrumental in enhancing maritime safety, assisting in SAR missions and serving many other purposes. Nonetheless, it is imperative to recognise its limitations, such as constraints related to VHF range, vulnerability for cybersecurity and occasional data inaccuracies. That said, AIS remains a shining example of how technology can revolutionise maritime operations. It underscores the sheer magnitude of technological potential in fostering safer and more efficient global transportation. The evolution of AIS is driven persistently by technological breakthroughs. Satellite-AIS, for instance, has

expanded its operational extent remarkably. On the horizon, VDES emerges as the next evolutionary step, announcing as AIS 2.0 for a future-ready maritime world.

Above and beyond: Practical ways to use AIS on board ship
Gregor Stevens (Senior Manager Nautical) and Arvind Natrajan (Senior Marine Advisor Crewing and Training), of the International Chamber of Shipping, look at some of the ways in which AIS can be used on board ship – and a few points to bear in mind

Possibly the biggest benefit of AIS is the ability to identify ships by name and callsign. This can be helpful to the OOW in areas of increased traffic, such as coastal passage and port approaches. When the AIS output is interfaced with radar, the OOW can label targets of interest on the radar, such as anything that could turn into a collision risk. Coupled with information about the destination and ETA of the target, this assists immensely in improving situational awareness.

The advantage of interfacing the AIS with ECDIS is that, from an OOW's point of view, ECDIS will not only display own ship's progress in real-time, but will also display the progress of all the targets. This enables the OOW to look ahead towards the traffic density in other areas in the passage plan, possibly planning their own ship's progress more efficiently. Both radar and AIS can be interfaced with ECDIS. If there is an inherent error on the target ship, the AIS symbol and radar echo of the target will not match. In such situations, always rely on the target's radar echo, whether on the radar or the ECDIS display, not on the AIS.

Data and situational awareness

Performance standards for AIS specify that transmission of data should take place with minimum involvement by the ship's personnel. Navigating officers are expected to use the information from the AIS to supplement data from other bridge equipment and enhance situational awareness. For example, seeing the destination and ETA of a nearby vessel provided by AIS may help the Officer of the Watch (OOW) in predicting how that vessel is navigating, especially in a Traffic Separation Scheme (TSS) or restricted waters. However, remember that this information is only as good as the source it has been taken from – and this source may not be entirely accurate. AIS should never be used as the primary means of navigation; it should only ever be used as an aid.

AIS and visual lookout

Another AIS function is to provide the OOW with rate of turn (RoT) information of the target (depending on target ship size). On a radar, the heading information of a target is updated only when the radar processing unit has interpreted a series of consecutive echoes. In other words, heading information on a radar is accurate as long as the target is maintaining a constant heading. When a target is altering its heading (whether for collision avoidance or as part of a planned course manoeuvre), the heading information provided by the radar may be unreliable for several minutes. Since information from the target on the AIS is received via its GPS, the OOW can interpret the RoT information faster in order to understand if the target is manoeuvring. In normal visibility, visual observation of the target's heading provides clearer evidence than the heading information given by the radar. This fact supports the important principle of maintaining a look out by 'all available means'. However, in the event of restricted visibility, this is a good example of how AIS can be used to enhance situational awareness. It is also important to understand that AIS provides ground track information for the target. Even when a vessel has stopped its engine, AIS will still be able to show its progress due to prevalence of tide or current. The significance

of this when manoeuvring in close proximity of other vessels or fixed-to-ground objects, such as navigation aids or shore objects, cannot be over-emphasised.

AIS and collision risk

Rule 5 of Colregs says that a vessel should use "sight and hearing" and "all available means" to assess the risk of collision. The OOW should use AIS to help them appraise the situation. However, AIS should not be relied on solely when making decisions about collision avoidance. It should be considered an aid to navigation and should always be used together with sight, hearing, radar etc. There have been some serious marine casualties in which the use of AIS by the OOW for collision avoidance purposes has been found to be a significant contributing factor.

Strengths and weaknesses of AIS

AIS is a carriage requirement for all vessels 300GT and above sailing on international voyages (SOLAS V). AIS must be active at all times, unless the Master has a specific reason to switch it off. Traditionally this would be in the case of a security threat to the vessel. However, we are seeing more occasions of AIS being turned off to make it harder to track vessels and their operations. The vast majority of merchant vessels do have an operating system that is switched on. However, the information that AIS transmits is only as good as the inputs that it receives. This means that it is not entirely reliable 100% of the time.

Despite this, AIS does give some very valuable information that may not be available from other sources. A ship's static information, including length, breadth, name and callsign, is always being transmitted. Voyage data, such as draught, cargo and distance, should be regularly updated by the OOW. The range of AIS is also much greater than radar, and it can be detected at distances of up to 60NM depending on circumstance. This allows it to play a vital role in search and rescue operations, for example.

AIS transponders are often fitted to small craft like yachts and fishing boats that may not be easily picked up by radar – although bear in mind that many small vessels do not carry AIS, and it is important to keep a sharp lookout. AIS can also be used in river navigation in situations where vessels may be hidden by radar due to the landscape, but can still be tracked with AIS. All of the above enhances overall situational awareness. Conversely, AIS does have some weaknesses that must be taken into account. As already discussed, the data it produces can only be as accurate as the inputs from the other vessel. If the other vessel has a GPS error, it will transmit a position incorrectly and the radar return and AIS target will not overlay correctly. Erroneous inputs would also display CPA and TCPA's that do not correlate with the ARPA calculations.

WATCHOUT - Erroneous AIS data led to a two-ship collision in poor visibility In this series, we take a look at maritime accident reports and the lessons that can be learned

What happened?

A containership and a gas carrier collided in dense fog, causing damage to both ships, but no injuries or pollution. The collision occurred in the early hours of the morning in a busy shipping area. The containership had come to a complete halt after receiving instructions to do so by local Pilots. The gas carrier was travelling forward, making its way towards a transfer position nearby.

The gas carrier's Master altered course to starboard, intending to pass the other vessel astern. Although he could not visibly see the containership, he used AIS data to inform his assessment of the situation. Unfortunately, he did not realise that the containership was

not moving, as this was not detectable by the AIS. The Master's course change put his own vessel in direct line to collide with the other ship, which it did shortly after the alteration was made. Corrective action of applying full starboard rudder was attempted, however this happened too late to prevent the collision from happening.

Why did it happen?

- Despite the poor visibility and high levels of traffic in the area, the gas carrier's Master solely used AIS data to inform his course alterations. This was in spite of the official requirement to only use AIS to support safe navigation in strict compliance with the COLREGS. The Master's decisions about collision avoidance should have been based primarily on systematic visual and/or radar observations, not just on AIS.
- The AIS data received from the stationary vessel did not include sufficient information to reveal to the gas carrier that it was not moving forward. This caused the Master to input the wrong course alteration, as he believed the other ship to be in motion. Whenever a shipping situation requires analysis to determine the risk of collision, radar target and ARPA data should be used in preference to the received AIS information.
- Neither bridge team fully appreciated the risk of collision in sufficient time to take any meaningful action to avoid the incident. In addition, neither vessel received a collision warning from anyone ashore, despite the location being a designated vessel traffic service area.
- VHF radio conversations were taking place on the gas carrier at the time, proving a significant distraction to those on the bridge while the situation was unfolding.
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What changes have been made?

- Both vessels have carried out internal audits and safety reviews following the collision and taken steps to prevent a recurrence.
- Both vessels have issued articles and circulars about the issues raised to their wider fleet, including safety requirements for navigating in restricted visibility.

Additional training in the use of AIS and other collision avoidance techniques has been provided to bridge members involved in the incident.

THE MASTER'S DECISIONS ABOUT COLLISION AVOIDANCE SHOULD HAVE BEEN MADE ACCORDING TO THE COLREGS, I.E. BASED PRIMARILY ON SYSTEMATIC VISUAL AND/OR RADAR OBSERVATIONS, NOT JUST ON AIS

WAYPOINT - 'Applying Information Safely' – an alternative meaning for AIS

George Shaw from the Royal Institute of Navigation looks at how to use AIS safely and explores some of the risks that must be overcome to ensure its ongoing value

AIS has an intentionally open design, and data is unsecured, due to insufficient bandwidth. This means more vessels are likely to use it – but it can also leave users open to cybersecurity threats. These data security issues require mariners to use information provided by AIS with caution, and in conjunction with other information. In isolation, the standalone picture presented by AIS can be untrustworthy, so mariners must use 'all

available means' to assess vessel encounters. Unlike AIS, radar/ARPA is not easily jammed or spoofed and provides accurate relative information based on vessels' movements through the water. You should base your avoidance actions primarily on radar data and frequent observation through the window, cautiously supplemented by AIS.

Is that vessel really there?

Since information transmitted by AIS is not authenticated, AIS signals can be easily spoofed to create false information, either creating non-existent vessels or misreporting positions of ships located elsewhere. In 2021, spoofed AIS reports of HMS Defender infamously appeared to show the vessel approaching Sevastopol while it was actually moored in Odessa. Criminals can readily falsify AIS reports to offset own vessel positions away from sensitive areas. Inaccurate information can also occur unintentionally, due to mis-typed manual data entry or sensor errors. In addition, quality of data will vary according to the type and accuracy of sensors on the reporting vessel.

Crucially, positioning information on AIS is almost totally dependent on input from Global Navigational Satellite Systems (GNSS), which also have cybersecurity issues. GNSS are highly vulnerable to natural and deliberate interference. Low levels of jamming can introduce position offsets, sufficiently misleading to present a severe risk to the safety of navigation – with no alarm raised. Higher levels of jamming may prevent position fixing entirely, triggering bridge alarms, while subsequent drift in dead-reckoning may rapidly increase the uncertainty in position estimates.

IN 2021, SPOOFED AIS REPORTS OF HMS DEFENDER INFAMOUSLY APPEARED TO SHOW THE VESSEL APPROACHING SEVASTOPOL WHILE IT WAS ACTUALLY MOORED IN ODESSA

GNSS positioning can also be spoofed, potentially inducing gradual position offsets that are difficult to detect. Such position errors can be widely transmitted over AIS to multiple vessels, affecting their situational awareness, CPA calculations and collision alarms.

Treading cautiously

Digital services are expanding the use of AIS, for example in virtual aids-to-navigation that provide a valuable rapid response to incidents before physical intervention can take place. However, mariners must treat virtual indications cautiously, especially where there is no physical entity to cross-check. Additionally, the limited data capacity within AIS risks being overloaded by the rapid growth in maritime services. One solution currently under discussion at the IMO is the future VHF Data Exchange System (potentially 'AIS2.0'), which would offer more data bandwidth, authentication and cyber resilience.

- The inherent limitations of AIS are currently compounded by cyber vulnerabilities and may result in incomplete, uncertain data. These include:
- Vessels that are not fitted with AIS – and vessels legitimately switching off AIS in risk areas – are simply not visible.
- VHF transmissions are essentially line-of-sight, limiting reception to around 15-20NM, depending on antenna heights.
- Signals can be blocked by headlands and infrastructure, (although they may reach some radar blind spots).
- In heavy traffic, overload of message slots may prevent reception of in-range AIS reports.
- Unless there are specific ASM Area Notices, AIS will not warn of mammals crossing the vessel's path.
- Consequently, mariners must treat AIS information with caution, always assessing and comparing all available sources of information.

Take 10: Issue 34

AIS is a hugely important tool for vessel safety and navigation, and its evolution is both rapid and ongoing. Here are ten important things to remember about AIS.

1 AIS transformation

AIS has been a transformative technology, both as a tool to help identify risk of collision but also aiding security and logistics.

2 Strengths

AIS is a powerful tool that allows ships to be better identified and seen in poor visibility or behind land. It is particularly useful when combined with radar and visual observations

3 Weaknesses

AIS is completely reliant on GNSS (GPS) and VHF, so any disruption to those systems will affect it. The quality of AIS transmission depends on the accuracy (or not!) of manually entered data.

4 Beware over reliance

Navigators should never solely rely on AIS for making critical decisions. Remember that Rule 5 of the Colregs requires the use of all available means to assess collision risk.

5 What else is out there?

AIS is only mandatory for vessels of 300GT on international voyages. This means that many smaller vessels, including fishing boats and leisure craft, may not appear. Other navigation hazards, such as rocks and beacons that will be seen by radar or visually, will not be picked up by AIS.

6 Search and rescue

The range of AIS is much greater than radar. It can be detected up to 60NM away, and can play a vital role in search and rescue operations.

7 The off switch

AIS can be turned off with the explicit permission of the Master. Traditionally, this would be in the case of a security threat to the vessel. However, we are seeing more and more occasions of AIS being turned off simply to make it harder to track vessels and their operations.

8 Looking ahead

There are a number of AIS tracking websites available. These can be very useful for looking ahead, identifying congested areas and assisting with passage planning

9 Into the future

The evolution of AIS is driven by technological breakthroughs. Satellite-AIS has remarkably expanded its operational extent. VHS Data Exchange System (VDES) is also emerging as the next evolutionary step, described as AIS 2.0.

10 Information sharing

When you have an opportunity, discuss with your bridge team how they use AIS and debate its pro and cons. Help new officers fully understand the strengths and weaknesses of AIS.

Inséré 22/02/24 NIEUWS NOUVELLES Enlevé 22/03/24

Euronav to acquire CMB.TECH for $1.25 billion

by Jasmina Ovcina Mandra

Belgian tanker shipping company Euronav NV and its controlling shareholder CMB NV have entered into a share purchase agreement for the acquisition of 100% of shares in cleantech maritime group CMB.TECH for $ 1.150 billion in cash.

Euronav said that the move fits its renewed strategy of diversification, decarbonization, and accelerated optimization of its current crude oil tanker fleet. As disclosed, the purchase price will be financed from the cash proceeds of the sale of part of the VLCC fleet to Frontline and includes $ 2.496 billion roll-over debt (bank, leasing and shipyard liabilities). The duo believes the acquisition would create a 'leading and future-proof shipping platform' and a 'key player in sustainable shipping.'

"CMB and Euronav believe that the addition of CMB.TECH to Euronav's business will enable a flywheel strategy – positioning the group to tap into each step of the energy transition towards low carbon shipping, with a clear vision on value creation for its shareholders. Euronav's older tanker tonnage provides excellent opportunities to recycle capital over time into more future-proof, attractive and diversified end-markets and contract types. In addition, Euronav's current customer portfolio is located at the centre of the energy transition and looking for low-carbon tanker shipping services," Euronav said.

"After having reached an agreement with Famatown Finance Limited and Frontline plc on the strategic and structural deadlock for Euronav, we are pleased to announce another significant milestone for Euronav with the acquisition of CMB.TECH. This will allow the Company to rapidly and meaningfully execute its diversification and decarbonization strategy," Alexander Saverys, Euronav's and CMB's CEO, said.

The transaction is also subject to important conditions, including approval by a special general meeting of Euronav's shareholders and customary waivers. Euronav and CMB expect to close the acquisition in February 2024.

CMB.TECH builds, owns, operates, and designs large marine and industrial applications that run on dual-fuel diesel-hydrogen and diesel-ammonia engines and monofuel hydrogen engines.The company offers hydrogen and ammonia fuel that it either produces or sources from external produces to its customers. CMB.TECH is active throughout the full hydrogen value chain through four different divisions: Marine, Technology & Development, H2 infra, and Industry. The value creation of the new strategy is driven by CMB.TECH's "future-proof" (or low-carbon emitting) fleet of 106 low-carbon vessels, of which 46 are under construction. Namely, the company's largest division is the marine division. It builds, owns, operates and designs a wide range of low and zero-carbon ships powered by dual-fuel diesel-hydrogen and diesel-ammonia and monofuel hydrogen engines: offshore wind support vessels, dry bulk vessels, container vessels, chemical tankers, and others (tugboats and ferries).The H2 infra division acts as a flywheel for both the Marine and Industry division – supporting that the green hydrogen and green ammonia value chain is a distinct part of a financially sustainable solution for the energy transition.

CMB.TECH's Industry division develops hydrogen powered heavy-duty industrial applications. The advanced technology allows the conversion of existing diesel engines into dual-fuel and monofuel engines. The engines include high-speed options for smaller-scale applications, as well as medium-speed and slow-speed engines for marine and heavy-duty applications.

Mandatory takeover offer update

On 27 November 2023, CMB filed a takeover offer on all outstanding Euronav shares with the offer price amounting to $18.43 per share.

CMB intends to maintain Euronav's listing on Euronext Brussels and the New York Stock Exchange, and has no intention to launch a squeeze-out bid following the closing of the offer.Given the company's strong focus on decarbonization following the implementation of its new strategy and the CMB.TECH acquisition, Euronav intends to propose to its shareholders to change its corporate name to CMB.TECH.It envisages keeping the "Euronav" name as the brand name for its tanker division.

Source : offshore-energy

Inséré 23/02/24 DOSSIER Enlevé 23/03/24

Docking Knock

A passenger ship was on a berthing approach to a dock. The Master took the con about 0.5nm from the pier, with the ship making about 7 knots.

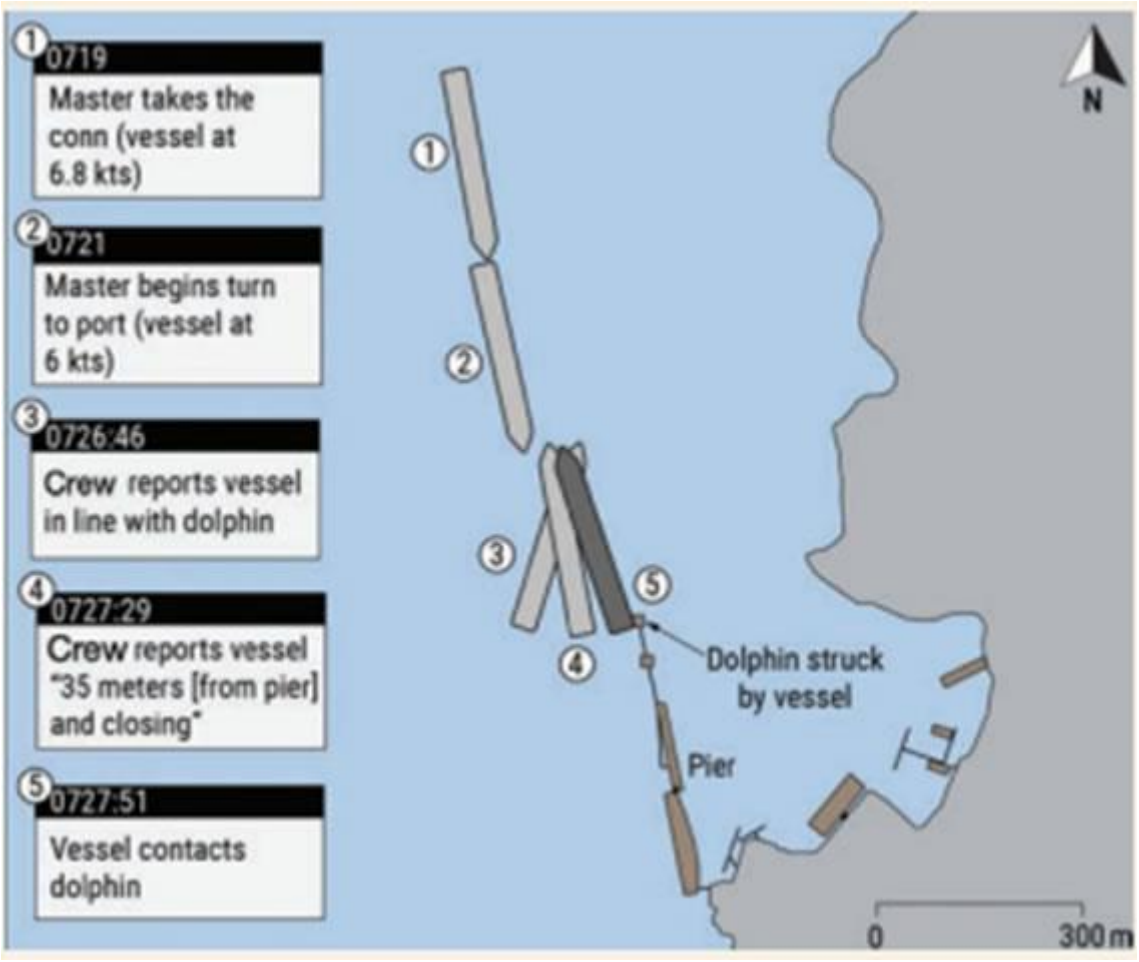
As edited from NTSB (USA) report MIR 23-10

When the vessel was about 0.37nm from the pier and making about 6 knots, the Master began the near 180° rotation to port in order to back into the berth and make a starboard docking. Two of three bow thrusters and both azipods were online.

The Master, staff captain, and a pilot were stationed on the port bridge wing. The ship rotated to port, with its stern swinging to starboard toward the pier. It needed to clear the pier's northernmost mooring dolphin. The staff captain managed communications with the forward and aft mooring decks; he also operated a starboard bridge wing camera (using a joystick), which allowed him to see the pier and mooring dolphins.

The chief officer and another pilot were located on the starboard bridge wing. The first officer was stationed at the forward console to monitor the ECDIS – which used integrated radar – and inform the Master of the vessel's distance to the pier every tenth of a mile as it approached the terminal. The second officer was stationed at the console at the back of the bridge. A helmsman and a lookout were also on the bridge. A crew member, who was in charge of the aft mooring deck team, was stationed on the stern to provide the vessel's distance to objects and the pier by radio when requested by the staff captain on the bridge.

After the vessel began rotating, the first officer stopped calling out the vessel's position relative to the mooring dolphin at the end of the pier. Instead, the Master relied on the bosun's distance callouts via radio and the ECDIS display on the bridge wing to identify the vessel's position relative to the pier, using the ECDIS. The Master also used the starboard bridge wing camera operated by the staff captain to note when the ship, moving athwartships to starboard, was clear of the dolphin, allowing him to go astern to the berth. However, the crew stated that the camera froze during the manoeuvre due to a hardware issue. When the vessel was almost completely turned, the crew member aft reported the vessel was in line with the dolphin. Soon after, he reported the vessel was 56 metres away from the dolphin. About 30 seconds later, he reported the distance as 35 metres and closing. Very shortly after, the ship's starboard quarter struck the mooring dolphin at the end of the pier. Vessel damage was minor but damage to the pier was estimated at $2.1 million.



The investigation found, among other things, that the cruise terminal pier had been extended northward by 120 metres with the addition of two dolphins and a connecting walkway about a year before the accident. However, this change was apparently not communicated to the responsible hydrographic authorities. As a result, the pier was not accurately depicted on any navigational charts. Therefore, the vessel's ECDIS showed the original, non-extended pier. Even so, as the vessel approached the pier, the weather was clear, and visibility was good. The Master and bridge team should have been able to see the extended pier and added dolphins. However, none of the members of the bridge team reported the extension as the vessel approached the pier. Instead, the Master relied on the ECDIS – which showed the old, inaccurate Electronic Nautical Chart (ENC) – to determine the vessel's position relative to the pier.

The investigation determined that the crew member calling out distance aft was giving accurate distances to the pier's northernmost dolphin from the ship's stern. However, the Master incorrectly assumed the bosun was calling out how much clearance the ship would have as the stern passed the dolphin. The crew member had either not been properly briefed before the manoeuvre or had received no instruction as to what exactly he was expected to communicate to the bridge team. Had the Master and crew member clearly understood what distances were being communicated, the Master and bridge team may have been aware of how close the vessel was to the dolphin and could have taken action to avoid the casualty.

- There is no substitute for clear, concise communication. In this instance, notwithstanding good visibility and daylight, the nine person berthing team either miscommunicated or under-communicated, thus paving the way for a negative outcome.
- Although an excellent navigational tool, ENCs can be inaccurate for a wide range of reasons. In this case, we observe that the berth extension of 120m completed about a year earlier was not reported to the hydrographic authority. As such, the ECDIS image the Master was referencing was not a reflection of reality.
- It is good practice in navigation and manoeuvring to use more than one source of position data input.

Inséré 24/02/24 NIEUWS NOUVELLES Enlevé 24/03/24

RNLN Patrol Ship Hull Vane Retrofit Matches Predicted Performance

The first Royal Netherlands Navy (RNLN) warship to be fitted with a novel hydrodynamic 'wing' is demonstrating efficiency and performance improvements in line with forecasts, according to both the Dutch Command Materiel and IT (COMMIT) and the company responsible for the modification.
Richard Scott 27 Dec 2023

HNLMS GRONINGEN, a Holland class patrol ship, received the Hull Vane retrofit earlier this year. Developed by Wageningen-based Hull Vane BV, the Hull Vane® is a patented stern-mounted underwater appendage that serves to suppress the stern wave and improve hydrodynamic performance to reduce fuel consumption (and hence CO2 emissions); increase maximum speed; reduce wake; and improve seakeeping by dampening pitch, heave and roll
Hull Vane installations have previously been fitted to yachts and commercial vessels. The decision to retrofit **GRONINGEN** grew out of a 2015 study that predicted a reduction of approximately 13% in annual fuel costs through the retrofit of the 'wing' design at the stern. Following interest from the Netherlands Ministry of Defence, further work was performed to characterise performance gains, optimise performance, and ensure the structural integrity of an integration.

Based on these studies, the company was in late 2020 contracted for the fabrication of the Hull Vane® structure for installation on a Holland class vessel. The project has been funded and led by MIND (Military Innovation by Doing) and COMMIT

Since receiving its 'underwater spoiler', Groningen has subsequently undertaken operations in the North Sea and the Caribbean, and transited the Atlantic. MARIN measurements performed during sea trials indicated a 16% fuel reduction at 17.5 kt, and 10% across the full usage profile, attributed to Hull Vane®. Based on a typical operating profile, this equates to a saving of 300,000 tonnes of CO2 emissions per year according to COMMIT. Speaking to Naval News at the NEDS exhibition in Rotterdam on 30 November, Hull Vane BV's CEO Niels Moerke noted that the formal evaluation period for Groningen would last 12 months.

"But what we have heard so far is absolutely in line with our expectations, and is serving to validate our modelling. Feedback from the crew has also been very positive – as well as reduced fuel burn, the wake has changed, and ship motions are reduced."

Reduced wake turbulence simplifies launch and recovery of the Fast Raiding Interception and Special Forces Craft from the vessel's stern slipway, while less deck motion in higher sea states expands the operating envelope for embarked rotary-wing aviation. Wake reduction also means lower visual and acoustic signatures. Hull Vane BV is now looking to address the wider naval ship market. "For the RNLN, the three other Holland-class vessels are potential candidates for the Hull Vane, as well as support ships and future vessels," Moerke said. "We are also looking to engage with European shipbuilders given that it is most advantageous to install a Hull Vane on new-build vessels."

Source : Naval News

Inséré 25/02/24 BOEKEN LIVRES BOOKS Enlevé 25/03/24

"Haveneconomie en -logistiek"

B O E K B E S P R E K I N G door : Frank NEYTS

Recent verscheen bij de Uitgeverij Garant (Antwerpen-Apeldoorn) het interessante boek "**Haveneconomie en –logistiek**". Chris Coeck, Jean-Pierre Merckx en Alain Verbeke tekenden als auteurs.

Haveneconome en logistiek management moeten op een geïntegreerde wijze bestudeerd worden. Een diepgaande kennis van de verschillende aspecten van de haveneconomie en het logistiek management is cruciaal om de efficiëntie en effectiviteit van de havens te kunnen verhogen.

In dit boek wordt een wetenschappelijke benadering van de problematiek gecombineerd met praktische en beleidsmatige aspecten. Naast het definiëren van de zeehaven als economische entiteit en het schetsen van de actuele logistieke ontwikkelingen ter zake, beschrijft het boek de vraag naar – en het aanbod aan – havendiensten. De structuur van de havenorganisatie en de concurrentiekracht ervan worden eveneens belicht. Tenslotte verschaft het boek ook inzichten in trafiekprognoses en het gebruik van diverse analyse-instrumenten om havens en logistieke diensten te bestuderen. Steeds worden de theoretische concepten aangevuld met praktijkvoorbeelden uit de Antwerpse haven of andere havens in de Hamburg-Le Havre range. Het boek richt zich tot beleidsvoerders en personen betrokken bij het formuleren en implementeren van havenbeleid. Ook vormt het een nuttige basis voor een strategische reflectie vanwege de haven- en logistieke manager. Het is eveneens hanteerbaar als handboek voor studenten op master- en postacademisch niveau, in het kader van colleges over haveneconomie, vervoerbeleid, transporteconomie en logistiek management. Doorheen het boek wordt een beleidsmatige benadering van de havenproblematiek gehanteerd. Dit is bijzonder relevant aangezien de lezer het meest gebaat is met een transparante, objectieve beschrijving van analytische instrumenten, beleidsconcepten en fenomenen uit de praktijk "**Haveneconomie en –logistiek**" (ISBN 979-90-441-3712-5) telt 224 pagina's en kost 27,5 euro. Bij een bestelling rechtstreeks via de uitgeverij rekent die daar 5 euro bij voor P&P kosten

. Bestellen kan via de link Garant Uitgevers, **http://www.maklu.be/MakluEnGarant/BookDetails.aspx?id=9789044137125** Uiteraard kan het boek ook besteld worden via de betere boekhandel.

Inséré 25/02/24 NIEWS NOUVELLES Enlevé 25/03/24

Shipowners urged to do more for the psychological wellbeing of seafarers

Threats to seafarer health: exposure to traumatic events, fatigue, discrimination, as well as lack of exercise and poor eating habits can all create potentially 'significant psychological

burdens' upon seafarers, according to the study reported in the International Maritime Health journal.

Maritime medical experts have urged shipowners to do more to care for the psychological wellbeing of crew members after a study found that more than one-third of seafarers have experienced traumatic incidents onboard their ships. Andrew Linington reports

Research conducted among 115 Polish seafarers found that 36% had witnessed a traumatic event during their career and a similar number reported having frequent nightmares or 'intrusive thoughts' – both symptoms of post-traumatic stress disorder The study – carried out by the Institute of Maritime and Tropical Medicine in Gdynia and the Medical University of Gdansk – was based on an analysis of key health indicators and harmful psychosocial factors in the work of seafarers, as well as an examination of their strategies for coping with stress.

Researchers found that 70% of the seafarers worked more than 55 hours a week and 45% get less than seven hours of sleep a day while at sea, compared with only 20% while ashore.The study – reported in the latest issue of the International Maritime Health journal – also found 'a positive relationship between exposure to a traumatic event and nightmares and intrusive thoughts, as well as between shorter sleep at home and exposure to a traumatic event'.

Fewer than half the seafarers exercise to the level recommended by the European

Society of Cardiology – five times a week for a minimum of 30 minutes – while at sea; and around a half fail to eat the recommended amounts of fish and dairy products.

Around 13% of the surveyed seafarers said they had experienced discrimination at least once during their career – either on the grounds of age, gender or race. Researchers said such harmful psychosocial factors create 'significant psychological burdens' upon seafarers – which may pose a direct threat to their health and safety and may be linked to evidence of high suicide rates. The high rates of shift work and night work among seafarers may also result in 'occupational burnout', the report adds. Researchers suggested the Maritime Labour Convention should be beefed up to ensure that shipowners provide free internet connectivity, noting that this would reduce the isolation seafarers experience and improve their quality of life onboard .

The medical experts said shipowners need to introduce a number of measures to reduce these risks, including planning voyages and port calls to minimise the need for night work and working weeks over 55 hours.

'It would also be beneficial to organise the work in such a way that the shifts lasted 12 instead of six hours where possible – for example during often multi-day stopovers in the roadstead,' the report adds. Researchers suggested the Maritime Labour Convention should be beefed up to ensure that shipowners provide free internet connectivity, noting that this would reduce the isolation seafarers experience and improve their quality of life onboard. 'Due to the frequency of occurrences that may cause PTSD, it seems reasonable to introduce an obligation for the shipowner to provide psychological or religious assistance to the crew (depending on the crew's needs and the cultural context) after a trauma, sudden death or a serious accident on board, in order to reduce the risk of psychological or psychiatric complications,' the report adds. 'Alternatively, we can consider training for the crew about coping mechanisms and strategies for stressful situations and training in interpersonal communication to reduce the stress level.'

Inséré 26/02/24 HISTORIEK HISTORIQUE Enlevé 26/03/24

A new day for His Majesty's admirals (I)

Nothing equals the beautiful order of the English at sea. Never was a line drawn straighter than the formed by their ships; thus they bring all of them to bear upon those who draw near them.

This admiring comment on the Royal Navy's battle formation was made by a French admiral in 1666. It was an accurate description of the tactics that made England supreme on the seas for 100 years—and then failed her utterly at the Battle of Ushant and most importantly at a critical juncture during the American Revolution.

As Keppel had demonstrated so unhappily off Ushant, the essential tactic was the line ahead. The French admiral had described it most accurately: the formation consisted of a perfectly straight line of sailing warships presenting a moving wall of fire against the enemy. In the constantly changing circumstances of naval battle, the line ahead had many advantages. It concentrated the fleet's firepower in one direction. It prevented such accidents as ships of the same fleet firing on one another or firing past or through an enemy ship at a friendly vessel. Most of all, it gave each captain clear and simple directions: he was to hold his place in line and focus his fire on the enemy ship opposite his own.

The first Fighting Instructions had been issued in 1653 under Oliver Cromwell, who was an early and ardent advocate of a powerful navy. The rules were revised and expanded in 1703, but the basic tactics remained the same. And of the orders laid down in the Fighting Instructions, the most sacrosanct decreed: "All the ships of every squadron shall endeavour to keep in line with the chief." Moreover, the penalty for not holding such a line was "severe punishment"—which could mean anything for a captain from a public reprimand to death, depending on the circumstances, The Fighting Instructions reiterated, "None of the ships of the fleet shall pursue any small number of the enemy's ships till the main body be disabled or run."

So the Royal Navy concentrated on its single majestic and overpowering line ahead. Even after the frustrating standoff against the French at Ushant, the Admiralty remained certain that traditional methods would be more than enough to win the naval engagements of the American Revolutionary War. For one thing the American navy was scarcely worthy of the name. As an organization, it had been bungled from the start. Shipbuilding contracts were let for political reasons and construction was delayed. The first American captains were no match for their Royal Navy counterparts. The statistics tell the sad story of America's first navy. Of the 50 warships built and bought for the Continental Navy during the war, all but one were lost to enemy action—having been either sunk, captured or scuttled. Meanwhile, the Americans took only five small ships of the Royal Navy.

The only significant damage done to the British by the Americans at sea was accomplished by the more than 1,600 privateers that were commissioned and sent out to harass British shipping. They captured something like 1,000 British merchantmen and caused an astronomical rise in shipping insurance rates. But they were little more than a nuisance to the Royal Navy, which destroyed even more American shipping. One officer in the Continental Navy managed in 1779 to bring the war into England's home waters. But sensational as was John Paul Jones's victory in the Bonhomme Richard over the Serapis, it amounted to little more than a psychological blow to the Royal Navy. The real challenge, once again, came from across the Channel.

The belligerency of France in 1778 turned the American Revolution from a shifting series of land battles into a truly maritime war. The armies—British, Hessian, American and French—fought on from the Canadian border to South Carolina. But the ultimate outcome was decided by the Navies of Great Britain and France.

The Battle of Ushant not only demonstrated that the line-ahead formation was outdated, it also showed that the French Navy of 1778 was superior in a number of respects.

This dramatic change could be accounted for in London as well as in Paris. During the 12 years of peace between the Seven Years' War and the American Revolution, the Royal Navy had been victimized by false economies at the Admiralty and profiteering by the Navy's suppliers. Meanwhile, King Louis XV's powerful adviser, the Duc de Choiseul, rallied Frenchmen in a campaign to rebuild their navy. Fund drives supplemented the royal treasury with money to construct new ships. They were named after the groups and towns that contributed, the most impressive being the 104-gun Ville de Paris. It was Choiseul who inaugurated the academies of marine architecture that were responsible for the better designed, faster sailing French men-of-war. Under Choiseul's direction, a corps of 10,000 Naval gunners was organized and rigorously drilled in the art of accurate naval fire. By 1770, when Choiseul left office, France had 64 ships of the line and 50 frigates. By 1778, when France entered the war on America's side, she had 80 ships of the line. In the following year, Spain honored the Bourbon family compact with France by declaring war on England, adding 60 ships of the line to the combined force confronting England. The Royal Navy had about 150 major ships to counter these 140, but not all were fit for sea.

Moreover, French gunners were by then more accurate than the British and were at their best at long range. That was important because of the new French strategy of avoiding pitched battle with any enemy force that was not clearly inferior in numbers. The Royal Navy was about to meet its match, but the Admiralty did not yet realize the situation.

Up until now, the Royal Navy had not yet actually lost a battle at sea. The new Franch tactics of hit-and-run had so far thwarted every British attempt to force a line-to-line slugging match. In one battle after another the British admiral would stubbornly form his line ahead; the French would cut up his rigging and sail away to fight again. In strictly naval terms the situation might be called a standoff. The effects were felt on the battlefields of North America, since the French Navy was increasingly able to deliver reinforcements to the Americans and to the French soldiers who had joined them.

One of those who could see the advantage of the new French naval strategy was General George Washington. For the' first four years of the war, with nothing but the ineffectual Continental Navy for support, the American war had gone badly. Now the French Navy was helping to turn the tide. In the summer of 1781, Washington thought he could see the makings of a devastating combined American-French operation. A large French fleet was in the West Indies endeavoring to take advantage of Britain's preoccupation with the colonies and to recapture some of the islands France had lost in the Seven Years' War, 18 years before. If that force, or part of it, could come north to support a campaign that Washington and the French general, the Marquis Gilbert du Motier de Lafayette, were planning, the colonists might win one of the most important victories of the war.

Major General Earl Cornwallis, with more than 7,000 of Britain's finest troops, was encamped in Yorktown, on the Virginia shore of Chesapeake Bay. If a French fleet could block the narrow entrance to the Bay, thereby cutting off Cornwallis' supply line, the Americans and French could launch a pincers attack and wipe out Britain's best army in the colonies. Washington wrote a letter to the French minister to the colonies, the Chevalier de la Luzerne, stressing what the American general saw as the "essential importance" of naval superiority in the war, and pleading for the French fleet to come north.

The commander of the French fleet in the West Indies was Rear Admiral Comte Francois Joseph Paul de Grasse, an aristocrat born in a feudal castle in the Alpes-Maritimes, now 59 years old and quite an imposing quarter-deck figure at six feet two inches tall—"six feet six inches on days of battle," one admirer claimed. De Grasse responded to the call from the colonies with his entire fleet. En route north he lost two of his ships to the same bizarre type of accident: a sailor doling out the ration of tafia, the brandy that was the French equivalent of grog, knocked over a candle and set the ship afire. First the 74-gun Intrepide

and then the 40- gun Inconstante were destroyed this way, and de Grasse ordered that thereafter a responsible officer must preside over every issue of tafia.

Still, de Grasse had 28 ships of the line to take north. Crowded aboard the men-of-war were three regiments of French infantry, 100 dragoons and 350 artillerymen-2,500 soldiers in all to reinforce Lafayette's troops. Their equipment and artillery were carried aboard 15 merchantmen that de Grasse chartered with money from his personal fortune. To avoid detection by British frigates in the Atlantic, de Grasse led his fleet through the treacherous, shoal-dotted Bahama Channel between Cuba and the Bahamas. By mid-August of 1781 the entire armada was riding north in the Gulf Stream off Florida, and on the evening of August 29, the fleet dropped anchor inside the entrance to Chesapeake Bay, picking off in the process a few British frigates that had not been quick enough to slip out of the Bay.

It happened that de Grasse's serpentine approach to the colonies had served him in a way he did not know. His departure from the West Indies had been discovered by the British, and Rear Admiral Sir Samuel Hood left Antigua on August 10 with 14 ships of the line to search for him. By sailing a straight-line course instead of cutting between Cuba and the Bahamas, Hood was off the American coast ahead of de Grasse. On August 25, four days before the French fleet arrived, Hood looked into Chesapeake Bay, found that all was clear and sailed on to New York.

Though His Majesty's Navy had to admit a certain grudging respect for the American privateers who preyed on British merchant shipping during the Revolutionary War, it had nothing but contempt for the Continental Navy. The American rebels could mount only a haphazard collection of weak and ancient vessels, so poorly crewed that one colonial legislator disgustedly termed them an aggregation of "Tinkers, Shoemakers and Horse Jockeys." Yet there was one American captain who delivered as stinging a slap as the proud Royal Navy had ever received. What is more, he gave it in Britain's sacred home waters—in a classic ship-to-ship action that was witnessed by a huge crowd of Englishmen who watched from the chalk cliffs of Flamborough Head on the Yorkshire coast.

JOHN PAUL JONES ON BOARD THE *RICHARD*

The Yankee "pirate" who humbled the Royal Navy

The American's name was John Paul Jones. The son of a Scots gardener, he had shipped out to the West Indies in 1761 at the age of 13. After a short career as a slaver and a trader among the islands, he had slain a murderous seaman in self-defense, decided he would not receive a fair trial on the island of Tobago and fled to Virginia. In 1775 he volunteered as a lieutenant in the new American navy and quickly proved himself as a naval officer. In command of the Continental Navy's 18-gun sloop-of-war Ranger, he seized several merchant ships in English waters, raided a coastal town and captured the Royal Navy's 20-gun sloop Drake. So exasperating did he become that he was known to the British as the Yankee "pirate."

But all that was only prologue. On the afternoon of September 23, 1779, in the Bonhomme Richard, an ancient French merchantman that had been hastily converted to a warship, Jones sighted 41 ships off Flamborough Head. They formed a British convoy under the protection of the Royal Navy two-decker Serapis, a copper-bottomed frig-ate—newer, nimbler and more powerful than the Richard.

Captain Richard Pearson of the Serapis had been warned by a boatload of local citizens of the Richard's approach. As the distance between the two ships narrowed, Pearson could see that he had a clear advantage-50 guns to the Richard's 40. And they were bigger guns—twenty 18- pounders to the Richard's six. However, Jones had the weather gauge—the advantage of whatever wind there was on this calm day—and he brought the Richard slowly down on the Serapis. By early evening, flying a British flag as a ruse, he was within pistol shot of the British warship. At this distance the two commanders could talk to each other.

Pearson was the first. "What ship is that?"

Jones whispered to his sailing master, who called back: "The Princess Royal. "

Pearson tried again. "Where from?" Pause. Pearson continued: "Answer immediately, or I shall be under the necessity of firing into you."

At that, Jones gave an order. A red-white-and-blue ensign replaced the British colors, and the Richard cut loose a devastating broadside.

The Serapis answered almost simultaneously—and as the heavy balls tore through the oak planking, there was a shuddering explosion from the Richard's gun deck. Several powder charges had gone off, killing many of the gunners and putting most of the 18-pounders out of action.

With the Richard's heaviest guns gone, that should have been the end of it. But Jones now performed a brilliant maneuver. Backing his fore- and main-topsails, he slowed the Richard and turned her across the Serapis' stern. He thus put himself in a raking position, in which all the guns along a ship's side can fire the length of the enemy. After a brisk exchange of broadsides, Jones realized that his only chance lay in grappling and boarding the English ship. But Pearson's marines slaughtered Jones's boarders as they struggled to climb onto the Serapis' decks.
In the close quarters, Pearson called out to Jones. "Has your ship struck?" Jones was astonished. He shouted back: "I have not yet begun to fight!"

A full moon had risen over the water, and the crow (watched in awe as Jones sent the Richard quickly forward and across the Serapis' bow to rake her once again. This manoeuvre was not successful, but Jones soon got his wish to grapple with his enemy. just as the Richard was passing the Serapis' bow, her rigging caught the Serapis' bowsprit; the breeze pivoted her around until she came alongside the Serapis, bow to stern. Jones called for grappling hooks, and the two ships lay locked together, their guns booming marksmen sweeping each deck and clouds of smoke swirling from dozens of fires on both vessels.

The murderous pounding went on and on, and the Serapis' heavier cannon were doing terrible damage. The Richard's hull was riddled; her decks were held up by only a few stanchions. But Jones's sharpshooters were causing carnage on the Serapis' decks and clearing the British from the tops as well. Now some of the Richard's men climbed out on the yardarms to lob grenades down onto the enemy. Incredibly, one of them, William Hamilton, scrambled clear across onto the Serapis' yardarms with a basket of grenades. And from there, taking dead aim, he dropped a grenade neatly through a hatch onto a pile of powder cartridges.

The explosion seemed to lift the Serapis' deck. It killed 20 men at the guns, horribly burned many others and knocked out half of the Serapis' cannon.

Nevertheless, the Richard seemed finished. She was settling in the water. The Richard' s chief gunner, Henry Gardner, could stand it no longer. He screamed at the Serapis, "Quarter, quarter, for God's sake!" Jones grabbed a pistol and flung it, knocking Gardner down. But Pearson heard the cry and called across to Jones.

"Sir, do you ask for quarter?"

Jones replied, "No, sir, I haven't as yet thought of it, but I'm determined to make you strike." Pearson turned back to his ship and ordered: "Boarders away!" The Serapis' surviving marines surged toward the Richard's deck, but confronted by the Richard's pike-armed defenders, they quickly fell into retreat.

Now Jones dashed to one of the 9-pounders, whose crew had been badly wounded. With superhuman effort, he singlehandedly trained the gun on the mainmast of the Serapis, loaded it with double shot and fired, loaded and fired it again and again.

On the Serapis, Pearson looked about his decks littered with dead and at the fires burning in a dozen places. At last, he stepped around the bodies to the staff where the red ensign was nailed—and ripped it down.

One of Jones's officers escorted the English captain over to the Richard's splintered quarter-deck. Pearson handed his sword to Jones. As he did so, the Serapis' mainmast cracked and crashed over the side. Both captains watched the mast and its tangled gear splash into the sea. Then Jones returned Pearson's sword and invited the defeated officer to his smoky, shattered cabin for a glass of wine.

In a fiery three-and-a-half-hour dance of death, John Paul Jones, the American "pirate," had outmanoeuvred and out-fought one of the Royal Navy's best captains in one of its finest ships. The Admiralty held a court-martial when Pearson was soon after returned to England in an exchange of prisoners. But the court could find no fault with the Serapis' captain; he had fought well, and he had, after all, protected the merchant ships from Jones's attack. In the end, Pearson was not only absolved of blame, he was knighted for gallantry. When John Paul Jones heard the news, he exclaimed: "Should I have the good fortune to fall in with him again, I'll make him a lord."

Lashed together, the flaming Serapis (left) and the shattered Richard (behind the Serapis) relentlessly pound away at one another. Victory finally went to the Americans, Jones testified later, because of his "will of most unalterable resolution."

As Graves, had no news of de Grasse. He was more concerned at the report that another French force, a squadron of eight warships under Commodore Comte de Barras, was transporting a shipment of siege artillery from Newport, Rhode Island, to the French and Americans surrounding Cornwallis at Yorktown. Graves and Hood agreed to join forces and, with 19 ships of the line, to sail for Chesapeake Bay to head off de Barras. While they were about it, they took along supplies and 2,000 troops to reinforce Cornwallis.

New Yorkers thereupon were given a first-hand example of Britain's press gangs at work as the Royal Navy rounded up 400 colonists to help man British ships. A press-gang officer recorded that the procedure "furnished us with droll yet distressing scenes—taking the husband from the arms of his wife in bed, the searching for them when hid beneath the warm clothes, and, the better to prevent delay taking them naked, while the frantic partner of his bed, forgetting the delicacy of her sex, pursued us to the doors with shrieks and imprecations, and exposing their naked persons to the rude view of an unfeeling press gang."

Early on the morning of September 5, as the British fleet approached the mouth of Chesapeake Bay, one of Graves's lookouts announced that there were some masts just inside the entrance. It looked as if de Barras and his squadron had already arrived; the eight French ships would be easy victims for Graves's 19. But as the British fleet drew closer to the mouth of the Bay, the lookouts reported a veritable forest of masts.

Graves did not know it at the time—and it would provide an even nastier shock in due course—but the Comte de Barras's eight-ship squadron was not among the vessels he was studying. De Barras was still en route from Newport laying a circuitous course south as far as the Carolinas to avoid detection by the British. These ships, as Graves would discover, were those of Admiral Francois de Grasse. There were 24 of them, four vessels having been sent on other missions, and as Graves would also discover, de Grasse was a brilliant tactician.

But for the moment, all the advantage—surprise, position, wind, tide, everything save numbers—lay with the British. De Grasse's fleet was anchored in Lynnhaven Roads along the southern shore and inside Cape Henry. As the British drew near enough to be identified, the French exploded into frantic activity, unfurling sails, slipping anchor cables and leaving them tied to buoys in the harbor. In utter confusion, they scrambled to clear the Bay for the Atlantic, where they could employ their tactics of firing at the British tops and running out to sea.

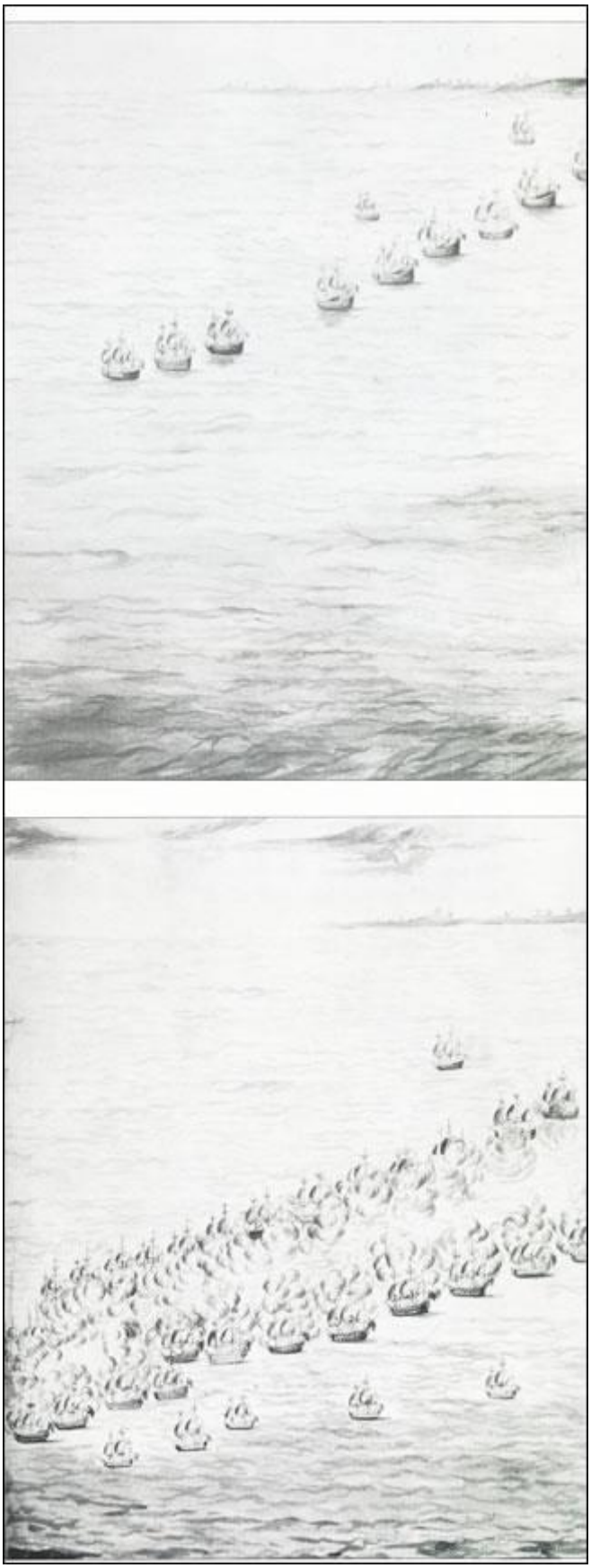
Graves was thereby presented with an even greater opportunity than he had anticipated on leaving New York. Here was a numerically superior French fleet virtually at his mercy. The wind was northeast, blowing into the Bay; the French were thus up against a lee shore, with an incoming tide against them as well. Nor could they maneuver into any fighting formation because of a shoal, called the Middle Ground, in the center of the Bay's entrance; the ship channel at this period was only three miles wide. All Graves had to do was send his 19 men-of-war down onto this scattered flock of 24 Frenchmen and pick them off one after another.

In fact, the French were in an even more parlous state than they appeared. Nearly 1,300 of de Grasse's officers and crewmen—close to half of the total—were ashore ferrying the troops and artillery they had brought from the West Indies. De Grasse's flagship, the Ville de Paris, was short 200 men. The 74-gun Citoyen did not have enough sailors to, man her upper-deck guns. De Grasse had ordered the recall signal hoisted, but the boats were too far up the Bay and he had sailed without them.

At the moment, the situation looked hopeless for de Grasse. But soon he could cry out with delight at what Graves was doing—or rather not doing. Instead of sending a spreading net of ships to close the exit to the harbor, the British Admiral was leisurely keeping to the classic formation of the Fighting Instructions.

The Union Jack flew at the mizzen peak of Graves's flagship, the London, signaling "Line Ahead" as the stately procession moved down on the entrance to the Bay. By the time Graves, maintaining perfect formation, finally reached the Middle Ground at the mouth of the Bay, the fleeing French had largely cleared the entrance, and were in the process of forming a line of their own. Whereupon, still in precise formation, Graves laboriously maneuvered his entire fleet around in the same orderly line, heading back to sea. As if at a formal review, the British fleet sailed into and out of the entrance to Chesapeake Bay.

Each ship kept her place in the formation, without a break in the line. It was an impressive spectacle, precise, orchestrated, beautiful—and utterly worthless. What is more, by reversing his line, Graves had compounded the error: now his weakest ships, which had been in the rear, were in the van and would have to lead the attack, if there was one. He himself was the 10th ship in the line; the new leader was Captain Mark Robinson in the 74-gun Shrewsbury.



Following the Fighting Instructions, Graves intended to sail along the French line and bombard it to splinters—that is, once the French formed a line. But at this point the French had no line—and with no enemy line to oppose, Graves's single line was helpless.

It was now mid-afternoon. Rounding Cape Henry, the French ships finally fell into a rough line as they hurried out into the ocean. This gave Graves his chance—but he lost it. Heading for the straggling French line, he kept his "Line Ahead" signal. So his straight, unwavering column brought the British up against the French at an angle, in a V instead of in parallel lines, with the result that only the British van, the lead ships of the line, came close enough to engage the French. Graves then used a combination of signals that was argued about for years thereafter. He hoisted a white pendant with a blue-and-white checkered flag beneath it, signalling: "Bear Down and Engage More Closely." But he also kept his "Line Ahead" signal flying.

"Bear Down" meant every captain could turn toward the enemy and attack the nearest French ship. But this would no longer be a line ahead. And most of Graves's captains, especially Hood, commanding the rear in the Barfleur, knew what the Fighting Instructions said about that: "Line Ahead" always superseded other signals. So Hood and the others in the center and rear stuck by the book. They kept their straight line.

Graves was thus attacking a superior force with only a part of his inferior force, and de Grasse's gunners shortly proved their mettle. As the converging fleets met at the point of the V, the leading Shrewsbury shook under the fire of the leading French ship Pluton. One shower of cannon balls swept the Shrewsbury's deck, ripping the left leg off Captain Robinson and killing the first lieutenant and 13 of the crew. Succeeding blasts from the Pluton killed 12 more of the Shrewsbury's sailors and injured 46. The Shrewsbury's mainmast and mizzenmast were shot through, and her sails and spars were so riddled and shattered that she had to fall out of the line.

When Captain Anthony Molloy tried to bring the second British ship, the 64-gun Intrepid, to the Shrewsbury's support, he came under even heavier fire from the French 74-gun Marseillais. With her main-topmast nearly cut in two, her sails in tatters, her rudder damaged, 19 shot holes between wind and water, and 21 killed and 35 wounded, the Intrepid also drifted out of the line.

De Grasse's ships did not escape without damage. A broadside from the Princessa in the British van swept the decks of the Refléchi, killing the captain. And the Auguste ran into a withering fire of British musketry as well as cannon. The Auguste's foretop bowline was shot away, threatening to send the foretop crashing down to the deck. Two French sailors were shot as they climbed up to repair the bowline. A third Frenchman thereupon scrambled to the foretop, repaired it while shot flew around him, and then slid safely back to the deck. Admiral Comte Louis Antoine de Bougainville summoned the young man to the quarterdeck and offered him his purse. But the sailor replied: "You need not pay me for doing my duty, Admiral, Hood coldly replied, "You had up the signal for the line,".
The opening guns of the battle had fired just after noon of September 5. It was almost dusk before Graves lowered his "Line Ahead" signal, which then permitted his captains to turn toward the nearest enemy. But it was too late. The faster French ships were in the Atlantic; de Grasse had escaped what should have been a calamitous trap without the loss of a single ship. In killed and wounded, he had inflicted 336 casualties on the British, while suffering 230 casualties himself.

The British were seething with recrimination. In an angry post-mortem aboard his flagship, the London, Graves demanded to know why Hood had not turned out of the line to engage the enemy.

Graves turned to the man who had led the van into action: Rear Admiral Francis S. Drake, a descendant of the great Elizabethan hero. Why, Graves asked, had Drake engaged the enemy?

"On account of the signal for action," Drake replied.

Graves triumphantly turned back to Hood and asked, "What say you to this, Admiral Hood?"

Sir Samuel said calmly, "The signal for the line was enough for me."

It did not help matters that Graves next allowed de Grasse to out-maneuver him again—this time to the disaster of Cornwallis and the British forces fighting at Yorktown. On September 6, seeking to prevent de Grasse from blockading Cornwallis, again Graves went after the French fleet, which was lying off Cape Henry. A merry chase it was. For five days, de Grasse led Graves on a wide circle out into the Atlantic and back toward Chesapeake Bay, slowing when the British fell behind, speeding up when they began to close, always remaining temptingly and infuriatingly near. It was a superb stratagem. For while de Grasse was playing hare and hounds, the eight warships of his comrade-in-arms, the Comte de Barras, arrived at Chesapeake Bay, as de Grasse knew they would, and proceeded to land their heavy artillery for the French and American troops besieging Cornwallis.

To be followed

Inséré 27/02/24 DOSSIER Enlevé 27/03/24

EU ETS – Who is liable to the authorities: Shipowners or managers?

Ahotly debated topic regarding the extension of the EU Emission Trading Scheme ("EU ETS") to include maritime emissions, is who should be responsible for submitting emissions allowances on the relevant submission date (the "submission date") to the relevant administering authority ("ETS obligations"), in particular in instances where a shipowner has delegated the responsibility to comply with the ISM Code to a manager. In such cases, should a shipowner and its manager decide in their bilateral management agreement which of them is responsible for ETS obligations ("Option 1")? Or should the manager always be responsible for those obligations provided the shipowner has delegated responsibility to comply with the ISM Code to him ("Option 2")?

This question is of particular importance for ship managers who manage ships which are not owned by the manager's group, as the assumption of ETS obligations vis-à-vis the administering authority is associated with high risks. Depending on the trade and emissions of a ship, the costs will likely amount to an average of €500,000 pa – and could be even higher.

If a manager's responsibility falls under Option 2, it is responsible for submitting the allowances to the administering authority on the submission date. A manager will want to arrange in the management agreement with the shipowner that the latter must provide the manager with sufficient allowances so that it can fulfil its ETS obligations. In the case, for example, of a time charter, the shipowner will try to agree with the time charterer that it must either procure the allowances for the ship it has chartered or reimburse the shipowner for the procurement costs. However, if the shipowner does not transfer the allowances to the manager, or if it becomes insolvent and the allowances fall into insolvency estate, the manager is left empty-handed while remaining responsible for compliance with ETS obligations.

"The Commission must adopt a final regulation in the fourth quarter of 2023, before the EU ETS for shipping enters into force on 1 January 2024."

One would have thought that the EU legislator would favour Option 2, which "is aligned with the existing application of the shipping company definition used in IMO and EU legislation in the last 20 years" (page 4 of an undated Concept Note – implementing act on the rules relating to the administration of shipping companies by administering authorities in respect of a shipping company, pursuant to Article 3gf of Directive 2003/87/EC). However, it would seem that the EU legislator is now keen to implement Option 1. The EU Commission published a draft on 1 September 2023 entitled "Commission Implementing Regulation (EU) laying down rules for the application of Directive 2003/87/EC of the European Parliament and Council as regards the administration of shipping companies by administering authorities in respect of a shipping company". In simple terms, the draft says that, in principle, the shipowner is responsible for complying with ETS obligations concerning the administering authority. However, if a manager has assumed the responsibility to comply with the ETS obligations on the basis of a management agreement with the shipowner, it is obliged to submit the allowances vis-à-vis the administering authority. The parties are therefore able to choose who is responsible for complying with the obligations. If the manager is responsible, it must provide the administering authority with a document clearly indicating that it has been duly mandated by the shipowner to comply with ETS obligations (Article 1 paragraph 2) together with the usual contact details (Article 1 paragraph 3). Where no document has been provided to the administering authority, the shipowner will be considered the entity responsible for ETS obligations (Article 1 paragraph 4).

*Tanker **CHEMROAD POLARIS** taking on bunkers.*

How should the regulations proposed in the draft be assessed? Some regulations are vague, but the core statement is that a manager is not always automatically obliged to comply with ETS obligations. Due to the high risk involved, managers in particular would welcome the implementation of Option 1. In fact, Option 1 also gives the parties more leeway to determine how they want to distribute obligations and risks. If a manager is not responsible for ETS obligations, this should be explicitly stated in the management agreement. If a shipowner wishes to entrust a manager with responsibility for ETS obligations this must also regulated in detail in the management agreement. The manager will want to ensure that it receives the allowances regularly from the shipowner (who should in turn receive them, in case of a time charter, from the time charterer) so that he can submit the allowances to the administering authority on the submission date. If the shipowner does not want to provide the manager with the allowances before the submission date (i.e. because the shipowner does not want to bear the insolvency risk of the manager), the parties will have to consider appointing a trustee to hold the allowances in trust for them both. The draft is still to be passed by the Commission. It can be commented on via the EU website until 28 September 2023. Somewhat controversially, the options are also being discussed by member states. The Commission must adopt a final regulation in the fourth quarter of 2023, before the EU ETS for shipping enters into force on 1 January 2024. Even though many issues remain undecided, shipowners and managers in particular must now begin to work on adapting charter parties, management agreements and other documentation to confirm with what the final regulations will likely entail.

Source: Watson Farley & Williams

Inséré 28/02/24 NIEUWS NOUVELLES Enlevé 28/03/24

A. Saverys: "CMB.TECH is de wereldreferentie voor groene scheepvaart"

Julie Desmet

Het nieuwe CMB.TECH zal tegen 2026 over meer dan honderd koolstofarme 'future-proof' schepen in zijn vloot beschikken. Dat maakte de familie Saverys bekend tijdens een presentatie van zijn strategie nu het Euronav wil combineren met de cleantech maritieme groep CMB.TECH.

Op 12 januari 2024 gaf de nieuwe directieraad van Euronav – waaronder de drie kopstukken Alexander (CEO), Ludovic (CFO) en Michael Saverys (CCO) – meer informatie aan de aandeelhouders, analisten en investeerders over de geplande overname van CMB.TECH en over haar vernieuwde groene strategie om het referentieplatform in duurzame scheepvaart te creëren.

Waardecreatie

Alexander Saverys, CEO van Euronav en CMB, stak van wal: "Laat me eerst zeggen waarom we nooit hebben geloofd in een fusie met Frontline. Het antwoord is simpel: gebrek aan waardecreatie", zegt hij. "We geloven dat een gediversifieerde scheepvaartgroep met een sterke focus op decarbonisatie meer waarde zal creëren dan puur gewoon een olietankerrederij. Dat wil niet zeggen dat we de tankermarkt verlaten. We zien nog steeds opportuniteiten."

"We betalen de verkoopsom (2,35 miljard dollar cash) voor de 24 VLCC's (very large crude carriers) van de Euronav-vloot aan Frontline niet in dividenden uit, net omdat we meer waarde willen creëren door dit geld te herinvesteren", gaat hij verder. "De kern van Euronav's langetermijnstrategie is de verjonging van de vloot en een nieuwbouwprogramma dat recent van start is gegaan."

De Euronav-vloot bestaat uit 17 VLCC's op het water en drie 'ammonia ready' VLCC's in aanbouw, 22 suezmaxen op het water en vier in bestelling en twee drijvende opslagtanks (FSO's) die in Qatar aan de slag zijn.

CMB.TECH – die maritieme en industriële toepassingen op waterstof en ammoniak bouwt, bezit, exploiteert en ontwerpt – bezit 106 koolstofarme en koolstofvrije schepen: 60 schepen op het water en 46 nieuwbouwschepen. Het gaat daarbij om droge bulkschepen (Bocimar), chemicaliëntankers (Bochem), containerschepen (Delphis) en schepen voor de offshore windindustrie (Windcat).

De nieuwe CMB.TECH moet dé wereldreferentie worden inzake duurzame scheepvaart "Als de overname van CMB.TECH op 7 februari 2024 tijdens de bijzonder algemene vergadering wordt goedgekeurd, creëren we een combinatie van twee sterke entiteiten", zegt Saverys. "Aan de ene kant hebben we een robuust tankerplatform met een sterk klantenportfolio en aan de andere kant een marktleider in groene scheepvaart. De nieuwe CMB.TECH moet dé referentie worden van duurzame scheepvaart."

7 miljard dollar

Het nieuwe CMB.TECH zal uit vier divisies bestaan: 'Marine' – waarin Euronav zich moet ontplooien als sterk tankerplatform, 'Industrie', 'H2 Infra' en 'Technologie & Ontwikkelingscentrum'. Voor kleine schepen ligt de focus op de verdere ontwikkeling van waterstoftoepassingen en voor grote schepen op ammoniaktoepassingen.

"De reële marktwaarde van onze vloot bedraagt ruim 7 miljard dollar", zegt hij. "De grootte van onze vloot die op ammoniak en waterstof zal kunnen varen, zal de productie van deze schone brandstoffen opschalen. Er zullen nog heel veel schepen in de vaart komen. Ik kom net terug van China, waar we nog een extra containerschip en twee newcastlemax bulkschepen in ontvangst hebben genomen", duidt hij. "In 2024 zullen er nog veel meer schepen onze vloot vervoegen."

"Daarnaast geloven we dat ondanks de duurdere kost van schone brandstoffen vandaag, we een competitief voordeel bieden op lange termijn. In het kader van de EU-regels binnen het pakket Fit for 55 is het voordeliger om in schone en toekomstbestendige schepen te investeren", besluit hij.

Zowat alle tandwielen die een haven doen draaien, wil de familie Saverys op termijn laten werken op waterstof en ammoniak. Het gaat dan om (sleep)boten, containerliften, vrachtwagens, generatoren en zelfs locomotieven.

Saga

Euronav nam op 22 december 2023 100% van de aandelen van CMB.TECH, de groene energiepoot van de familie Saverys, over voor 1,15 miljard dollar in contanten. Bovendien liet het management weten dat het aan de beurs genoteerd wil blijven. De overname moet Euronav toelaten om haar diversificatie en vergroeningsstrategie snel en zinvol uit te voeren.

De voorbije achttien maanden werd er in verschillende vakbladen lustig geschreven over de Euronav-saga, die Alexander Saverys destijds beschreef als een 'Netflix-serie waardig'. Op 9 oktober 2023 werd er een einde gesteld aan de impasse, met de aankoop van alle Euronav-aandelen – die Frontline aanhield – door CMB. Euronav en CMB verwachten de transactie af te sluiten in februari 2024.

Omdat de deelname van CMB de grens van 30% overschrijdt, is CMB wettelijk verplicht een openbaar overnamebod uit te brengen op de resterende aandelen in Euronav. Aandeelhouders hebben dan tot 15 maart de keuze: ofwel verkopen ze hun aandelen, ofwel volgen ze de nieuwe strategie onder de nieuwe meerderheidsaandeelhouder CMB. "Als u niet gelooft in onze strategie, kan u verkopen", richtte Saverys zich tot de aandeelhouders. "En anders, welkom aan boord. De zee zal niet kalm zijn, maar uw kapitein zal er alles aan doen om ons door de energietransitie te loodsen."

Inséré 29/02/24 DOSSIER Enlevé 29/03/24

Scrap metal fire extinguished but vessel sunk

A general cargo vessel was loading scrap metal into both the forward and aft cargo holds. A loader was lowered into the aft cargo hold to smooth the heap of scrap metal in certain areas. At one point, the operator of the loader saw a small amount of white smoke rising from within the scrap heap in the port aft section of the hold. He immediately raised the alarm.

As edited from JTSB (Japan) report MA2018-10

The shore fire department was called while crew prepared fire hoses. Soon, the loader operator – who was still in the hold – saw flames in the scrap heap. A few minutes later, crew were able to direct water jets from fire hoses onto the scrap metal heap. The loader operator evacuated the hold, leaving the arm of the loader extended above the hatch coaming. Local shore fire fighters arrived and took control of the fire fighting activities. Not long after, the crew were asked to evacuate the vessel for their safety.

The shore fire fighters decided, based on experience in past firefighting of ship fires, to use a protein foam spray delivered from a large aerial-platform chemical-spray fire truck. As

they made preparations for the application of the protein foam spray, the vessel listed to port, and the firefighters on the vessel withdrew. The fire continued to increase in size. About an hour after arriving, the shore fire fighters began spraying the protein foam into the aft cargo hold. This technique did not seem to have the desired effect and the shore firefighters asked the Master for permission to continue to use water. Permission was granted, but some 12 hours later, after the application of copious amounts of water, the vessel sank alongside the berth. The fire was then declared extinguished.

The investigation found, among other things, that the source of the fire was most likely to be a spark created by contact between metal objects, a battery, etc., in the scrap. The source then ignited combustible material mixed in the scrap (eg plastic, rubber, wood chips, paper). It was not possible to determine the exact origin of the fire. The investigation also found that the Master did not think to use the hold's fixed CO2 firefighting equipment after the fire was first discovered. In fact, this was a moot point because the loader was left with its arm extended above the hatch coaming. This would have prevented the closing of the hold's hatch, a necessary first step before releasing CO2.

Lessons learned

As seen in the previous MARS report (202345), scrap metal, while intuitively innocuous and listed as noncombustible in the IMSBC Code, is nonetheless a fire risk.
- Reactions during an emergency are honed with training.
- Masters and crew should be aware of the most efficient fire fighting methods on their ship and quickly be able to put these into practice.
- Copious and uncontrolled amounts of water poured into a ship will cause a loss of stability and possibly the foundering of the vessel. This will, however, probably succeed in extinguishing any fire on board.

Mars

Inséré 01/03/24 NIEUWS NOUVELLES Enlevé 01/04/24

US sinks 3 ships, kills 10 after Houthi Red Sea attack

By Jacob Gronholt-pedersen and Ahmed Elimam

U.S. helicopters repelled an attack by Iran-backed Houthi militants on a Maersk (MAERSKb.CO) container vessel in the Red Sea, sinking three ships and killing 10 militants, according to accounts by American, Maersk, and Houthi officials on Sunday.The naval battle occurred around 0330 GMT on Sunday as the attackers sought to board the Singapore-flagged Maersk Hangzhou, Maersk and U.S. Central Command (CENTCOM) said. Helicopters from the USS Eisenhower and USS Gravely joined the ship's security team in repelling the attackers after receiving a distress call, CENTCOM said.

Maersk said it was pausing all sailing through the Red Sea for 48 hours after the attack.bA spokesman for the Houthis said the group carried out the attack because the ship's crew refused to heed warning calls. He said 10 Houthi naval personnel were "dead and missing" after their boats were attacked by U.S. forces in the Red Sea.bThe naval battle underlines the risk of a regional escalation in fighting as Israel continues with its relentless bombing campaign following a Hamas surprise cross-border attack on Israeli towns on Oct. 7 that

left 1,200 dead, and took 240 hostages. Israel's air and artillery bombardment has killed more than 21,800 people, according to Gazan health authorities.

Yemen's Houthis have been targeting vessels in the Red Sea since November to show their support for Hamas, prompting major shipping companies to take the longer and costlier route around the Africa's Cape of Good Hope rather than through the Suez Canal.bThe Red Sea is the entry point for ships using the Suez Canal, which handles about 12% of global trade and vital for the movement of goods between Asia and Europe.

The United States launched Operation Prosperity Guardian on Dec. 19, saying more than 20 countries had agreed to participate in the efforts to safeguard ships in Red Sea waters near Yemen.bMaersk, one of the world's top cargo shippers, said on Dec. 24 it would resume sailing through the Red Sea. However, attacks have continued and U.S. allies have proven reluctant to commit to the coalition, with nearly half not declaring their presence publicly.bThe botched Houthi boarding operation was the second attack on the Maersk Hangzhou in as many days. The ship, which is carrying 14,000 containers en route from Singapore, was on Saturday hit by a missile about 55 nautical miles southwest of Al Hodeidah, Yemen.bThe shipping company added that the crew of the Maersk Hangzhou crew was safe and there was no indication of fire onboard the vessel, which continued its journey north toward the Suez Canal.

White House national security spokesperson John Kirby declined to say what options the U.S. is considering when asked on ABC's "Good Morning America" if Washington would consider a preemptive strike on the Houthis.

"We have made it clear publicly to the Houthis, we've made it clear privately to our allies and partners in the region, that we take these threats seriously."

Attacks by Yemen's Houthi militants on ships in the Red Sea are disrupting maritime trade through the Suez Canal, with some vessels re-routing to a much longer East-West route via the southern tip of Africa.

Attacks by Yemen's Houthi militants on ships in the Red Sea are disrupting maritime trade through the Suez Canal, with some vessels re-routing to a much longer East-West route via the southern tip of Africa.

Writing in the Daily Telegraph newspaper, British Defence Secretary Grant Shapps said: "We are willing to take direct action, and we won’t hesitate to take further action to deter threats to freedom of navigation in the Red Sea."

"The Houthis should be under no misunderstanding: we are committed to holding malign actors accountable for unlawful seizures and attacks," he said.

Earlier on Sunday, British Foreign Secretary David Cameron said he had told Iranian Foreign Minister Hossein Amirabdollahian in a call that Iran should help stop the Houthi attacks in the Red Sea. The BIMCO shipping association condemned the attacks and thanked those states involved in repelling them."We are thankful to U.S., French, and UK efforts so far and hope even more states will support the coalition with naval assets or other impactful means including diplomatic pressure on the Houthis and their sponsors," Jakob Larsen, BIMCO's head of maritime safety and security, told Reuters.

Inséré 02/03/24 DOSSIER Enlevé 02/04/24

Het Belwind windmolenpark vanuit de lucht © Haven Oostend

OFFSHORE WINDMOLENS ONTMANTELEN

Steve ***Bauwens***

België behoort tot de wereldtop voor wat betreft de installatie en het onderhoud van windmolen parken. Ondertussen komt de ontmanteling van de eerste generatie windmolens in zicht. Er rijzen heel wat vragen over de afbraak van deze reuzen constructies. De Grote Rede ging te rade bij zes Belgische experten die vanuit hun vakgebied het thema benaderen. Vast staat dat het opnieuw innovatief pionierswerk wordt.

PIONIER IN ONTWIKKELING, PIONIER IN AFBRAAK WINDMOLENS

Het Internationaal Energieagentschap verwacht dat windenergie in 2027 de belangrijkste bron van elektriciteits productie in Europa wordt. Er zijn namelijk heel wat voordelen aan windenergie: het is schaalbaar, kostenconcurrerend en biedt heel wat kansen op vlak van tewerkstelling en innovatie.

België is met haar 30.689 km2 oppervlakte een klein land. Dat geldt ook voor het Belgisch deel van de Noordzee, dat nauwelijks 3.454 km2 groot is. Toch is ons land naar windenergie capaciteit vijfde in de wereld en vierde wereldwijd voor offshore windenergie. Voor de bouw van het eerste windmolenpark in het Belgisch gedeelte van de Noordzee in 2008 was echt pionierswerk vereist.

De concessieperiode van het eerste Belgische park loopt tot 2039. Volgens de concessievoorwaarden moeten de parkuitbaters de omgeving in hun oorspronkelijke staat herstellen eens de concessie is afgelopen. Net zoals de installatie van de eerste parken, zal ook de afbraak opnieuw pionierswerk zijn Maar welke impact hebben de wind molens

en de ontmanteling ervan op het marien milieu? Hoe zal de ontmanteling in zijn werk gaan? Zijn windmolens recycleerbaar?

VERPLICHT ONTMANTELEN

Marijn Rabaut licht toe: "Momenteel is Zone 1 in het Belgisch gedeelte van de Noordzee volgebouwd met in totaal 9windmolenparken. Die zijn ontwikkeld tussen 2008 en 2020, wat een gefaseerde ontmanteling inhoudt in de periode 2034-2047. De nieuwe parken in de Prinses Elisabethzone krijgen méér en krachtigere windmolens waardoor het vermogen toeneemt. De nieuwe zone zal zo jaarlijks meer elektriciteit produceren dan twee grote en moderne kerncentrales. Samen met de reeds bestaande zone van 2000 MW komt de totale windcapaciteit op zee dan op 5800 MW.

De verplichte ontmanteling is gebaseerd op internationale regelgeving voor boor-platformen. Als algemeen principe geldt hier dat installaties in onbruik nooit mogen leiden tot schade aan andere gebruikers of het milieu. Op nationaal vlak zijn er twee wetten uit 1999 die bepalingen opleggen met betrekking tot de ontmanteling van windmolens, namelijk de Elektriciteitswet en de Wet Marien Milieu.

De Elektriciteitswet stelt dat de concessie kan verlengd worden zonder evenwel een totale duur van dertig jaar te overschrijden. Het zijn vaak de windmolenparkbeheerders die de verlengingen vragen, zij het niet altijd voor de maximaal mogelijke periode. Het hangt af van het vermogen, de technische geschiktheid van de turbines om langer te blijven werken en de financiële rendabiliteit. De ontmanteling moet rond zijn binnen de maximumperiode van 30 jaar en de windmolenparkbeheerders dienen al bij de installatie van de parken een provisie te voorzien voor de ontmanteling.

De Wet Marien Milieu voorziet in een ruimtelijke planning op zee. Deze wet verplicht parkbeheerders om schade of milieuverstoring in de oorspronkelijke toestand te herstellen. Bij ontmanteling moeten ze de windmolenpylonen wegnemen tot 2 meter diep in de zeebodem, de steenbestorting verwijderen en de elektriciteitskabels volledig uitgraven. Indien concessiehouders de kabels langer willen gebruiken, dienen ze hiervoor een nieuwe vergunning aan te vragen".

EEN RIJKGEDEKTE TAFEL ONDER WATER

In de windmolenparken is een specifieke biodiversiteit ontstaan, onder andere op de betonnen sokkels van de windmolens, zoals hier in het Belwind windmolenpark op de Blighbank. © VLIZ (Sven Van Haelst)

In de windmolenparken is ondertussen extra biodiversiteit ontstaan, onder andere op de betonnen sokkels van de windmolens. Steven Degraer volgt deze nieuwe natuur op de voet. *Steven Degraer*: "Offshore windmolens hebben een aantal ongewenste effecten. Zo mijden een aantal zeevogelsoorten –

zoals de Roodkeelduiker, een duikende viseter – een gebied van tot wel 15 kilometer rond de windmolens. De windmolens verkleinen dus hun leefgebied.

Andere vogelsoorten zoals sternen, lopen minder risico op aanvaring. Ze lijken zelfs t profiteren van het nieuw gecreëerde kunst matig rif onder het wateroppervlak. Dat rif ligt aan de basis van een heel rijke onderwaterfauna van ongewervelden en vissen. Zelfs zeehonden voelen zich aangetrokken door de windmolens omdat ze er een rijk gedekte tafel aantreffen".

"De nieuwe harde substraten die men in offshore windmolenparken plaatst, komen er van nature niet voor. Ze begroeien met allerlei dier- en plantensoorten. Bovenaan vind je groen- en bruinwieren, daaronder een band van hoofdzakelijk mosselen, en nog lager tref je zeeanemonen en vlokreeftjes. Hoe lager op de fundering, hoe meer soorten. De windmolenmasten staan gemakkelijk 20 tot 30 meter diep in het zeewater. Dat biedt een heel rijke habitat die van nature niet te vinden was in het Belgisch gedeelte van de Noordzee. Is dit positief of niet? Dat hangt af van hoe je hiernaar kijkt. Vind je vooral biodiversiteit en de 'voordelen' van deze nieuwe habitats belangrijk? Dan is de kans groot dat je voor bent. Ben je van oordeel dat het authentiek bewaren van het oorspronkelijke mariene milieu belangrijk is, zal je eerder tegen zijn. In België vinden we het aanvaardbaar dat deze nieuwe habitats zich vormen op en rond de windmolens. We gaan echter niet zo ver als de Nederlanders die – los van de nodige infrastructuur voor de windmolens – extra kunstmatige riffen aanleggen om deze nieuwe natuur aan te trekken.

DOORSTAAN WINDMOLENS DE TAND DES TIJDS?

Windmolens kunnen volgens de regelgeving 30 jaar blijven staan, maar is dat ook technisch gezien mogelijk? Volgens *Hugo Canière* van het Belgian Offshore Platform hebben windmolens net zoals auto's regelmatig onderhoud nodig. Bij defecten kijken de parkbeheerders of het slechts om kleinere reparaties en de vervanging van onderdelen gaat of dat er een structureel probleem is dat herstelling onmogelijk of financieel onrendabel maakt. Dit beïnvloedt de beslissing om grote, structurele defecten al dan niet op te lossen op het einde van de concessieperiode.

Pieter Jan Jordaens (Sirris) stelt dat er heel wat onderzoek gebeurt naar de structurele gezondheid van offshore windmolens. Ook Sirris, samen met de Vrije Universiteit Brussel, is actief op dit gebied. Anders dan bij de olie- en gasplatformen is de belangrijkste belasting van offshore windmolens niet de zwaartekracht. Krachten op windturbines laten zich veel hoger voelen, namelijk op de rotor, en dan vooral horizontaal als gevolg van de wind. Precies weten waar en hoe die kracht werkt, is nodig om veilige en kostenefficiënte ontwerpen te maken. De funderingen van de eerste parken zijn gebouwd met grote marges op vlak van veiligheid. Het betrof hier immers pionierswerk. De oudste turbines zouden de concessie- duur dus goed moeten kunnen doorkomen. Bij nieuwere generaties heeft toegenomen inzicht geleid tot het gebruik van betere materialen en technieken om de ruwe omgeving van de Noordzee het hoofd te bieden.

Momenteel moeten de funderingen na afloop van de concessieperiode volledig verwijderd zijn. *Hugo Canière* stelt dat het hergebruik van de funderingen afhangt van de gehanteerde technieken. Tegenwoordig is de monopile – in de bodem geheid – de meest gebruikte draagconstructie in het ondiepe water van de Noordzee. Het is niet evident om deze monopiles in hun geheel uit de bodem te halen. Tegelijkertijd worden de turbines groter en groter waardoor je nieuwe turbines steeds verder uit elkaar moet zetten en de huidige funderingen niet noodzakelijk op de juiste plaats zullen staan. "Beslis je om de sokkels toch te laten staan, dan kan je er eventueel creatief mee omgaan en er na herbestemming andere constructies zoals bv. voor waterstofwinning (in connectie met nieuwe windmolens) of aquacultuur op plaatsen", aldus *Hugo Canière*.

"Hoewel het momenteel wettelijk niet kan, zou het een meerwaarde kunnen zijn om de funderingspalen tot een drietal meter boven de zeebodem te behouden in functie van de nieuwe natuur", aldus *Steven Degraer*. "Zo neem je vanuit het biodiversiteitsstandpunt mogelijke negatieve effecten boven het wateroppervlak weg en behoud je de kunstmatige riffen onder water". Volgens *Hugo Canière* kan dit idee mogelijks bijkomende risico's met zich mee brengen voor de schepen die instaan voor het onderhoud van de parken. *Steven Degraer* trekt dit niet in twijfel, maar vindt dat de risico's moeten afgewogen worden t.o.v. de biodiversiteitswaarde die het behoud van een deel van de funderingen kan bieden. Momenteel worden de randvoorwaarden hiervoor geëxploreerd.

RECYCLEREN OF OP DE VUILNISBELT?

Hugo Canière ziet de ontmanteling gebeuren op een vergelijkbare manier als de installatie, maar dan in omgekeerde volgorde.

Een kraanschip licht het bovenstuk van de windmolen en laadt die op het dek. Dit neemt een tweetal dagen per windmolen in beslag. Daarna gaan de onderdelen terug aan land. Dit is perfect mogelijk met dezelfde schepen die vandaag windmolenparken installeren.

In de verdere toekomst zal hiervoor mogelijks een marktsysteem ontstaan waarbij bedrijven zich specialiseren in de ontmanteling en hiervoor specifieke ontmantelingstools en -schepen ontwikkelen.

Aan land zal er nood zijn aan een nieuwe logistieke en recyclageketen. De grote structuren dienen in kleinere stukken te worden gezaagd en bij recyclagebedrijven terecht te komen die de materialen recycleren. *Pieter Jan Jordaens* wijst erop dat je een aantal onderdelen kunt hergebruiken als ze nog niet aan het einde van hun levensduur zijn gekomen. "Voor windmolens op land bestaan er al websites waar je online herbruikbare onderdelen kunt bestellen. Zo krijgen tandwielkasten, generatoren, transformatoren en zelfs wieken soms een tweede leven. Wat je niet kunt hergebruiken, kan je terug tot basismateriaal herwerken zoals bv. staal, gietijzer en koper. Het grootste recyclage-probleem vormt het composietmateriaal, een mengeling van glasvezel of koolstofvezel met andere stoffen. Dit sterke en lichte materiaal is de ideale grondstof voor windmolenwieken, maar ook voor andere zaken zoals de rompen van jachtboten. Op dit moment ligt het vrijgekomen volume composiet van windmolenwieken op ongeveer 200 ton per jaar. Volgens cijfers van OVAM en Sirris zal dit tegen 2040 toenemen tot 12.000 ton voor offshore windturbines alleen. De Europese koepelorganisatie Wind Europe streeft naar een stortverbod op Europees niveau. Er is heel wat onderzoek lopende om de wieken beter te recycleren. De Spaanse windturbine-maker Siemens Gamesa heeft in september 2021 de eerste recycleerbare wieken voor windmolens aangekondigd. De ontwikkelaars maken gebruik van een technologie waarbij een nieuw soort thermoplast de componenten samenhoudt en hergebruik van koolstof- en glasvezels nadien mogelijk wordt. Immers, in tegenstelling tot de oudere generatie wieken, kunnen deze gesmolten worden voor hergebruik. Een stap dichter bij een 100% recycleerbare windmolen."

Ben De Pauw wijst erop dat er nog heel wat stappen moeten worden gezet. "In principe is 90% van een windmolen recycleerbaar. Maar een stalen schacht van een windmolen die 30 jaar de ruwe belasting van de Noordzee heeft getrotseerd, is natuurlijk niet meer zo fonkelnieuw als een net geïnstalleerd exemplaar. Bovendien is er ook nog het logistieke vraagstuk hoe alle onderdelen na afbraak terug aan land en in de recyclage-bedrijven geraken. Het Interreg North Sea Region project 'Decom Tools', waarin de POM West-Vlaanderen en heel wat andere partners participeert, zet hierop in. Een van de doelstellingen van het project is aan te tonen dat chemische recyclage van composiet mogelijk is en bovendien rendabel".

WERK VOOR DE BOEG

Een aantal Belgische, toonaangevende bedrijven zullen een prominente rol spelen in het ontmantelingsverhaal. *Lucien Romagnoli*: "Alle bedrijven die nu al actief zijn in de bouw van windmolenparken zien wereldwijd de vraag naar nieuwe offshore parken groeien. Gezien de grote uitdagingen op vlak van de klimaatopwarming en de energieomslag, zal dit nog sterk toenemen. Tegelijkertijd zal ook de vraag naar ontmanteling en recyclage van offshore windmolens snel groeien. Er ligt de komende jaren dus heel wat werk op de plank".

"Er zijn een aantal Belgische bedrijven gespecialiseerd in de ontmanteling van offshore installaties zoals boorplatformen. De gebruikte technieken vergen echter nog bijschaving om ook voor de windmolen-parken inzetbaar te zijn. Zo zijn structuren die jarenlang in het water liggen onderhevig aan verwering en kennen ze een grote aangroei met dieren en planten. We moeten bekijken wat dit betekent aan extra gewicht en hoe je alles zo efficiënt mogelijk kunt verwijderen en aan land brengen", aldus Romagnoli. De eerste ontmantelingen worden opnieuw pionierswerk. Maar van zodra de ontmanteling en hernieuwing van de windmolenparken in het Belgische deel van de Noordzee en daarbuiten van start gaat, zal dit heel wat – vooral technisch- industriële – jobs met zich mee brengen".

MAATSCHAPPELIJK DEBAT NODIG

Er zijn heel wat opties bij de ontmanteling van een windpark, zowel naar technieken, benodigde materiaal, kostprijs als naar de vereiste specifieke innovatie. Voor een aantal Belgische bedrijven is de opgedane kennis en expertise bij de installatie van windmolen-parken op zee een belangrijk exportproduct geworden. Maar die bedrijven zijn niet alleen. Gezien de wereldwijde stijgende interesse in windmolenparken op zee, zijn buitenlandse bedrijven een inhaalbeweging aan het maken. Het zal belangrijk zijn de bedrijven de kans te geven heel goed voorbereid te zijn op de ontmanteling van de windmolen- parken op zee. Daarom is een debat over wat we als maatschappij precies willen op het einde van de concessieperiodes nodig.

De kraan van het offshore jack-up installatieschip Vole au Vent (Jan De Nul) laat toe om op een veilige manier zware funderingen en componenten van offshore windmolenparken te installeren. © Haven Oostende

MEER LEZEN

- https://odnature.naturalsciences.be/mumm/nl/windfarms
- www.belgianoffshoreplatform.be/nl/news/tegen-2030- komt-helft-van-belgische-elektriciteit-u it-wi nd-en-zonneenergie
- www.belgianoffshoreplatform.be/nl/news/eerste-offshorewind-energiezone-in-de-belgische-noordzee-volledigenop-tijd-volgebouwd

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Inséré 03/03/24 NIEUWS NOUVELLES Enlevé 03/04/24

Most large fishing boats go untracked as 'dark vessels'

An AI analysis of satellite images reveals fishing, shipping and offshore development activities worldwide by monitoring boats that don't publicly broadcast their location

By Jeremy Hsu

The majority of the world's industrial fishing vessels are not publicly trackedThree-quarters

of the world's large fishing boats and a quarter of transport and energy ships are "dark vessels" that do not publicly share their location. The finding comes from an analysis of satellite images using artificial intelligence – an approach that could help better track human activities impacting the oceans.

"We had an idea that we were missing a big chunk of the activity happening in the ocean but we didn't know how much," says Fernando Paolo at Global Fishing Watch, a non-profit organisation based in Washington DC. "And we found that it's a lot more than we imagined."

Paolo and his colleagues used satellite images – including radar images that can reveal objects regardless of clouds or darkness – taken between 2017 and 2021 and covering coastal regions where most large-scale fishing and other industrial activities take place. The researchers trained several AIs to detect and categorise boats and offshore structures within this dataset. By comparing this global map of vessels with a database of boats that publicly broadcast their location, the researchers found the majority were not keeping their automated identification systems on. Such identification is not always required but the lack of its use may indicate illegal fishing and other activities. One AI learned to identify fishing vessels from other types of boats according to travel patterns and locations. It found that between 42 and 49 per cent of the approximately 63,000 vessels fit this classification.

Other AIs identified 28,000 offshore structures related to wind power generation and oil production, with fast-growing swarms of offshore wind turbines outnumbering petroleum infrastructure such as oil rigs. Such offshore developments and non-fishing ship activities are growing, whereas fishing activity has mostly "maxed out", says David Kroodsma at Global Fishing Watch ."We still need to map out all that non-fishing activity because it's encroaching on fishing grounds," says Kroodsma. "Because the oceans are becoming more crowded, you have to look at how it all fits together. «Publicly available satellite imagery lacks the resolution to detect small fishing vessels less than 20 metres in length, write Konstantin Klemmer at Microsoft and Esther Rolf at Harvard University in a Nature article commenting on the study. But they said such efforts can improve monitoring of human activities near protected marine areas and unregulated parts of the ocean.

Source : newscientist

Inséré 04/03/24 DOSSIER Enlevé 04/04/24

Improper operation of a ballast water treatment system (BWTS) can result in additional costs, delays and compliance issues for shipowners.

Crew training is an essential element in a BWTS installation to provide technical insight, operational expertise and regulatory knowledge to avoid trouble and ensure smooth-running ballasting operations, according to Optimarin.

The Norwegian BWTS supplier, which has delivered over 1000 such systems to date for vessels worldwide, has therefore developed an online training programme dubbed OptiLearn as part of its educational efforts to empower crews for effective ballast water

management. OptiLearn courses have so far been completed by more than 1200 successful participants with positive feedback.

In addition, Optimarin provides training on system simulators at various onshore locations and through its service engineers during BWTS commissioning onboard.

"The purpose of such training is to give the crew a good overview of the system to understand its functionality and components, how it operates and what are the maintenance requirements," says Optimarin System Engineer Øystein Myhrvold, who created the OptiLearn portal and content.

"This ensures a good user experience for operators of the system and correct operation of the BWTS in accordance with laws and regulations for handling of ballast water."

BWTS learning curve

Many crews are still on a learning curve with ballast water treatment, which is relatively new technology for shipping as it only became a regulatory requirement in September 2017 when the IMO's Ballast Water Management Convention entered into force.

The convention, which will require all ships to comply with the so-called D2 standard for ballast water discharges from September 2024, stipulates that each vessel must have a valid Ballast Water Management Certificate, a Ballast Water Management Plan and Ballast Water Record Book.

"There are several risk factors with ballasting operations. A major one is incorrect operation of the BWTS that can result in both environmental damage and serious financial consequences in heavy fines from port states due to non-compliance with the convention, which they are required to follow," Myhrvold explains.

And simply installing a class-approved BWTS is not sufficient to achieve compliance in the longer term as it requires crew knowledge of different ballast water testing requirements in various parts of the world, such as the US.

Clearly, inefficient ballasting can also result in costly delays at port that can have a commercial impact for the shipowner by affecting voyage schedules and delivery times.

Saving money on maintenance

Another potential risk factor is damage to BWTS equipment and components due to a lack of operational competence, such as through running the pump dry. This may necessitate premature replacement of such spare parts, resulting in higher maintenance costs.

Optimarin Service Manager Arne Lund says the company conducted a test in which it compared ballast water management on two vessels with identical equipment. This found that relatively higher maintenance expenses on one of the vessels was a direct result of poor operation of the BWTS.

"By providing training for the crew, we saw consumption of spare parts and other wares could be reduced significantly, thereby saving money. If the operator understands the system and knows how its components work, this makes it possible to anticipate and quickly resolve issues so the BWTS can run effectively with low maintenance costs over many years," he says.

The OptiLearn training platform hosts technical, operational, and service and maintenance courses that give participants a comprehensive overview of the Optimarin Ballast System. These cover system components and their functionality, operational and emergency procedures plus contingency measures, and how to maintain the BWTS.

"We are confident this will benefit the user in operating, servicing and troubleshooting the BWTS, avoid damage to equipment and reduce system downtime," Myhrvold says.

User-friendly system

Course participants have responded positively, giving it a rating of 4.7 out of 5 and stating it was "very educational", "well explained" and gave "nice and clear training about the BWTS". The course is available online 24/7 and can be accessed anywhere via an app on mobile devices, enabling participants to study whenever they want, with results uploaded to the OptiLearn portal.

Myhrvold highlights the fact the Optimarin Ballast System is designed for ease of operation with a user-friendly interface and a high level of automation, having been steadily upgraded with improved functionality based on client feedback over more than 20 years of BWTS deliveries.

"Using the Optimarin Ballast System has been simple and intuitive since the first version. Our advanced and fully automated system requires little work from the operator. This makes ballast water treatment as uncomplicated as possible, thus allowing crew to focus on cargo operations and other high-priority tasks," he explains.

Functions such as single-click start-up, a visual display of ballasting progress in the control panel and alerts on component status minimise the need for user intervention with the system, while giving a full overview of operations. Furthermore, the cloud-based digital solution OptiLink enables Optimarin technicians to remotely monitor the system through internet connectivity and thereby provide maintenance support, with over-the-air software updates. In addition, tracking of BWTS operations with OptiLink can help to pinpoint where crew training is needed.

Hands-on training

Along with e-learning, Optimarin provides crew training on fully functional demonstration systems located at a test facility at its head office in Sandnes, Norway, as well as at ship management company Anglo-Eastern's maritime training centres in Mumbai, India and Manila in The Philippines that host regular courses and workshops for seafarers in BWTS operation.

Optimarin also prioritises hands-on instruction for operatives during system commissioning to ensure they are familiar with the BWTS and enable them to ask questions. The company's service engineers have clear guidelines to provide basic guidance and determine specific training content for different segments of crew, such as engine room or bridge personnel, during handover of the BWTS.

"We see that a lot of start-up issues with new systems could be avoided simply by including crew training in the planning phase. It is also an ongoing process to ensure crew have the knowledge they need during service visits to minimise the need for maintenance," he says.

Myhrvold says there is now a greater industry awareness of the need for expertise in ballast water treatment, with a heightened focus among both the ship's management and crew on training in both the technical and operational aspects of a BWTS.

"The crew and customer should be trained to have a good technical understanding of the Optimarin Ballast System, as well as in-depth knowledge of running the system. This will result in fewer operational problems, reduced need for support and an enhanced customer experience overall," he says.

Inséré 05/03/24 HISTORIEK HISTORIQUE Enlevé 05/04/24

A new day for His Majesty's admirals (II)

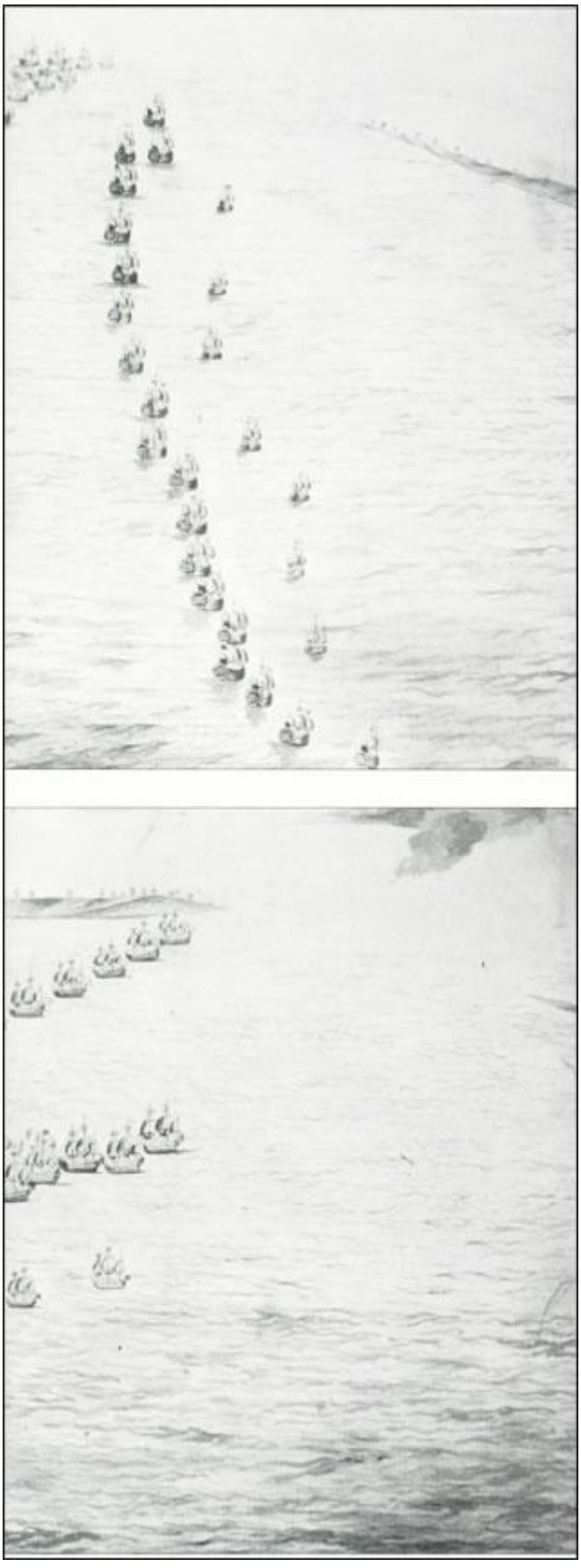
To make matters infinitely worse for the hapless Graves, he was now faced with 32 French ships of the line, most of them in better shape than his vessels. And now his fleet was down to 18; the Terrible had been so weakened by the battle and subsequent chase that Graves had ordered her scuttled. The crowning blow came when the French took up a blocking position across the entrance to the Bay.

There followed an icy exchange of notes between the London and the Barfleur. "Admiral Graves presents his compliments to Sir Samuel Hood," and "desires his opinion what to do with the fleet?- Reply: "Sir Samuel presents his compliments to Rear Admiral Graves," and "would be very glad to send an opinion, but he really knows not what to say in the truly lamentable state we have brought ourself." With resignation, Graves summoned another conference in his cabin. There was, all agreed, no alternative. The fleet would have to return to New York for repairs and reinforcements.

This sorry aggregation arrived on September 20. It was a month before a refurbished contingent of 25 ships of the line could sail again for Chesapeake Bay. They were too late. On October 19, just after the British fleet had departed New York, Cornwallis' band at Yorktown played "The World Turned Upside Down,- and his troops marched out to surrender to General George Washington and his army.

The fighting on land continued for another year. But the war had been lost for the British at Yorktown, in considerable measure because of the failures of the Royal Navy and its outmoded line-ahead tactics. Ye` even this catastrophe did not destroy the Admiralty's faith in traditional methods. For one thing, there seemed no suitable alternative—not one that the Admiralty wished to recognize, anyway. But in fact there was. In Edinburgh. Scotland, John Clerk, an amateur tabletop tactician, a land-lubber playing with ship models, had already devised a new set of tactics that would help greatly in making the Royal Navy supreme once again—though it would take awhile for his theories to penetrate the upper echelons of the Naval establishment.

In all his life, John Clerk never went to sea. He was 10 years old before he even saw his first ship, in the harbor at Leith, the seaport for Edinburgh. But he had read the shipwreck saga Robinson Crusoe and had become fascinated by a ship model owned by some of his schoolmate.s He soon thought of joining the Navy, but was forbidden to do so by his family, who, as he later explained it, "already had suffered heavy losses in both sea and land service.



"Nineteen British men-of-war, accompanied by smallerfrigates (upper panel, right), maneuver into a precise line of battle as they approach Chesapeake Bay on September 5,1781, allowing the French time to compose their own line before escaping in the opposite direction. When the laggardly British finally turned to close with the enemy (lower panel j, they did so at such an awkward angle that the French rear was never even engaged.

Young John Clerk had to be satisfied with sailing small boats in Leith harbor and with hours spent on the pier studying the ways a sailing ship employed the wind. He returned home to build ship models, sail them on his father's pond and experiment with rudders and rigging. As he grew older, naval tactics became his hobby—and obsession. He covered his family's tables with charts and drawings of tactics. He carved dozens of wooden ship models, small enough to carry two fleets about in his pockets, so he could work out his formations whenever he found himself with a few spare moments and a table nearby.

He became an Edinburgh merchant. But he doodled endlessly with his battle diagrams, worked out innumerable combinations of ship-of-the line formations with his ship models, and analyzed and reanalyzed the Fighting Instructions.

With his fresh eye, John Clerk detected the most serious weakness in the line-ahead formation: it depended for success on the enemy's cooperation; he had to form a line of battle as well. For the most part, the enemy fleets had done so up to now. But with the French Navy adopting its new tactics of hit-and-run, unless the French had a numerical superiority, Clerk concluded that the time-honored line-ahead formation was usually worthless. And when he read about the widely publicized courts-martial of Keppel and Palliser after the Battle of Ushant, he was even more convinced. The issue at court was whether Keppel had formed a proper line ahead, while to Clerk it seemed clear that the French had escaped because Keppel had insisted on a line ahead and had waited too long

to form it in any case.
This was too much for Clerk. He started to write a book decrying the old tactics and offering some novel ideas of his own. Entitled An Essay on Naval Tactics, john Clerk's study was intended as a textbook for Naval officers. It was packed with diagrams and charts, and its major proposition was concentration of fire—" directing the greater part of the force of fleet against a few ships, either in the van or the rear."
It was stunningly simple. Clerk advocated that instead of always parading properly and fighting one on one in gentlemanly fashion, the Navy concentrate on just a part of the opposing fleet, employing all of its ships against a few of the enemy's. The principle depended on a fundamental fact of fighting sail: a vessel's maneuverability was determined by the velocity and direction of the wind. Thus, for example, one could attack the rear section of a line of ships and devastate it before the leading ships could double back to the rescue. A ship of the line might take as long as half an hour or more simply to come about. In the past, the ships in numerous sea battles had split into separate groups of combatants. But most of these situations had occurred by accident and not by design. The Admiralty had always felt uncomfortable about such instances.
John Clerk became a zealot. He traveled to London, and through friends of friends tried to peddle his ideas to the Admiralty and to any captain or admiral to whom he was introduced. Naval warfare was a popular subject in England in those days; any Royal Navy success brought cheering crowds into the streets, and a loss stimulated editorials, letters, petitions and similar outcries all across the country. Clerk began to attract attention—at least among civilians. Enough friends, acquaintances and Navy buffs were interested in his book to permit a limited printing. But the Navy was something else again. Copies were sent to the Admiralty and to many admirals, only to be greeted with studied disinterest.

Many of the recipients, when asked, said they had not bothered to read the book. Others denied that they had even seen it. One admiral who publicly acknowledged the work and actually went so far as to praise it, did so with the patronizing comment: "And when I reflect that its ingenious author is only a military seaman in theory, I cannot sufficiently express my approbation of it."

But a number of admirals and captains were quietly reading Clerk's book in the privacy of their cabins and studies. One of them was a man who would soon make naval history.

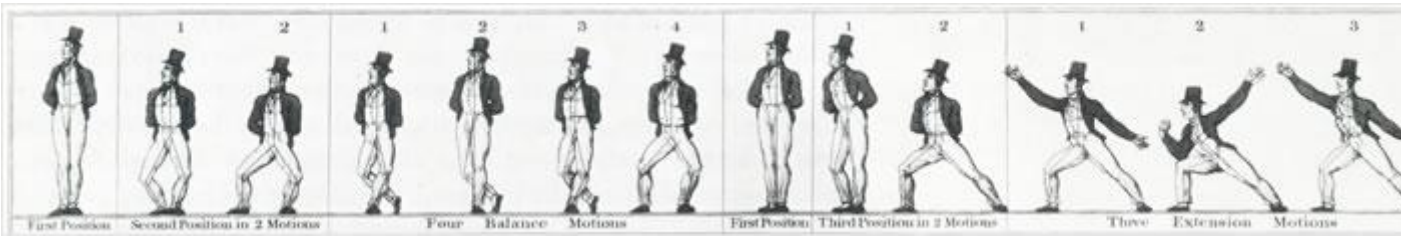
George Bridges Rodney was autocratic, sybaritic, profane—and brilliant. He had been Naval commander in chief in the West Indies before the War of Independence. He had served as governor of Greenwich Hospital for old and infirm seamen when it was described as "a hotbed of the dirtiest conceivable jobbery and thieving." By 1774 Rodney's gambling debts had grown so huge that in order to escape his creditors, he had fled to Paris during a rare period of peace between England and France. When more creditors in Paris threatened to close in on him, he was rescued by a friend: in a grand gesture of ancien regime chivalry, the wealthy Louis Antoine de Gontaut, Duc de Biron, proffered Rodney a loan that permitted him to return to London, where in 1779 the Admiralty reassigned him to the West Indies.

It was an even more important post than before. Not only was much of the naval warfare of the American Revolution being fought in the West Indies, but the area also served as the British base for naval actions off the North American coast. Rodney was therefore the recipient of much well-wishing and a great deal of well-meaning advice. According to John Clerk, it was through a mutual friend that Rodney was given a manuscript copy of Clerk's An Essay on Naval Tactics.

Admiral Rodney was a member of the conservative school of tactics and a supporter of the line-ahead battle formation. Yet he was also a man with an open mind. He did not comment directly to Clerk. But an acquaintance recalled an evening before Rodney's departure when the admiral sat at a dinner table demonstrating with cherry pits among the port glasses

how he planned to break the French line. And when another friend asked Rodney what he thought of john Clerk's theories, the admiral had an oracular answer: "You shall see what I think of it the first time I meet the French fleet."

In fact, he did not employ Clerk's cut-the-line tactics the first time he met a French fleet—though he did depart somewhat from the orthodoxies of the day. En route to the West Indies with 22 sail of the line, he encountered an enemy squadron off the Portuguese coast, just below Cape St. Vincent. It was the Spanish contingent of a force blockading Britain's base at Gibraltar. In the so-called "Moonlight Battle" on January 16, 1780, in wintry gale winds, Rodney did not wait for the Spaniards to form a line or to form one himself. Ill with the gout, an aged man at 61, he gave his commands from his berth: "Lay me alongside the biggest ship you can, or the admiral if there be one." He did not cut the enemy's line because there was no line to cut. But he routed the Spanish fleet, capturing or destroying seven of the 11 ships.



Without so much as toppling his topper, an exemplary seaman goes through the knee-flexing bends and lunges of a ballet-like drill designed to teach the fancy footwork that would make him deadly with a cutlass. Genteel as the exercises may appear in this diagram issued by the Admiralty in 1813, they were followed in grim earnest by sailors who knew their skill with a blade would mean life or death upon the call for "Boarders away!"

The blockade of Gibraltar was lifted. Rodney became a national hero and was knighted. He continued on to the West Indies, where he fought two inconclusive battles with the French; in neither of them did he have the opportunity to go for the enemy's line. He remained there for a year, during which he amassed a fortune in prize money from privateers and from a looting expedition against the rich Dutch island of St. Eustatius in the Leewards. Then in the summer of 1781, in great discomfort from the gout and chronic prostate trouble, he returned to England to take advantage of the healing waters of Bath.

By December 1781, as all England was agonizing over the Navy's sorry performance at Chesapeake Bay and the subsequent surrender of Cornwallis at Yorktown, Rodney prepared to return to the West Indies, and went aboard the Formidable, a 90-gun ship of the line. But westerly gales delayed his journey and he went ashore to wait the storm out at Caws and Bay. The son of port Commissioner Paul Ourry later remembered when the admiral and the commissioner propped their gouty feet before the fire and he overheard Rodney declare, "Damme, Paul, if I get near that rascal de Grasse, I'll break his line."

In February of 1782 Rodney was back in the West Indies. His second-in-command was Sir Samuel Hood, who had helped to lose the Battle of Chesapeake Bay. The winner of that battle, Comte de Grasse, had also returned to the West Indies. Rodney and de Grasse finally met in April of 1782, off the island of Dominica.

De Grasse had 33 ships of the line to Rodney's 36. But the French Navy's orders were to avoid pitched battles whenever possible, and under these circumstances de Grasse was convoying an assault force to attack England's most important West Indies possession, Jamaica. Rodney had guessed de Grasse's target; when he had been warned that he should keep protective squadrons near Barbados, St. Lucia and Antigua he had answered, "Oh

damn these islands! Jamaica is of ten times more consequence than all of them put together."

De Grasse turned north. Rodney followed. For four days he chased his quarry along the westward shores of Martinique and Dominica. At this point de Grasse became the victim of bad fortune. It first took the form of a series of misadventures by the hard-luck French 74-gunner Zele. On the night of April 10, after two days of chase, the Zele collided with the 64-gunner Jason. Both were too damaged to keep up with the rest of the French fleet. The Jason was sent off to port for repairs, while the Zele's crew tried to make their repairs at sea. The next morning Rodney spotted the crippled Zele and sent a few ships to take her. De Grasse countered by coming back to cover her. On the night of the 11th the Zele collided with another French ship, the Ville de Paris, and put herself entirely out of action. De Grasse was forced to abandon her; he now had 31 ships, and Rodney, with his 36, was almost upon him.

Moreover, de Grasse found himself in a trap. His northward progress was blocked by a group of islets known as the Saints, between Dominica and Guadeloupe. He considered ducking through the passage between the two islands, but the wind was blowing through the channel from the east. His only open route lay to the south. He would have to double back on his pursuers. But at least—as at Ushant—it would be a passing engagement with the fleets on opposite tacks. They would sail past each other at a combined speed of four to five knots even in the dying breezes. The British gunners would be unable to concentrate on the French hulls, while the French could still cut up the British rigging; it took much pounding to damage stout oaken hulls, but one good broadside of flying chain and bar could slice through great areas of shrouds and braces. De Grasse turned south. And Rodney turned to meet him as he came past.

At first it looked like every other Royal Navy battle for the past century. In an unswerving line ahead, Rodney's fleet moved alongside the French fleet as it filed past. His gunners aimed at the French hulls as de Grasse's gunners sent chain and bar shot slashing through the British rigging; the topmasts of nearly every ship crackled and twisted as the flying shot cut them away.

But now de Grasse became the victim of foul luck from which there was no escape. The wind shifted. It hauled from east to southeast and hit de Grasse's line at the center. The French ships at the center and rear, already close-hauled, had to fall off slightly to keep their wind. Others were taken aback and stalled. Gaping holes appeared in the French line.

Had John Clerk been aboard Rodney's flagship, he would have cheered. Here was the perfect example he had hypothesized in so many diagrams and in so many tabletop maneuvers with his pocket models. The enemy line was open and waiting to be cut.

At this point, Rodney may or may not have suffered an attack of indecision. Only one record survives to tell what transpired on the Formidable's quarter-deck during the next few minutes. Many years later, Sir Charles Dashwood, who had been a midshipman aboard Rodney's flagship, recounted a vivid scene. As he related it, Fleet Captain Sir Charles Douglas had climbed onto the hammock nettings at the forward rail of the quarter-deck to study the ships ahead, and saw the gaps in the French line. One gap was directly ahead. Climbing down, he asked Midshipman Dashwood, "Dash, where's Sir George?" Dashwood had just replied that the admiral was in his cabin when Rodney came on deck.

Doffing his hat, Douglas approached Rodney and urged, "Break the line, Sir George. The day is your own, and I will insure you the victory." "No," said Rodney, "I will not break my line."

The two men paced the quarter-deck in opposite directions, turning and coming back toward each other. Douglas tried once more. "Only break the line, Sir George, and the day is your own."

This time Rodney replied with grudging permission. "Well, well, do as you like," he said, and went into his cabin.

Douglas immediately ordered the helm to port. The Formidable swung across the line of battle and moved through the French line, all guns firing as she went. In the hail of cannon balls from the British flagship the French warship Glorieux lost all her masts at once.

The Formidable flew no signal for breaking the enemy's line because there was none in her flag locker. And Rodney must have watched anxiously at his stern windows. Whether or not he had been talked into it, he had made a radical decision. The question was whether his fleet, still under "Line Ahead," would break precedent and follow his lead.

Within minutes Commodore Edmund Affleck in the 74-gun Bedford went through another opening, splitting it so that the entire British rear could follow the Bedford through. Captain Alan Gardner of the Duke had in fact preceded Rodney through the line by accident: the wind shift had pushed the French ship opposite him across the Duke's bow. In horror at the thought of being cut off, Gardner looked to the flagship, which was next astern of him, and with vast relief watched the Formidable turn through the line. The Duke swung over and followed her.

Unlike his compatriot at the Battle of Chesapeake Bay, Rodney immediately hauled down his "Line Ahead" signal, keeping aloft the one for close action. Rounding up on the unprepared Frenchmen on their other side, the British ships isolated and surrounded small contingents of the disordered French line, concentrating four ships against three and in some cases three against one.

The French ship Ardent, carrying most of the siege artillery for the attack on Jamaica, struck her colors after a few exchanges of fire. Most of the French decks were crowded with soldiers for the Jamaica assault; they were mowed down by British shot. So many bodies were dumped over the French sides that the sea quickly became tinged with red, and schools of sharks moved in among the ships.

The dismasted Glorieux was taken in tow by a French frigate. British men-of-war moved in on them. On the Formidable's quarter-deck, Fleet Captain Douglas, watching the pursuit, was reminded of Homer. As Rodney came back on deck, sucking a lemon, Douglas called to him: "Behold, Sir George, the Greeks and the Trojans contending for the body of Patroclus." Rodney snarled, "Damn the Greeks and damn the Trojans! I have other things to think about."

The 61-year-old admiral, exhausted by the tension of battle, ordered an armchair brought onto the quarter-deck and sank into it. Tossing aside his lemon, he asked a nearby midshipman to make him a lemonade. The midshipman went below and returned with the lemonade, stirring it with the only utensil he could find, a dirty knife. Rodney looked at the knife and said, "Child, that may do very well for the mid-shipmen's berth but not for an admiral; drink it yourself and go and call my steward to me."

Rodney's flagship Formidable (flying the white flag, center background) smashes through the French line at the Battle of the Saints on April 12, 1782. The admiral's revolutionary maneuver set the French to rout and ushered in a new era of naval tactics. But on another level, the great victory was something of a disappointment: because Rodney managed to capture a mere five ships, his reward for the stunning victory amounted to only £ 5,016 in prize money.

The Formidable had gone through the French line at about 9 a.m. The swirling battle went on, with a pause during a flat midday calm, ink, the late afternoon. By then five of the French ships had struck their colors. The Glorieux was cut away from her tow by the British pursuers. The prize of the battle was the 104-gun French flagship, the Ville de Paris, on which half-a-dozen British ships concentrated their fire. As her hull splintered and her rigging disintegrated under the storm of shot, the French flagship's gun crews fought back until all their cartridges were gone and they had to ladle the powder into the gun barrels. By late afternoon, her rudder knocked out and her cannon balls used up, the Ville de Paris rolled helplessly in the sea as Hood's Barfleur came down and sent a last flaming broadside into her. On the Ville de Paris's quarter-deck a tall figure stood by himself. Admiral de Grasse finally hauled down his flagship's colors. As he did, Rodney brought the Formidable alongside the Barfleur, and officers from both British ships were rowed to the French flagship to climb her side and accept de Grasse's surrender.

On the Formidable's quarter-deck Rodney turned to Douglas and said, "Now, my friend, I am at the service of your Greeks and Romans, for the enemy is in confusion and our victory is secure."

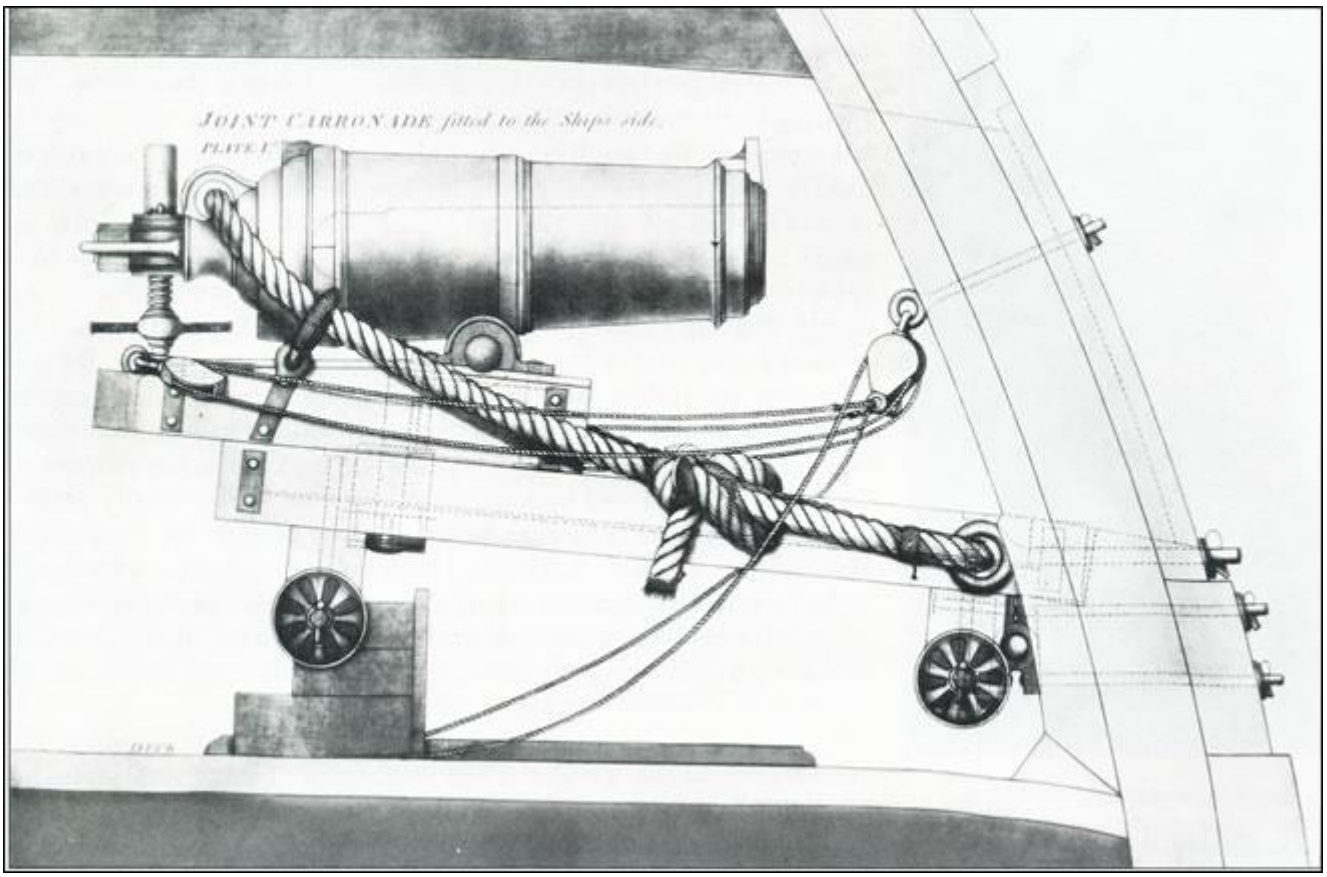
To "that rascal de Grasse" Rodney was generous and courteous. The French admiral was given the run of Rodney's cabins, and professed himself in love with the Misses Rodney as soon as the portraits of Rodney's four daughters were restored to the admiral's cabin from the wine room, where they had been stored during the battle. During the pleasant, peaceful days following the battle, de Grasse strolled the Formidable's quarter-deck, watching the sailors catch a shark and chatting with Fleet Captain Douglas; despite his stay in Paris, Rodney's French was limited, but Douglas was a French scholar. The French admiral confided that he had had to leave his private fortune, amounting to £5,000, in a chest aboard the Ville de Paris, and was concerned that the chest might be looted by his sailors. Rodney sent some British sailors over to the Ville de Paris; they returned with de Grasse's chest and a few others as well.

For weeks after the Battle of the Saints, and for more than a century since, controversy has persisted. Sir Samuel Hood argued that Rodney should have followed up his victory by pursuing the remainder of the French fleet. Rodney, however, had not slept for four nights. Darkness was falling swiftly, as it does in the tropics, and there would be no moon. The ships were not far from the shoals and reefs of the islands. The French had done their usual damage to the British rigging. Rodney had had enough, and he did not want to risk losing one of his ships—or any of the prizes he had captured. By next morning, when Hood came

aboard the Formidable to urge a chase, the surviving ships of the French fleet were already below the horizon. "Come, now," said Rodney, "we have done very handsomely as it is." With understandable satisfaction Rodney dispatched a fast frigate to London with the message: "It has pleased God, out of his Divine Providence, to grant to His Majesty's arms a most complete victory."

Englishmen reacted to Rodney's news with pent-up hysteria. It was the Royal Navy's most decisive victory since the naval engagements of the Seven Years' War. Rodney was rewarded with a peerage and an income of £2,000 a year; Hood was also given a peerage, and two more of Rodney's captains were knighted.

Called "the smasher- by the British—and the "devil gun" by the French, who were its targets—the stubby carronade was designed for close quarters and in its biggest models fired an immense 68-pound ball propelled by five and a halfpounds of powder. Introduced in 1779, it played a major role in the Battle of the Saints; the French did not devise anything equaling its powers of destruction until 1799.



At the Battle of the Saints, Rodney had launched a new day in naval warfare. Since the Seven Years' War, British admirals had fought the enemy in the line-ahead formation, and had never won so decisive a victory—until Rodney cut through the enemy's line off Dominica.

His victory was compounded of other elements besides the new tactics. A major contributor was Rodney's fleet captain, Sir Charles Doug-las. Historians have questioned Midshipman Dashwood's recollection that it was Douglas who talked Rodney into adopting Clerk's tactics, but Clerk later claimed that he had personally demonstrated his maneuvers to Douglas in London before the Battle of the Saints. Douglas deserves much of the credit for

other reasons. He was a brilliant innovator, who markedly improved the British rate of fire. Douglas substituted flannel for silk as a powder cartridge; flannel was more flammable than silk and thus left no smoldering remnants in the breech of the cannon, which in turn meant the elimination of the worming in order to extricate the still-burning cartridge fragments. Another Douglas innovation was to moisten the wads between powder and ball, also reducing the possibility of their igniting and the need for the worm.

Yet a third Douglas improvement was a perforated goose quill filled with powder; it could be thrust into the cannon touchhole much more quickly and efficiently than the old method of pouring a portion from a powder horn. Hundreds of these goose quills were ready for instant use in the Battle of the Saints.

Among the most important of Douglas' contributions was one that materially increased the rate of fire. He devised a system of lead springs and weights that worked to absorb the recoil of the cannon and made their return to firing position much easier and quicker. But the greatest Douglas invention was an intricate block-and-tackle arrangement that enabled a crew to aim a gun with greater accuracy and flexibility. Besides the wedges that had lifted or lowered the muzzle, Douglas' tackle permitted a wider arc when training the gun. Douglas' reforms enabled gun crews to aim, as much as 45 degrees in either direction; when approaching an enemy, they could get in as many as three shots before the enemy was in position to reply—and when departing, they could deliver an equal sting after the enemy had been forced to cease fire. At the Battle of the Saints the gunners of de Grasse's flagship, the Ville de Paris, were dumfounded by the concentrated fire they were receiving.

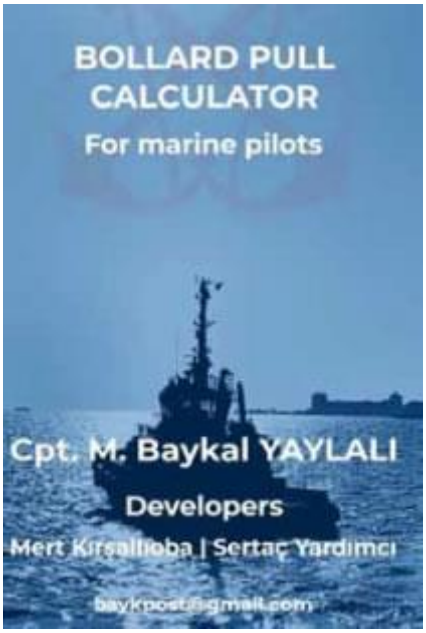
The British had yet another surprise for the French. On his last visit to England, Rodney had been introduced to a devastating new weapon. It was a large, short-barreled gun called the carronade because of its origin at Scotland's Carron Iron Works. Mounted on a track that provided more friction than the wheels of a ship's gun, thus reducing the recoil, the wide-muzzled carronade could fire a monster 68-pound ball with a five-and-a-half-pound powder cartridge. The carronade was useless at long range but murderous close up. And because the island of Dominica prevented the French line from falling away, most of the Battle of the Saints was fought at close range. When the Formidable went through de Grasse's line, Rodney's carronades accomplished more damage and slaughter than a dozen big guns could have caused at a distance. Of the five French ships that were captured, three were the victims of carronades blasting into their sterns.

With the aid of these technological, strategical and tactical advances, Sir Charles Douglas, Lord Rodney and John Clerk had formed an unlikely triumvirate to alter the tactics of fighting sail forever.

Rodney praised Douglas but did not mention Clerk in his report on the Battle of the Saints. But on his return to London he acknowledged his debt to the amateur admiral of Edinburgh by contributing to an edition of Clerk's book a series of salty, self-revealing footnotes, among them: "The naval instructions want a thorough reformation; but 'tis not in the power of every commander-in-chief to make what additions he pleases." And, "There will ever be a manifest advantage in obliging your enemy to depart from their original intention, and attacking them in a different mode from that they offer you."
In a word: surprise. Splitting the enemy's line and doing the unexpected would be the tactic adopted by a new generation of fighting admirals who were only now stepping onto the quarter-decks of the Royal Navy. And it was just in time, because the Royal Navy's greatest challenge of all was about to arise.

Inséré 06/03/24 BOEKEN LIVRES BOOKS Enlevé 06/04/24

Pilot's Tug Assist Tool Provides Bollard Pull Calculations



Captain M.Baykal Yaylali, chief pilot at the Directorate General of Coastal Safety Izmir Alsancak Port, has released open source software Pilot's Tug Assist Tool (PTAT) which estimates the total required tug power for ships in various conditions of wind, current and waves. The tool can be loaded as an app on a smart phone. In most cases, the required tug power and number of tugs needed in variable conditions of wind, current and waves is an assessment made by pilots based on their professional experience. However, these assessments can be questioned by lawyers if something goes wrong. Additionally, a pilot has not so much time, says Yaylali. "For a pilot, if tugs are needed, it is hard to calculate the required tug power just before or during ship maneuvering. Furthermore, the more extreme the weather conditions become the less accurate assessments are and the higher the risk of too little tug power."

The tool is based on the calculations and graphs as explained in Chapter 5 of the book "Tug Use In Port" written by Captain Henk Hensen FNI; frst published in 1997 by The Nautical Institute, London, UK, with a third edition published by The ABR Company in 2018. The program has been tested for more than two years, and it has been working well, says Yaylali.

Safety factors have been added to the program that will factor in 20 percent for current effect and 25 percent for wind and wave effects. It is possible to convert calculations for possible bow and stern thrusters (kW-HP) and for wind (KT-m / s). In addition, for scenarios concerning hazardous cargo that require compensating for sideway/lateral ship momentum, users can calculate the tug/pull power output to be applied 30 meters before the dock/docking. Calculations can be performed for open and solid berths separately. The app is available free of charge, and more information is available **HERE**

Inséré 06/03/24 NIEUWS NOUVELLES Enlevé 06/04/24

Turkey blocks passage of British minehunter ships heading to Ukraine

Ankara triggered convention that blocks the passing of military ships through its Bosphorus and Dardanelles straits after the Russia-Ukraine war began

Turkey has blocked two British minehunter ships from transiting through the country's waters en route to Ukraine, since it would violate an international pact concerning wartime passage of the straits.

Britain said in December that it would transfer two Royal Navy minehunter ships to the Ukrainian Navy to help strengthen its sea operations amid the war with Russia.Nato member Turkey informed allies that as long as the war continues, it would not allow the vessels to use its Bosphorus and Dardanelles straits, the presidency's communications directorate said.When Russia launched its invasion of Ukraine in 2022, Turkey triggered the 1936 Montreux Convention, effectively blocking passage of military ships for the warring parties.The pact exempts ships returning to home bases.

Source : The National

Inséré 07/03/24 DOSSIER Enlevé 07/04/24

Ballast water management – regulations are tightening

A year from now, all vessels subject to the Ballast Water Management Convention must have an approved ballast water treatment system installed onboard. Is your ship ready for tighter regulations?

Good management of ballast water is critical to prevent the spread of invasive aquatic species (see fact box below). To that end, the Ballast Water Management (BWM) Convention was adopted and eventually came into force in 2017. With it, came two primary regulations, both intended to improve ballast water management: The D-1 regulation covers ballast water exchange, that is flushing ballast water tanks in open seas, while the D-2 regulation covers ballast water treatment, that is the removal and destruction of biological organisms from the ballast water before it is discharged.From 8 September 2024, all vessels subject to the BWM Convention (all ships over 400 GT, with some exceptions and additions) must meet the performance standards contained in regulation D-2, meaning that vessels without a ballast water treatment system must install an approved system before the deadline.

What do ship operators need to do?

Ship operators that have not made their decision on the installation of ballast water treatment systems are advised to start the preparatory work as soon as possible. The 8 September 2024 deadline is nearing and there are multiple decisions that should be made in order to ensure compliance. Below are some key elements of the preparatory work.

- Ensure that the obligations under the BWM Convention, and under other national and local regulations, are fully understood, and develop a thorough strategy for complying with the applicable standards.
- Pay particular attention to the position in the United States (US). The US is not a party to the BWM Convention. Vessels discharging ballast water into US territorial waters must comply with the US BWM Regulation regardless of a vessel’s status under the IMO BWM Convention. The US maintains a separate list of ballast water treatment systems approved by the US Coast Guard.
- Evaluate the suitability of available ballast water treatment system solutions for each vessel based on its operating profile and design (see below for more information on the different treatment options).
- Consider the “time factor”. Availability and delivery times for approved treatment systems will vary depending on demand, as will shipyard capacity.

• Once a ballast water treatment system solution has been selected, make sure officers and crew are properly trained and are competent to carry out their assigned ballast water management duties and functions. Procedures for training and familiarization for the BWM Convention should be incorporated in the company's safety management system (SMS) and should include, but not be limited to, the following:
• introduction to ballast water management and all relevant rules and regulations;
• familiarization with the vessel's ballast water management plan and assigned duties;
• operation and maintenance of the vessel's ballast water management treatment system;
• emergency procedures; and
• making entries and recordkeeping in the vessel's ballast water record book.
• Ensure every vessel has onboard an approved Ballast Water Management Plan, a Ballast Water Record Book, and an International Ballast Water Management Certificate.
• Prepare for Port State Control (PSC) inspections. In addition to verification of valid and approved onboard procedures, records and certificates, sampling of the vessel's ballast water may be required carried out in accordance with the IMO Guidelines for ballast water sampling (G2). Compliance with national and local regulations will also be subject to inspection by PSC.

The vessel's Class Society can advise on the IMO-approved systems most suitable for the vessel type and trading area. Advise the classification society if the vessel is likely to trade to the US to ensure the system also meets US Coast Guard approval.

Elements of a Ballast Water Management Plan

A Ballast Water Management Plan (BWMP) is a shipboard document that details the procedure for the discharge of ballast water and the handling of sediment. This plan must be specific to the vessel and her equipment and approved for each vessel by the Flag Administration and/or Class Society. At the time of writing, the plan may include procedures for either or both D-1 and D-2. However, after 8 September 2024, procedures must reflect the D-2 requirements.

Ballast Water Management and Treatment Systems

Ballast Water Management Systems treat ballast water to remove or inactivate waterborne organisms, bacteria, and sediments. Generally, BWM systems treat the ballast water as it flows into the ship from the sea. Regulation D-3 of the BWM Convention requires that ballast water management systems must be 'type-approved.' In order to be type-approved by an Administration, ballast water management systems need to be tested in a land-based facility and onboard ships to prove that they meet the performance standard contained in regulation D-2 of the BWM Convention. While the date by which individual vessels must have a ballast water treatment system installed depends on its IOPP renewal date, the IMO Implementation Schedule for BWMS's also ensures full global implementation by 8 September 2024. See our simplified implementation timeline below.

The insurance position

Gard has issued two Member Circulars on BWM, No. 4/2017 in July 2017 and No. 17/2016 in January 2017, advising Members that liabilities, including fines for inadvertently introducing untreated ballast into the environment, are capable of cover, subject always to the Rules and any terms and conditions of cover. Cover for other fines relating to a breach of the BWM requirements are only available on a discretionary basis.

Source: Gard

Inséré 08/03/24 NIEUWS NOUVELLES Enlevé 08/04/24

Frontline sold its five VLCCs

Frontline announced it has reached a deal to sell its five oldest very large cruse carriers (VLCC) to an undisclosed buyer for an aggregate net sale price of $290 million, MarineLink reported. The vessels, built in 2009 and 2010, are expected to be delivered to the new owner during the first quarter of 2024.After repayment of existing debt on the vessels, the transaction is expected to generate net cash proceeds of approximately $207 million, and the Company expects to record a gain in the first quarter of 2024 in the range of approximately $68 million to $76 million, depending on the date of delivery of each vessel to the new owner. The sale is subject to certain closing conditions, in line with industry standards.

Following this transaction and the completion of the delivery of all 24 VLCCs acquired from Euronav NV, Frontline's fleet will consist of 84 vessels comprised of 41 VLCCs, 25 Suezmax tankers and 18 LR2/Aframax tankers with an aggregate capacity of approximately 18.2 million dwt and average age of only 5.9 years.

Source : PortNew

Inséré 09/03/24 DOSSIER Enlevé 09/04/24

Net Zero Emissions Targets Will be a Challenge

The road ahead towards a net zero emissions future is faced with big challenges. In its latest weekly report, shipbroker Gibson said that "last week the IEA published its Net Zero 2050 report, which lays out the steps the world needs to take in order to reach net zero emissions (NZE) by 2050. It is important to stress that the report details a 'scenario' and is not a forecast. However, the analysis should not be ignored. Global powers and industry leaders may fail to deliver on the steps required in time, but the trajectory, even if only partially met, will have profound implications for all forms of shipping, whilst creating opportunities for those vessel sectors focused on greener sources of energy".

According to Gibson, "for the world to achieve NZE by 2050, oil, gas and coal demand must peak this decade. In fact, the report suggests even more drastic action is needed, with oil demand needing to fall from 97mbd in 2022 to 77mbd in 2030, and to 24mbd by 2050. Yet, the near term outlook is that oil demand will continue to grow for at least the next 5 years, reaching around 105.7mbd by 2028 – clearly highlights the disparity between requirement and reality. Indeed, upstream oil and gas investment is still substantial, with new offshore investments in the UK announced this week, alternative energy sources like offshore wind have faced 'headwinds'. Other milestones must be achieved, with EV car sales needing to reach 65% of new car sales by 2030, up from around 14% last year. A rapid fall in oil prices, from $98/bbl in 2022 to $42/bbl in 2030 and finally $25/bbl in 2050 suggests that many long term upstream projects may cease production before the end of their target life. Cheap oil, however, would be met by ever increasing carbon taxes, which rise to $250/tonne of CO2 by 2050 under the scenario".

Gibson added that "carbon capture, utilisation and storage (CCUS) also forms part of the roadmap, with the technology contributing an 8% reduction in emissions. But for the 2030 target to be reached, all of the announced CCUS projects must be realised on time. But the scale of the challenge and opportunity for shipping is substantial. In 2022, 45mt of CO2 was captured, however this number must rise to over 1 billion tonnes by 2030, and 6 billion by 2050 to deliver its contribution for NZE. Yet, from a shipping perspective, limited yards can build these vessels, whilst uncertainty over design, demand and charter contracts means it will be unlikely that sufficient shipping capacity can support the NZE CCUS requirement".

"The report also details shipping's contribution to NZE, with the scenario assuming ammonia emerges as the dominant fuel in shipping, accounting for 6% of energy consumption in 2030 and rising to 44% by 2050. By contrast, the IEA's scenario only sees methanol accounting for 1% of the energy used by shipping in 2030, and rising to just 30% by 2050, despite the fact that methanol fuelled vessels are already in operation and have a far larger orderbook than that of ammonia fuelled designs. It is assumed that around 15% of shipping energy will still come from fossil sources by 2050 under the outlook", said the shipbroker. "Clearly, action by governments and industry are not yet aligned to the NZE 2050 roadmap and appear unlikely to do so in the near term. Sensitivities in the timing and uptake of alternative fuels, energy sources and abatement technologies will be key. Volatility in commodity supply, demand and prices may also increase, as investment moves away from traditional energy sources, perhaps at times out of sync with demand. More policy is needed both at the government and NGO level, however, investment in shipping, both for new forms of energy, existing non energy cargoes and carbon will be a critical success factor behind the energy transition", Gibson concluded.

Source : Nikos Roussanoglou, Hellenic Shipping News Worldwide

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Inséré 10/03/24 NIEUWS NOUVELLES Enlevé 10/04/24

Nog geen ban op Russisch gas: helft lng Zeebrugge uit Rusland

Bart Meyvis

Er is voorlopig nog altijd geen sprake van een Europese ban op Russisch gas. Maar liefst 51% van het vloeibaar gemaakt aardgas (lng) dat in 2023 per tankschip aankwam in Zeebrugge, blijkt afkomstig te zijn uit Rusland.

Bij Fluxys in Zeebrugge werd in 2023 zo'n 165 terawattuur (TWh) aan lng gelost. Iets meer dan de helft daarvan is afkomstig uit Rusland. Van de overige percentages haalt Fluxys zo'n 29% van het lng uit Qatar en nog eens 15% uit de Verenigde Staten. Een aanzienlijk deel van het Russische lng dat in Zeebrugge aankomt, is bestemd voor overslag en vertrekt onmiddellijk per schip naar andere bestemmingen. Dat meldt de federale overheidsdienst Economie. Van een echte ban op Russisch gas is er dus nog steeds geen sprake.

Fluxys bevestigt de cijfers. "Vorig jaar werden er in totaal een 215-tal lng-schepen gelost in Zeebrugge", zegt Tim De Vil, woordvoerder van Fluxys. "75 schepen vertrokken meteen naar andere bestemmingen. Een aanzienlijk deel daarvan gaat met kleinere schepen naar

Scandinavische havens waar grote lng-tankers niet binnen kunnen. Daarnaast gaat een groot gedeelte richting Azië, voornamelijk naar China. Naast tankers vertrekken vanuit Zeebrugge ook heel wat lng-bunkerschepen en kleinere coasters."

Verandering in gasstromen

In april 2014 tekenden het Siberische Yamal LNG en Fluxys een langetermijncontract van 20 jaar voor de overslag van maximaal 8 miljoen ton lng per jaar via de haven van Zeebrugge. Yamal LNG brengt tijdens de arctische zomer het vloeibare aardgas zelf via de Noordelijke zeeroute naar de markten in Azië en de Stille Oceaan met ijsbrekergastankers. In de winter is die route geblokkeerd en varen de gastankers naar Zeebrugge, waar Fluxys het gas overslaat naar kleinere lng-schepen om zo Azië te bereiken via het Suezkanaal.

Sinds oktober 2021 is als gevolg van de daling van de Russische gasinvoer in Europa, een verandering zichtbaar in de gasstromen op Belgisch niveau. Terwijl het gas vroeger voornamelijk van het noorden naar het zuiden stroomde, van Noorwegen en Nederland naar Frankrijk, gaan de stromen nu van west naar oost: van Noorwegen, het Verenigd Koninkrijk, Frankrijk (lng-terminal Duinkerken) en de lng-terminal van Zeebrugge naar Duitsland en Nederland. Ook de hoeveelheid gas die door België stroomt, is aanzienlijk toegenomen.

Uit cijfers van Fluxys blijkt dat België vorig jaar meer dan dubbel zoveel gas dan het zelf verbruikte (357 TWh), uitvoerde naar andere landen. Duitsland, dat op dit moment zelf niet over een lng-terminal beschikt, is met 212 TWh de grootste afnemer. Het totale gasverbruik daalde vorig jaar tot 152,1 TWh. Dat is het laagste niveau sinds 1997.

Gasafhankelijkheid afbouwen

Een paar maanden geleden vroegen een twintigtal Oekraïense en Belgische organisaties samen met Bond Beter Leefmilieu nog een verbod op de overslag van Russisch gas in Europese havens. Ze eisten ook dringende stappen om de gasafhankelijkheid van Rusland verder af te bouwen.

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An aircraft takes off to join the U.S.-led coalition to conduct air strikes against military targets in Yemen, aimed at the Iran-backed Houthi militia that has been targeting

international shipping in the Red Sea, from an undisclosed location, in this handout picture released on January 12, 2024. US Central Command via X/Handout via REUTERS

Hezbollah Says Security Of All Shipping Harmed After US Strikes

BEIRUT, Jan 14 (Reuters) – The Iran-backed Lebanese group Hezbollah said on Sunday U.S. actions in the Red Sea would harm the security of all shipping as the area had now become a conflict zone, saying the Houthis of Yemen would keep up attacks despite U.S. and British strikes.

Hezbollah leader Sayyed Hassan Nasrallah, whose group is a leading part of an Iran-aligned regional alliance which includes the Houthis, said Houthi targeting of ships belonging to Israel or heading to its ports would continue.

"The more dangerous thing is what the Americans did in the Red Sea will harm the security of all maritime navigation, even the ships that are not going to Palestine, even the ships which are not Israeli, even the ships that have nothing to do with the matter, because the sea has become a theater of fighting, missiles, drones and war ships," he said.

"Security has been disrupted."

U.S. and British forces on Friday launched dozens of air strikes against Houthi forces in retaliation for attacks on Red Sea shipping. The group says it took the action to support Palestinians under Israeli siege and attack in Gaza. Washington launched another strike overnight Friday-Saturday.

The Houthis have vowed to retaliate for the attacks.

The Red Sea crisis has fueled fears of a further escalation of the conflict that has rippled around the Middle East since war erupted between the Palestinian group Hamas and Israel on Oct. 7.

Hezbollah, the Houthis, and Iran-backed militias in Iraq have all entered the fray since then, with Hezbollah firing at Israeli positions along the Lebanese-Israeli frontier, and Iraqi militias firing on U.S. forces in Iraq and Syria.

Nasrallah said envoys sent to Lebanon had been seeking to "extinguish" the Lebanon front by delivering a warning that if the group did not stop its attacks "Israel will launch a war on Lebanon." He did not identify the envoys.

Nasrallah said the aim of the Lebanon front was to "stop the aggression against Gaza."

The United States should understand "that the security of the Red Sea and calm on Lebanon's front, the situation in Iraq, and all developments in the region is tied to one thing: to stop the aggression against Gaza," Nasrallah said.

"You are trying to deal with the consequences and the results, go fix the reason."

Nasrallah was speaking to commemorate the death of a top Hezbollah commander, Wissam Tawil, who was killed in south Lebanon last week, the most senior Hezbollah commander to die in three months of hostilities with Israel.
The war began on Oct. 7 when Hamas fighters stormed Israel, killing 1,200 people and abducting 240 more, according to Israeli tallies.

Since then, nearly 24,000 Palestinians have been killed in the Gaza Strip during an Israeli offensive which has laid waste to the territory, according to the toll of the health authorities in Hamas-run Gaza.

The Houthis have also fired drones and missiles up the Red Sea at Israel itself. Many of the vessels attacked by the Houthis have had no known connection to Israel.

(Reporting by Laila Bassam, Jana Choukeri, Mariam Rizk and Ahmed Elimam; Writing by Tom Perry; Editing by Hugh Lawson, William Maclean

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Simplifying tanker procedures

Introducing written procedures for how to do tasks was a good idea in the 1990s when maritime safety was poor compared to today. But it has probably gone too far. What can be done. We discussed at Tanker Operator Athens

A shipping company had seen people injure their fingers in doors. The company had discussions about what to do about it. Can they create doors impossible to trap fingers in? Probably not. Should they create procedures that people should check if any fingers are in the way before they close a door? This sounded crazy to the fleet manager, who said that perhaps the crewmembers' parents were to blame, for not teaching their children to keep their fingers out of doors.

This anecdote, told by Martin Shaw, president of IMAREST, at the Tanker Operator Athens conference, illustrates the cause of the procedure overload we often see today. Shipping people see 'creating a new procedure' as the solution to every problem. We end up with thousands of pages of procedures, which are impossible to read, let alone follow.

Similarly, some companies have considere procedures to stop people falling over in showers, where there have also been accidents, Mr Shaw said.

He knew of one tanker company which had installed gyms for crew, after several accidents had occurred with weightlifting equipment improvised from items found in the engine room.

The company CEO asked a health manage how much the gyms were being used, and the health manager did not know the answer. So, a gym 'sign-in' book was created to keep track of usage. Then complaints about this 'gym logbook' reached the fleet manager, who had no idea this book existed, and what purpose it could serve.

Many tanker companies create procedures which do not reflect the way that work was done before the procedures were introduced, and people continue working in the old way.

A cause of this problem can be when procedures are put together without much input from people onboard the ship, perhaps written by outside consultants, said Captain Leonid Zalenski, chief operations officer of Columbia Ship Management.

Many tanker operators "have a fantastic management system which satisfies all requirements but implementation of it is so complex that it becomes a nightmare to follow," he said.

On the other hand, if the procedural system is maintained by the people who use it, it can continuously improve, he said. We shall make compliance easier if we want it to work.

SIRE 2.0 and procedures

SIRE 2.0, the new version of OCIMF's Ship Inspection Reporting Program currently being rolled out to tankers, could force a simplification of procedures, Captain Zalenski said.

As part of the inspection, seafarers will be asked to explain their role and tasks, and how this is described in the company procedures.

If the procedures are too long and complicated, they will not be able to do this easily, so this will encourage companies to simplify procedures.

"The bit I like about SIRE 2.0, it will force us to spend a bit more time training people and making sure they understand the requirements," he said.

"Procedures are not always easy to follow. SIRE 2.0 will force us to improve. [Seafarers] will have to explain basic things, what they do and what their responsibility is. This is sometimes quite complicated if procedures are quite complicated."

Background to procedures

The tanker industry started introducing many of its procedures in the 1990s, when incidents were much higher than they are now.

The ISM Code, introduced in the 1990s, forced shipowners to put processes in place for managing safety.

The Oil Companies International Marine Forum (OCIMF) introduced the Ship Inspection Report Programme (SIRE) in 1993, where a vetting inspector would come onboard, determine if the procedures were being followed. The inspection would inform the decision to accept the ship for charter.

The industry safety record is much improved, with a continuous decline in accidents over the next 10 years, while the amount of oil being transported roughly doubled. The SIRE program can be given some of the credit for this, said IMAREST's Martin Shaw. But then the industry's safety record reached a point where no further improvement could be made. There turned out to be a limit to how much procedures were beneficial, he said.

Today, the industry has just about mastered how to avoid accidents from predictable causes. So, when the industry has accidents, they are typically a result of a combination of factors which have never happened before, and could barely be predicted, Mr Shaw said. Writing procedures to stop that specific accident re-occurring has a limited value, because those causal factors are unlikely to re-occur at the same time.

Problems we see today are typically for reasons which are not entirely new, but slightly different to problems we have seen before. For example, ships still sometimes see novel, complex problems with tail shafts, although ships have carried tail shafts for nearly 200 years, he said.

We also see problems today connected with automation systems. Programmers try to build systems to automatically correct problems. But when an unusual fault happens which the automation system cannot resolve, the system goes into 'fault mode' and stops operating, and a person has to fix the problem. This can be very difficult to do. Manuals are rarely helpful, he said.

The complexity of procedures is compounded by the fact that different procedures can be demanded by flag, class and charterers, he said. Sometimes multiple procedures describe how to do the same task, in slightly different ways, and it is unclear to seafarers which takes priority. They may conflict with other company priorities, such as to reduce spending.

And the more tasks which are covered by procedures, the effort crew are making to think for themselves, which means they lose the ability to work out the solution to a problem, Mr Shaw said.

Blaming the crew

The procedures may be designed to serve the nefarious goal, of making it easier to blame seafarers for any accidents, Mr Shaw said. It is common that investigations determine that there was some procedure which was never followed, without considering whether it was

possible for seafarers to understand and follow everything. The problem gets worse with the more procedures we have.

So, while we commonly hear that "80 per cent of accidents on ships are caused by human error", we don't consider that many of those were really caused by whoever wrote the procedures, rather than the person who was supposed to follow them.

It would be better for the industry to acknowledge that 100 per cent of incidents are caused by some 'human error', but to include in this all of the 'humans' involved in design, construction, and management of the procedures, regulations, technology and software which seafarers use, he said.

Then try to eliminate the possibility for a seafarer to make a decision which increases the risk.

As a side note, if we had autonomous ships, they would still be following code written by people, based on procedures written by people, and any incident could still be attributed to human error, he said.

Time pressure

Meanwhile, crew are often under time pressure, both to do tasks in a certain time, and to ensure the ship gets to its destination at a certain time. This can conflict directly with their ability to follow all the procedures they are expected to follow.

Time pressure emerged as a factor in the Titanic sinking of 1912. The official enquiry concluded, "the loss of the said ship was due to collision with an iceberg brought about by the excess speed at which the ship was being navigated..which other skilled men would have done in the same position. However, the practice itself was faulty and it is to be hoped that the last has been heard of this practice."

Today, Mr Shaw is involved in the Human Element Industry Group (HEIG), which involves representatives of multiple industry associations, trying to ensure that maritime regulations properly take people into account. The group was set up at the request of IMO's secretary general in 2018. Mr Shaw likes to tell people that one of its goals is to "sort out one of the incomplete actions from the Titanic report."

Time pressure is not necessarily explicit (someone being told to do something at a certain speed). There is 'indirect' time pressure, when you feel that you should do something at a certain speed, and 'self-induced time pressure' where people just want to do something quickly, Mr Shaw said.

To remove time pressure, there would need to be a more sophisticated way of determining whether people had sufficient time to do all their expected tasks, while following all the expected procedures.

Good procedures

Good maritime procedures would describe measures that should be taken to avoid certain risks from occurring.

Then they should describe what should be done, if something bad does happen, to minimise the consequences.

If the incident is caused by an error, such a system can be defined as 'error tolerant,' because it ensures the error does not lead to something catastrophic.

Captain Zalenski from Columbia Ship Management said that in his company, careful thought has gone into every line of the procedures.

"If you can agree all safety elements in two pages, it will be perfectly acceptable," he said. "Nobody is pushing us to have 500 pages. It is entirely up to us to say things in 2-3 bullet points or write a textbook. it is not easy; it needs a lot of effort."

Captain Zalenski has implemented a ban on new checklists in the company, on the basis that it has reached a sensible limit of how many checklists there should be. "If you create a checklist for 'each and every,' you miss the point," he said.

How navies do it

One audience member, a former naval captain who had worked developing procedures for naval operations, observed that navies typically have very strict processes, but not too many of them.

They keep their processes concise by putting them through multiple reviews by teams of experts. They ensure they only cover incidents which threaten human life or threaten serious damage to the ship.

For example, there is a 15-page manual on how to do counter piracy operations in the Gulf of Aden. "After the captain has read these 15 pages, he was ready to go inside Somalia."

It was easy for a captain to find something quickly, such as what to do in a certain situation, he said.

"These 15 pages are focussed on the task. They are not talking about general things."

"[For example] you want to join a narrow passage, sometimes that's a difficult operation. You need timely and critical information just 1 hour before you start the action.

"This [manual] takes the stress out; you have it in front of you."

The procedures are written by a panel of subject matter experts such as former naval captains, working together with academics.

As well as the procedures, there is an online 'lessons learned' system, where you can learn from whoever has already done what you are about to do, such as enter a certain port.

In comparison, the maritime industry often gives crews very thick manuals. "It's very difficult for seafarers to follow or remember all these things. When people want information in the time of need, they don't have it."

Maritime companies often gather thousands of pages of safety reports which no-one can ever find later.

The maritime industry could reduce its procedures, but it would require enormous focus, and recognition of the difficulty of the task.

"There's nothing elementary about this," said Dimitris Lyras of Lyras Shipping, conference chairman. "This is hugely important and very elusive."

TankerOperator

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Art et science de la navigation

LA TRADITION DEVIENT SCIENCE - CONSTRUCTION D'UN NAVIRE - LE LANCEMENT - NOUVEAUX INSTRUMENTS DE NAVIGATION - LA DIFFICILE NAISSANCE DU CHRONOMÈTRE.

Dans l'antiquité, la navigation était un art presque magique et jusqu'à la fin du Moyen Age, le pilote semblait tenir dans ses mains des pouvoirs inconnus des autres hommes. Il en fut de même pour les constructeurs navals.

Des chantiers, il y en avait beaucoup le long des côtes. Ils étaient placés sous l'autorité des marres charpentiers qui eux aussi se transmettaient leurs secrets de génération en génération.

Bien entendu, un navire se construit selon les mêmes principes : une quille, des couples sur lesquels sont chevillées les planches du bordé joignant l'étrave à l'étambot et dont l'ensemble forme la coque. Mais la valeur d'un navire dépend de plusieurs éléments : la qualité des bois, les soins apportés à l'assemblage, le tour de main du charpentier et de son équipe.

Avec l'accroissement du tonnage, des problèmes nouveaux étaient posés : ceux de la résistance à l'avancement, de la solidité, de la répartition du poids, de la stabilité, tout ce qui sera plus tard codifié sous le nom de théorie du navire. La construction navale, pour les bâtiments d'une certaine importance du moins, quitta peu à peu le stade artisanal.

La tradition devient science.

A partir du XVIIIe siècle, le développement de la science permit de considérer ces problèmes dans toute leur ampleur et de concilier une tradition qui avait fait ses preuves avec les données de la mathématique et de la mécanique.

Il y avait depuis le xve siècle des écoles de navigation. Il y eut aussi des écoles de construction navale où les jeunes architectes étudièrent les formes des coques, observaient l'évolution des navires en mer.

En 1775, d'Alembert et Condorcet procédèrent à des expériences qui allaient être reprises sur une grande échelle par nos modernes bassins de carène. Ils firent construire des modèles réduits et étudièrent, à l'aide de dispositifs à poids, la résistance à l'avancement. Ils découvrirent que cette résistance ne croît pas exactement comme le carré de la vitesse, ainsi qu'on le pensait jusqu'alors.

Malgré ces principes établis, la forme des coques changea peu et la science semblait confirmer sur certains points les leçons de la tradition. Du moins les méthodes de construction devinrent-elles plus rationnelles, ainsi que l'organisation des chantiers, surtout en ce qui concernait le ravitaillement en matières premières.

Au premier rang de ces matières premières était évidemment le bois, du chêne en général pour les membrures et du pin pour les mâts. Le hêtre était réservé à certaines parties du bordage et à la quille.

Pour la construction d'un vaisseau, il ne fallait pas moins de 2 000 chênes. Des forêts entières furent achetées et réservées aux constructions navales. Le bois devait subir un traitement spécial et au demeurant fort simple : on le faisait tremper dans de l'eau saumâtre, parfois pendant des dizaines d'années. La sève éliminée, on faisait sécher les troncs un ou deux ans avant de les utiliser. Cette préparation préalable avait une importance primordiale. Que le bois jouât, et la coque ne gardait pas sa rigidité et faisait eau.

Construction d'un navire.

La construction du navire devenait donc une entreprise collective, presque nationale, à laquelle participaient tous les corps de métier : charpentiers, ferronniers, cordiers, calfats, fournisseurs de toute sorte.

A l'écart des magasins et entrepôts s'élevaient les chantiers de construction. Ceux-ci étaient constitués par une série de billots de bois, les tins, placés à deux mètres de distance, qui formaient sur la cale de construction un grillage incliné de trois degrés pour faciliter le lancement ultérieur du navire.

Sur les tins, on posait la quille sur laquelle étaient fixés successivement l'étrave, l'étambot avec carcasse, charpente de l'arrière. Tout cela était consolidé par des contre-étraves et contre-étambots.

Ensuite, on agençait sur la quille les couples formés de bas en haut par la varangue, le genou — la partie courbe du couple — et enfin l'allonge. Tous ces couples étaient consolidés par des lisses, pièces de bois horizontales. Enfin la coque recevait son bordage, son aménagement intérieur et son pont.

Le navire était alors prêt à être lancé. Il pesait environ 2 000 tonnes s'il s'agissait d'un vaisseau et il était impossible de continuer à le charger sans danger.

Le lancement.

Le lancement qui marque la naissance du navire, la prise de possession de son élément, a toujours été une cérémonie solennelle. C'est aussi — et surtout — une opération délicate. La coque repose sur un ber dont les différentes parties l'enserrent et la maintiennent. Le tout est supporté par des couettes qui glisseront avec le navire, lorsque celui-ci sera libéré de la saisine qui le retient à la cale et des différents coins qui l'empêchent de glisser à l'eau.

Le pavillon royal claque à la poupe. Des branches de laurier bruissent le long du bord. L'air sent la peinture fraîche et le bitume. Des ordres dominent les murmures des assistants, les cris des enfants, le roulement des carrosses qui amènent les invités de marque.

Soudain, c'est le silence. Un prélat s'avance et bénit le navire. Sa voix lance les prières rituelles et lorsqu'il se tait, le silence s'approfondit encore car, d'un moment à l'autre, le navire va entrer dans la mer. Les coups de marteau résonnent, les amarres rompues à coups de hache fouettent l'air et lentement, la coque glisse avec son ber dans un jaillissement d'écume à laquelle se mêle la fumée du suif échauffé par le frottement des pièces de bois.

Des acclamations montent. Des mains agitent des tricornes. Des imprudents fuient le rivage pour ne pas être submergés par le reflux de l'eau déplacée par le navire. Des charpentiers qui ont participé au lancement célèbrent l'événement, le verre en main.

Les gens de mer, superstitieux, commentent le lancement, attentifs aux moindres présages qui pourraient faire augurer de la carrière du navire. C'est ainsi que, lors du lancement à Rochefort du vaisseau le Duc de Bourgogne, en 1751, on remarqua que « lorsque le vaisseau partit, il parut un oiseau de proie poursuivant une colombe qui trouva un asile dans les lauriers du Duc de Bourgogne ». Et cela parut à tous un heureux auspice.

Nouveaux instruments de navigation.

La navigation suit les progrès de la construction navale. On se souvient qu'un capitaine, au XVIIe siècle, dispose essentiellement pour conduire son navire d'un astrolabe pour prendre la hauteur d'un astre, d'un loch pour mesurer la vitesse d'une sonde et, bien entendu, de l'indispensable compas.

Le compas se compose d'une « rose » solidaire de l'aiguille aimantée. La rose est en fait une étoile dont la branche supérieure indique le nord et les autres branches les principaux points cardinaux. Sur le rebord intérieur du cercle du compas, un repère : c'est la « ligne de foi » qui matérialise l'axe du navire. L'angle de la ligne de foi avec le nord est le cap.

Un compas se trouve devant le timonier. C'est le compas de route. Un autre compas est placé sur le château arrière. C'est le compas de variation dont le rôle est de contrôler le compas de route. Ce dernier est non seulement affecté par la déclinaison magnétique, mais aussi par la présence des objets en fer, les canons par exemple, qui se trouvent dans son voisinage.

Il est donc indispensable de déterminer souvent la variation, l'écart de l'aiguille avec le nord vrai. On compare les indications de la rose avec l'étoile polaire, dans l'hémisphère nord, ou avec un point à terre, visé au moyen d'une alidade, lorsque la position de ce point est déterminée avec assez de précision sur la carte.

Le loch et la sonde ne subiront pas de grands changements jusqu'au milieu du me siècle. Ils donnent d'ailleurs satisfaction. Il n'en est pas de même pour les instruments destinés à mesurer la hauteur des astres.

Certains capitaines utilisaient encore la primitive arbalète, mais un instrument plus perfectionné allait être mis au point par un marin, le grand explorateur anglais John Davis, découvreur du détroit qui unit la mer de Baffin à l'Atlantique.

John Davis inventa donc en 1594 le « quart de nonante » que les marins appelaient parfois irrévérencieusement « tire-pied ». Il se composait de deux secteurs concentriques, le premier d'un rayon supérieur à l'autre et portant chacun un curseur.

Le capitaine visait l'horizon à travers le trou du curseur du premier secteur. Il amenait ensuite le curseur du deuxième secteur dans la direction du soleil, de manière que l'ombre de ce curseur coïncidât avec la pinnule centrale. Pour avoir la hauteur de l'astre, il fallait additionner les deux mesures de chacun des deux secteurs.

Le quartier de Davis marquait un progrès très net sur l'astrolabe, mais il était encore mal commode à manier, surtout lorsque le roulis secouait le navire. Un bon observateur obtenait la hauteur du soleil à cinq ou six minutes d'arc près, ce qui correspondait à une erreur en latitude d'une douzaine de kilomètres.

L'instrument fut peu à peu amélioré. Vernier, un géomètre, inventa une petite règle coulissante et qui permit une plus grande précision dans la lecture des graduations. Enfin, un « verre ardent », c'est-à-dire une lentille convexe, placé sur la pinnule centrale, donnait du soleil un point brillant permettant une plus grande précision dans la lecture.

Davis, nous l'avons dit, était un marin, mais ce furent des astronomes et des mathématiciens qui trouvèrent la solution définitive du problème. Celui-ci était le suivant : viser simultanément l'astre et l'horizon afin de faire coïncider leurs images. Le premier, l'Anglais Hooke qui étudia en même temps que Newton les lois de la gravitation universelle et inventa notamment le baromètre enregistreur et le pluviomètre, conçut un miroir mobile amenant l'image de l'astre sur celle de l'horizon, élément de base de ce qui allait plus tard devenir l'octant.

Newton, trente ans plus tard, traça les plans de cet octant, mais c'est en 1731 que le mathématicien John Halley le réalisa.
L'octant se compose d'un arc de 45° — soit le huitième de la circonférence, d'où son nom. Sur cet arc de cercle appelé limbe pivote une alidade. A l'extrémité supérieure de l'alidade est un grand miroir solidaire de celle-ci. Sur un rayon de l'arc de cercle est fixée une lunette dans le prolongement de laquelle, sur la branche opposée, se trouve un petit miroir dont une moitié est étamée et qui renvoie l'image de l'astre réfléchie par le grand miroir. De cette façon, on peut voir simultanément l'image de l'astre et celle de l'horizon. Quand elles coïncident, on
lit la hauteur sur le limbe. Les graduations de celui-ci sont multipliées par deux, car par suite de double réflexion, on n'obtient que la moitié de la valeur de la hauteur.

La réalisation de cet octant fut au début imparfaite. L'instrument était lourd. La monture était en bois et les miroirs défectueux. Peu à peu, il fut allégé, le système optique amélioré et quand le limbe fut porté à 60°, l'octant devint le sextant.

La difficile naissance du chronomètre.

Donc, vers le milieu du XVIIIe siècle, les marins purent connaître leur latitude avec plus de précision. Restait le problème jusqu'alors quasi insoluble de la longitude.

On a vu que la longitude était calculée en faisant la différence entre l'heure d'un lieu — établie d'après des hauteurs d'astres — et l'heure du premier méridien. Pour connaître celle-ci, le moyen le plus simple était évidemment d'avoir recours à un « garde-temps ». Dès le xve siècle, quelques tentatives eurent lieu. On embarqua d'énormes sabliers de 24 heures et même des clepsydres, ces horloges à eau déjà connues des Egyptiens, des Chinois et des Romains, mais les résultats, on s'en doute, furent plus que décevants.

A l'époque où l'on faisait ces tentatives, on commençait à construire des montres, mais il s'agissait d'instruments encore fragiles et primitifs qu'il n'était pas question de placer à bord des navires. Pour comprendre l'étendue du problème, il faut se rendre compte des conditions très dures auxquelles auraient été soumises les montres sur un navire. Les mouvements du tangage et du roulis, les différences de température, l'atmosphère humide, toutes ces causes auraient contribué à les dérégler.

Les montres, depuis qu'en 1674 Huyghens avait inventé le régulateur à ressort spiral, avaient atteint une relative précision. Mais cette précision — elle donnait une marge de variation de vingt à trente secondes par jour — était insuffisante pour le calcul de la longitude. En effet, une erreur journalière de trente secondes pendant un voyage de deux mois aurait donné une erreur globale de 450 milles marins, soit 855 kilomètres.

Pour stimuler le zèle des inventeurs, le Parlement britannique, suivant en cela l'exemple de l'Espagne et de la France, avait promis une récompense au premier qui mettrait au point une montre marine : 20 000 livres si cette montre permettait le calcul de la longitude à un demi-degré près au cours d'un voyage en Amérique, et 10 000 livres si l'erreur était d'un degré.

Il semblait que l'avenir de la navigation fût entre les mains des horlogers, et c'était ce qui irritait les astronomes. Ils s'en tenaient, eux, à la méthode des distances lunaires dont nous avons déjà parlé. Avec la précision des nouveaux instruments de mesure des hauteurs d'astres, cette méthode donnait en effet des résultats acceptables, mais elle ne pouvait être utilisée sur le pont mouvant d'un navire.

En 1726, un homme d'allure modeste vint timidement se renseigner au Bureau des Longitudes à Londres sur les conditions d'obtention du prix promis par le Parlement. On lui demanda s'il était horloger professionnel. Il répondit par la négative, mais affirma qu'il avait dessiné les plans d'un chronomètre de marine. A cet inconnu, un certain John Harrison, fils d'un charpentier du Yorkshire, on communiqua le règlement demandé, mais on resta sceptique quant à ses chances de réussite. On avait d'ailleurs quelque raison de se méfier des amateurs depuis qu'un alchimiste avait proposé d'embarquer à bord des navires des chiens sur lesquels il aurait pratiqué une petite blessure à l'aide d'un instrument spécial. Tous les jours à midi, l'alchimiste enduirait l'instrument d'une poudre sympathique et sur le navire, les chiens se mettraient à hurler ensemble, indiquant du même coup l'heure du premier méridien.

Harrison, lui, n'était pas un illuminé. Il trouva l'appui d'un horloger de renom, George Graham, et il se mit au travail. En 1735, il pouvait présenter son chronomètre. Les rouages étaient en bois, mais les dents en métal. Deux balanciers oscillant en sens contraire assuraient la régularité de la marche. Un système antithermique en acier et en laiton corrigeait les écarts de température.

Le bureau des Longitudes accepta d'essayer le lourd chronomètre — il pesait 35 kilogrammes — au cours d'un voyage dans la Manche. Il permit de corriger l'estime de 1,5°.

C'était déjà un résultat et Harrison continua de se pencher sur son établi, inventant, construisant, essayant lui-même engrenages et ressorts. Un second, puis un troisième chronomètre furent achevés, mais c'est un quatrième, de poids et de taille réduits, qui fut enfins admis à subir l'épreuve d'un voyage aux Antilles en 1761.

A Port-Royal de la Jamaïque, des astronomes avaient établi la longitude du lieu au moyen des distances lunaires. Puis on détermina cette même longitude en faisant la différence entre l'heure du lieu et l'heure donnée par le chronomètre de Harrison. On compara les résultats : la différence n'était que d'une minute de longitude.

Un second voyage à la Barbade donna la même marge d'erreur, mais Harrison ne toucha d'abord que la moitié de son prix. On voulait d'abord s'assurer, avant de lui en remettre la totalité, que ce chronomètre pouvait être construit par un autre que son inventeur. Enfin, en 1775, sur l'intervention personnelle du roi George III, Harrison toucha le reliquat de son prix. Il mourut l'année suivante, âgé de quatre-vingt-trois ans.

Dix ans auparavant, le 25 août 1776, Louis XV accordait une audience à l'horloger Pierre Le Roy qui venait lui présenter une montre marine de sa fabrication.

Cette montre possédait un balancier compensateur des écarts thermiques et, pour la première fois, l'échappement à ancre. Grâce à ces perfectionnements, elle allait être cette fameuse « machine à calculer la longitude » si longtemps cherchée.

Du moins l'espérait-on. Restait à l'essayer. Pierre Le Roy s'embarqua un an plus tard sur la petite corvette l'Aurore, construite par un mécène, le duc de Courtanvaux qui était du voyage. L'Aurore croisa pendant plusieurs mois dans la Manche et la mer du Nord et les longitudes calculées au moyen des montres de Le Roy se révélèrent exactes.

Puis celles-ci furent embarquées sur la frégate l'Enjouée qui navigua du Maroc aux Antilles. Enfin, la croisière de la frégate la Flore dans l'Atlantique de 1771 à 1772 confirma que les chronomètres de modèles différents, dus à Le Roy et à trois autres horlogers, pouvaient être utilisés en toute confiance par les capitaines.

Il fallut pourtant attendre une quarantaine d'années avant que l'usage des chronomètres se généralisât. Au début, la fabrication de ceux-ci demandait beaucoup de temps et de travail et il n'était pas question de les construire en grand nombre pour en équiper tous les navires. Seuls, quelques navigateurs privilégiés possédèrent ces instruments coûteux et fragiles. Cook en emporta un pour son deuxième voyage en 1777 et déclara que « la longitude ne pourrait être fausse tant que nous aurons un guide de cette valeur ». Huit ans plus tard, l'Astrolabe et la Boussole furent pourvus de montres et même d'un chronomètre de Cook que La Pérouse reçut « avec un sentiment religieux pour la mémoire de ce grand homme ».

Avant ces navigateurs, Kerguelen, pour ses deux expéditions à la recherche du continent austral, de 1771 à 1774, disposait d'une montre de l'horloger suisse Berthoud. Mais il n'avait guère confiance en ces nouveaux instruments et préférait pour calculer sa longitude les méthodes de hauteurs lunaires ou bien encore s'en tenait à son estime. Malgré ces dernières méfiances, on peut considérer qu'à la fin du XVIIIe siècle, la navigation empirique, celle où le flair et le sens marin des capitaines suppléaient le manque de moyens techniques, vivait ses dernières années, et que l'ère des continents incertains et des îles fantômes allait disparaître

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Inséré 13/03/24 NIEUWS NOUVELLES Enlevé 13/04/24

ULCC up for sale, again; KOTC's VLCC contract

by Craig Jallal

Rumours of the sale of Euronav's ULCC **Oceania,** a rare VLCC newbuilding contract on the horizon and reports of funding for tanker companies and service providersIn early 2023, shipbrokers reported 2003-built, 441,561-dwt ULCC tanker Oceania had been sold by Euronav to third-parties. The same rumours have resurfaced in 2024, with unnamed Chinese entities being reported as the buyer, although Euronav has issued no statement regarding a sale, and the vessel remains

At one time, Euronav had control of all four of these famous 'White Elephants' ULCCs.

Newbuilding contracts

Brokers and shipbuilding newsletter BRL Weekly Newbuilding Contracts reported Kuwait Oil Tanker Company (KOTC) is asking for quotes from shipyards for a new VLCC to be ordered in 2024, and this is linked to an order for three 174,00-m3 LNG carriers.

Lawyers representing Penfield Marine in sale to Maersk Tankers US-based law firm Seward & Kissel has announced it represented Penfield Marine in the major fleet transaction with Maersk Tankers. Hunter Group contemplates private placement

Hunter Group has announced a contemplated private placement of up to US$12M, issuing new shares which will fund working capital in connection with two three-year back-to-back charterparties on an eco-design, scrubber-fitted VLCC, which it has placed at US$51,000 per day.

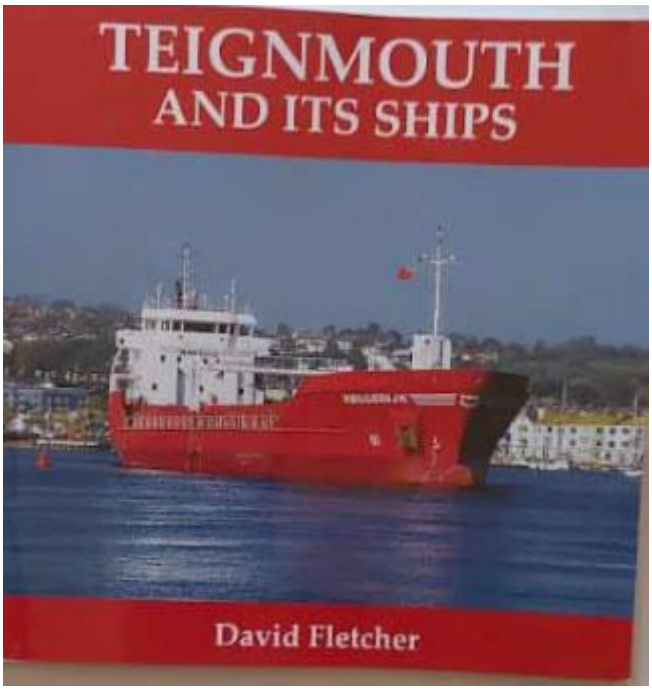
Hunter has appointed DNB Markets, a part of DNB Bank and Fearnley Securities, as joint bookrunners in connection with the private placement. In 2023, 5h3 Hunter Group announced it is exploring opportunities in CCS.

Source : Riviera Maritime Media

Inséré 14/03/24 BOEKEN LIVRES BOOKS Enlevé 14/04/24

"Teignmouth and its Ships".

B O O K R E V I E W by : Frank NEYTS



Recently Mainline and Maritime Ltd published "**Teignmouth and its Ships**" written by David Fletcher. Teignmouth is a popular seaside resort situated on the South Devon coast of England. Here the River Teign completes its journey from the high ground of Dartmoor to the English Channel. Since the Middle Ages the estuary of the River Teign has provided safe shelter and and an opportunity for maritime trade including the export of locally quarried minerals. This trade has continued into the 21st Century and Teignmouth is still a busy port with around 150 ships calling each year.

"Teignmout and its Ships", written by David Fletcher, tells the story of the port and the ships calling Teignmouth. Special attention goes to the cruise ships which anchored on the roads due to the halt to cruise business due to the Covid19 pandemic. A most interesting publication, informative and lavishly illustrated!

"**Teignmouth and its Ships**" (ISBN 9 781900 340977) is a softback book of 96 pages, well illustrated with many colour photographs. The price is £18.95 plus £1.89 UK postage or £6.00 overseas postage. Ordering directly via the publisher, Mainline and Maritime Ltd, 3 Broadleaze, Upper Seagry, Chippenham SN15 5EY400, UK. Alternatively it can be purchased at all good bookshops.

Inséré 14/03/24 DOSSIER Enlevé 14/04/24

IMO's MEPC –toughening targets

IMO's MEPC June 2023 meeting agreed that greenhouse gas emissions will be net zero "by or around 2050," a toughening of the 2018 target of "as soon as possible in this century". DNV experts reviewed the developments

The IMO Marine Environment Protection Committee (MEPC) 80 meeting on 3-7 July 2023 "might have been one of the most anticipated dates in this year's shipping calendar," said Simon Adams, senior communications manager with DNV.

It was when the IMO was due to decide whether its decarbonisation targets should be toughened. And it did decide to toughen them, with a unanimous agreement that greenhouse gas emissions from shipping will be net zero "by or around 2050".

"That wording may sound fuzzy, but it is diplomatic language intended to bring us together by 2050," said Eirik Nyhus, director, environment with DNV. "What we have now is a much more stringent strategy."

There was also agreement that total reduction in shipping greenhouse gas emissions of 20 per cent will be achieved by 2030, in terms of well to wake, not tank to wake.

There is an additional target of 5 per cent of ship energy to be a "zero or near zero greenhouse gas" source by 2030, "striving for 10 per cent". Another checkpoint is the target of 70 per cent reduction in greenhouse gas emissions by 2040, "striving for 80 per cent".

It follows the initial targets, agreed in 2018, for greenhouse gas emissions from shipping to be reduced by at least half by 2050 compared to 2008, and then reduced to zero 'as soon as possible in this century,' a phrase which could theoretically mean by 2099. In 2018 it was agreed that the targets would be reviewed in 5 years.

The 2018 targets also sought to reduce carbon intensity (CO2 emissions per transport work) by at least 40 per cent by 2030, and to "pursue efforts towards" 70 per cent by 2050. This 40 per cent target is unchanged in the 2023 agreement.

There had been one thousand people attending the MEPC meeting physically in London. Because the plenary hall has maximum capacity of 750 people, other people could only watch the sessions on screen from overflow rooms in the building, Mr Nyhus said. A further five hundred attended virtually from around the world. "It was quite hectic and fairly intense, lots of things happening," he said.

"Everybody comes into these negotiations with strong opinions about what they want to see happen. There will be, as per normal, people walking away dissatisfied. Some people with slight disappointments, some people with more deep ones."

"The hallmark of a consensus is that nobody gets everything they want. That is how we see the result from this strategy discussion."

The meeting provides much needed clarity on the future, which should help shipowners and fuel providers make investment decision Mr Nyhus said.

Although some nation states expressed scepticism about the decision made, there was universal agreement with it. Ultimately, "everybody piled onboard, there were no holdbacks. Even though negotiations were extremely hard up to the very last minute."

"We have a clear direction, clear ambition level. It gives me high hope that this will be the course IMO will abide by."

"We can say that the fuel supply industry has received a very clear signal that there is demand coming from maritime. This should give them certainty to invest in fuel production and bunkering facilities."

For shipping companies, it means that "knowing and understanding your own emissions data is business critical and will become increasingly so," he said.

Intensity vs absolute

The distinction between absolute emissions and carbon intensity is important because of the growth in cargoes carried by ship, noted Tore Longva, director of decarbonisation regulatory affairs with DNV.

DNV estimates that shipping overall has reduced greenhouse gas emissions by 10-13 per cent since 2008, while activity has increased 42 per cent. "That is an enormous achievement on energy efficiency."

But maritime cargoes are estimated to grow a further 12 per cent between now and 2030, So if individual ships do nothing further to improve performance, that would 'wipe out' the 12 per cent improvement since 2008, in terms of overall industry emissions.

The expected continued growth of shipping activity leads to estimates that achieving a 20 per cent reduction in absolute emissions by 2030, compared to 2008, will require 5 to 10 per cent use of zero carbon fuel by 2030, and 15 per cent further improvement in energy efficiency.

Regulatory measures

MEPC also discussed the regulatory measures to be taken to achieve the target. IMO has decided that there will be both technical and commercial measures.

The technical regulatory measure will be a standard for the greenhouse gas intensity of fuel used. There were proposals for this both from EU and China, which Mr Nyhus describes as "conceptually similar," and the EU measure had "close resemblance to FuelEU Maritime."

"IMO will need to work really hard on trying to consolidate all the proposals and views, so when we get to MEPC81 in April next year we can agree on a base document, for further development of technical aspects of regulations, legal language," he said.

The commercial measure will be some kind of tax based on emissions. There have been a number of proposals. IMO has not decided which one it will follow.

Discussions about this "did not get as far as the technical development," he said.

"There is agreement that there should be a pricing on GHG emissions [but] there's strong divergence on views of what kind of mechanism. Some people say, 'certain options are off the table,' others insist they are on the table," he said.

The technical and commercial measures could be linked, such that companies not achieving the GHG intensity standard in fuel they consume have a financial consequence.

The plan is for the regulations to be adopted in 2025 and entered into force in 2027. Although that seems a long way away, Mr Nyhus believes it is "quite an aggressive timeline," on the basis that regulations are typically approved at the meeting before they are 'adopted', which means it needs to be approved in 2024.

Aspects of fuels

MEPC adopted fuel lifecycle assessment guidelines, describing how emissions made in fuel production should be taken into account in future regulations, Mr Longva said.

Fuel production emissions are known as 'well to tank', although not all fuels come from a well. Emissions at the vessel itself are known as 'tank to wake'. The full lifecycle emissions are known as 'well to wake'.

Emissions are involved in making all fuels; biofuels also have 'negative emissions' in that carbon is taken out of the atmosphere when they are grown. Biofuels have positive emissions in their manufacture, such as in making fertiliser, operating equipment, transport and processing.

Emissions of fuels will be calculated in terms of grams CO2 equivalent per megajoule of energy. This will be called the 'emissions factor'.

The phrase 'CO2 equivalent' takes into account the varying greenhouse gas potential of different greenhouse gases, looking at CO2, methane and nitrous oxide, with methane being much worse than CO2 per tonne.

Fuel will need to be provided with a "fuel lifecycle label" showing emissions made in producing them. There will need to be some auditing and certification process.

The agreement is on the methodology for how calculations will be done, not the actual calculation. But IMO has developed "default" emissions factors for methanol, diesel, and LNG. These can be used if no specific information is provided, he said.

The figures for the well to tank emissions are not yet available "in great scientific rigour," Mr Nyhus said. It is an important calculation, to ensure that companies are eliminating emissions, not merely shifting them upstream.

For example, if a ship moves to hydrogen fuel, there will be zero CO2 emitted at the ship exhaust, which is great for CII. But if there is plenty of CO2 emitted upstream, such as for hydrogen made from natural gas, there's no net benefit to the environment.

The EU's FuelEU Maritime standard already looks at well to wake emissions.

Biofuels Circular

For biofuels, IMO has released a Circular stating that biofuels can use a CO2 conversion factor accounting for the whole well to wake emissions in CII.

The Circular states that biofuels should be certified by an international certification scheme and must meet that scheme's sustainability criteria. This will generally mean they are not made from any feedstock which could be used to make food. Waste products from food production are allowed.

IMO also states that biofuels must achieve a well to wake greenhouse gas emission reduction of at least 65 per cent compared to fossil marine gas oil. Many biofuels on the market do not achieve this, Mr Longva said.

The biofuels Circular is a "temporary fix to an immediate problem," Mr Nyhus said. Companies are keen to use biofuels today, but under current regulations do not see any benefit from doing so under CII. Eventually it will be replaced by life cycle assessment guidelines brought into regulation.

Review to CII

CII is scheduled to be reviewed at the end of 2025. We are now in a data gathering phase for that review, with potential amendments to be created by summer 2025, Mr Longva said.

So far, the CII calculation is based only on 'tank to wake' emissions, but it may be extended to include well to tank emissions.

There have been a number of submissions to IMO about how the CII formula should be adjusted. For example, for vessels with short waiting times, long voyages, LNG boiled off. "There will be no immediate changes to the framework, everything will be gathered by summer 2025," he said.

The CII reduction requirements from 2026 to 2030 will be aligned with the revised greenhouse gas strategy ambitions.

There are, yet no penalties for a ship which does not meet the required grades, except for a requirement to make a 'corrective action plan.' This will be reviewed in 2025.

Mr Nyhus believes that to detain ships which do not comply would be draconian. But some states will be willing to enforce CII compliance.

There could be a financial mechanism, whereby noncompliant ships are obliged to make additional payments to the financial scheme IMO develops.

Onboard carbon capture

There was a brief discussion at MEPC 80 about onboard carbon capture, but "no substantial discussion, due to time constraints," Mr Nyhus said.

The issue is scheduled to be discussed at the next meeting of the Intersessional Working Group on Reduction of GHG Emissions from Ships to be held in April 2024 (ISWG-GHG 16). It will be linked to further work on the life cycle assessment guidelines. "It is not discarded, but going a bit slower," he said.

Other discussions

There were approved amendments to the Data Collection System (DCS) regulations taking effect from 2026, stating that shipping companies should provide additional data 'elements'. This includes fuel consumption per fuel type, fuel consumption per energy consumer (main engine, boiler, auxiliary) and fuel consumption per transport work, by tonne mile or another metric.

There was discussion about whether the use of ShaPoLI/EPL can be included under EEDI framework, so that new ships could be built with power capacity they are expected to only use in emergency situations, but no conclusion.

The Ballast Water Management Convention is "undergoing a review." One issue being considered is what happens for ships operating in challenging water quality. For example, water thick with sediment from a river, so that ultraviolet light of a ballast treatment system cannot penetrate it.

IMO did not reach any conclusion here, Mr Longva said.

Ship recycling was not part of the MEPC meeting, but the rules have changed now the Hong Kong Convention has been ratified, and it will enter into force in June 2025. Each ship above 500 GT will need to carry a certified inventory of hazardous materials. While many ships already have this, DNV estimates there are 23,000 vessels which do not.

Also under the Convention, ship recycling facilities need to be authorised by competent authorities and will only be able to accept ships which are themselves in compliance.

Predictions

The webinar audience was asked what they believed was the most important solution to achieve the twenty per cent emissions reduction in 2030. 53 per cent said use of carbon neutral fuels such as biofuels; twenty per cent said technical energy efficiency improvements; 18 per cent said operational improvement, such as with speed and trading patterns; 6 per cent said onboard carbon capture, and 2 per cent said commercial improvements, such as changes to charter parties.

Mr Nyhus said that the poll results showed that people had faith in carbon neutral fuels. "Biofuels are likely to be available in reasonable volumes; e-fuels will lag a bit," he said.

There are no obstacles to making technical and operational efficiency improvements. Mr Nyhus thought the audience might have more confidence in commercial measures. "It could have a significant difference," he said.

For onboard carbon capture, Mr Nyhus said he thought the audience was correct to not put too much faith into it. "We think it will take a while before CCS takes significant volumes. So, in context of 2030 this seems reasonable."

The DNV experts were asked for their predictions on what will happen.

Mr Nyhus said he did not expect shipboard nuclear power to ever play a significant role in shipping. Apart from societal concerns and need for further technical development, it could take until 2050 for regulations to be sorted out and technology to be widely deployed. "It might make more sense to put nukes onshore and use the electricity to make liquid fuels," he said.

Mr Longva added that he thought biofuels would "take the brunt of reduction" to 2030.

Blue fuels (with shore carbon capture) and e-fuels will take longer, he believes. Large scale carbon capture on shore "is recognised as a vital solution globally to reach the 1.5-degree target," he said. "We see a lot of technology development. It is not mature. Challenges include "having access to storage sites, resolving the regulatory issues, ensuring there is true storage of CO2," he said.

"I think carbon capture will have a promising place. Maybe not in the long term to 2050, but certainly in the short to midterm."

IMO, EU and US

Will the EU and the US allow their maritime decarbonisation regulations to be replaced by IMO regulations once they are in place? "We'd all love to see a grand unified theory of regulations. We might get there. [But] at the moment I suggest the status quo will abide," Mr Nyhus said.

The EU has "review provisions" stating that regulations will be removed if an international regulation demands the same thing, and this will happen towards the end of the 2020s.

"Taking away something, which is seen as working and established, that is a tall order. Do not expect miracles tomorrow, will be my advice. We will have overlapping regulations for the next decade or so at least," he said.

Inséré 15/03/24 NIEUWS NOUVELLES Enlevé 15/04/24

Biden administration stalls U.S. LNG project approvals to "reevaluate" climate criteria

By : Ruth Liao and Ari Natter, Bloomberg

The Biden administration is reevaluating the so-called climate criteria it uses to approve new liquefied natural gas (LNG) export facilities, threatening to stall pending projects as the 2024 election nears. A panel of government officials convened by White House climate adviser Ali Zaidi met to develop a policy recommendation on the issue for President Joe Biden, according to two people familiar with the matter who weren't authorized to speak publicly. The officials met on Jan. 6, one of the people said. Biden has been briefed on the issue but has yet to make a decision, a second person said. The issue forces Biden to balance competing geopolitical and domestic priorities. He committed to providing more gas to Europe after Russia invaded Ukraine. But as the election nears, every fossil-fuel project approval under his watch is being scrutinized by climate-minded voters key to his reelection.

The Department of Energy, which issues export permits, is checking whether it's properly accounting for the climate impact of proposed plants, Politico earlier reported, citing an unidentified senior U.S. administration official. An Energy Department spokeswoman said the agency didn't have any updates on its approval process. The White House didn't immediately comment.

The U.S., which was the largest LNG exporter in the world in 2023, has five LNG export facilities under construction and several more permitted and awaiting a final investment decision. The plants chill natural gas to a liquid, allowing it to be loaded onto tankers and shipped around the globe. The U.S. began exporting LNG from its vast shale reserves in 2016, with demand picking up sharply after Russian gas flows to Europe sputtered following the country's invasion of Ukraine in 2022. Senator Bill Cassidy, a Republican from Louisiana, called any bid to curtail U.S. LNG exports "shortsighted," since it would thwart a shift away from coal-fired power to natural gas.

"If we limit the export of natural gas, we limit the ability to substitute cleaner burning natural gas for coal," he said Wednesday at an American Petroleum Institute event in Washington.

Any push to change how export licenses are approved could effectively stall permitting in the meantime. Administration officials already warned industry representatives of potentially protracted delays for approvals to broadly export LNG during meetings at the COP28 summit, according to a person familiar with the matter. Reviews of applications to broadly export LNG have stretched to more than 330 days under the Biden administration, up from 49 days under former President Donald Trump and 155 days under former President Barack Obama, according to the API. "The signal that sends to our allies is very, very concerning: Is the United States going to be a source of LNG and a reliable partner into the future?" API Chief Executive Mike Sommers said in an interview. "Our allies are going to start asking that question if they make this determination." Venture Global, the operators of CP2, a proposed plant in Louisiana that's awaiting approval by the Federal Energy Regulatory Commission, says the project, like other U.S. plants, will be key to the world's push to move away from dirtier fuel sources, like coal. "American LNG is the best weapon in our arsenal to quickly displace global coal use and combat climate change. NGOs and their paid activists have continually misled the public, making up their own facts to fit their agenda, when the data shows otherwise," Shaylyn Hynes, a spokeswoman for Venture Global, said in an emailed statement. Compared to the two previous presidencies, the Biden administration has taken longer to approve LNG export licenses for new projects, according to data from LNG Allies, a trade group. A longer wait means delays in getting financing and customer commitments, potentially putting projects' viability at risk.

The proposed Commonwealth LNG project in Louisiana has been waiting more than 400 days for its so-called non-FTA export permit from the DOE.Compared to the FERC process, "we find there is far less feedback or visibility in DOE's deliberations for us to understand the delay," Commonwealth LNG Founder and Executive Chairman Paul Varello said in an emailed reply to questions. "With all our other permits in hand, we're ready to move forward with the final steps toward financing and construction once the Non-FTA permit is secured."

Source : Worldoil

Inséré 16/03/24 DOSSIER Enlevé 16/04/24

Improving CII with biofuel blending

Shipowners can use biofuels to improve their CII scores, following 'Interim Guidance' which was agreed at the IMO MEPC meeting in July, reports ABS. A 30 per cent biofuel blend could take your vessel's score from D to A in 2023

By Panos Koutsourakis, VP Sustainability, ABS

With reporting of data in IMO's compliance with the Carbon Intensity Indicator CII) regulation well underway, shipowners and operators are focussed on how to optimise their operations and gain improvement in CII ratings.

The options include optimisation of vessel efficiency using energy efficiency technologies and the use of alternative and low carbon fuels.

Full adoption of cleaner fuels is some years away but options exist for the transition period.

Analysis by ABS has concluded that drop-in biofuels have the potential to make a substantial improvement to a vessel's Carbon Intensity Indicator (CII) rating.

The research concludes that blending with biofuels could improve a vessel's CII performance regardless of whether the vessel is powered by diesel, methanol or LNG.

The CII establishes a downward trajectory measurement of a ship's carbon intensity, which is the amount of carbon emissions generated by a unit of transport work, equivalent to one nominal tonne of cargo carried over a nautical mile.

The CII assigns an 'energy efficiency' rating to all ships (from A to E), based on the calculated carbon intensity.

Vessels in the D and E categories will have to demonstrate continuous improvement, moving progressively towards category C.

Ships that spend three consecutive years in category D, or one year in category E will be subject to a mandatory review of the Ship Energy Efficiency Management Plan (SEEMP) and a plan of corrective actions must be made to achieve the Required Annual Operational CII.

The 2022 Guidelines on operational carbon intensity indicators and the calculation methods provided the possibility for the CO2 Emission Conversion Factor (Cf) to be obtained from the fuel oil supplier, supported by documentary evidence, in case the type of the fuel oil is not covered by the relevant guidelines.

The current regime has been measuring carbon emissions tank-to-wake but there are discussions underway to change this to well-wake, accounting for the full lifecycle of emissions.

In the July meeting of the Marine Environment Protection Committee (MEPC 80) the Marine Fuel life Cycle GHG Guidelines (LCA Guidelines) were officially adopted a work program for further enhancement of the guidelines was agreed upon.

To facilitate the uptake and establish a common approach among flag Administrations regarding the assignment of a carbon factor (Cf) for biofuels and thus ensuring a level playing field, pending the development of policy instruments for the use of LCA Guidelines, the Committee also adopted Interim Guidance on the Use of Biofuels.

This suggests that, under certain provisions, biofuels that have been certified as sustainable by an international certification scheme may be assigned a carbon factors (Cf) equal to the value of the well-to-wake GHG emission of the fuel, based on the certificate.

Blending the biofuel from biogenic sources with diesel and other fuels up to 30 per cent would thus improve the overall carbon intensity and thus a ship's CII rating. The commonly used biofuel products for shipping are the biodiesel blends, which contain 20 -30% of pure biodiesel and offer 15 - 20% carbon emission reduction on Well to-Wake basis.

Potential improvement

ABS analysis concluded that a container vessel propelled by traditional low Sulphur fuel could see its rating improved from E to C in 2023 with the adoption of a 30% blend of biodiesel.

The advantage of biofuels to decarbonization extends to the supply chain and the bunkering infrastructure required for fuelling.

Since biofuels are simple fuels of the same molecular structure, their cost is confined to the fuel itself rather than in any additional treatment, meaning they represent a compelling option once supply and regulatory questions are addressed.

The next issue for owners – common to all alternative fuels - is availability in sufficient quality to support CII compliance and ultimately a net zero carbon shipping industry.

ABS expects there to be sufficient biofuel supply to meet current demand since the majority of energy majors have invested in producing sustainable biofuels.

Availability is increasing at the world's big bunkering hubs and is expected to increase further over time, especially after the decisions of MEPC 80, as demand signals from shipowners grow.

However, the shipping industry must be in no doubt that it will experience competition, principally from the aviation industry, which is also eyeing the use of sustainable biofuels to lower its carbon emissions.

Nevertheless, drop-in biofuels are a powerful tool for shipowners and operators to accelerate fleet decarbonization and improve their CII trajectory today.

ABS is involved in pilot projects on the application of biofuels that have shown us the significant potential of these fuels to contribute to reducing a vessel's well-to-wake carbon intensity and transform its rating.

ABS has published a series of sustainability whitepapers focused on alternative fuels, breaking down the available options including their challenges and advantages, as well as other factors to take into consideration during the decision-making process.

The whitepaper 'Biofuels as Marine Fuel' focuses specifically on drop-in biofuels and can be downloaded from the ABS website.

Inséré 17/03/24 NIEUWS NOUVELLES Enlevé 17/04/24

Cargo Ships Must Slow Down Off NJ, Are Hitting Whales

Boats longer than 65 feet must go 10 knots or less in certain areas. The problem is 84 percent of cargo ships don't follow the law: Congressman Frank Pallone, Jr. (D) is asking the Coast Guard and National Oceanic and Atmospheric Administration (NOAA) to enforce speed limits on cargo boats off the Jersey Shore. Pallone said cargo ships go too fast as they approach New York Harbor, and they are hitting whales and other marine mammals. That could be what's causing the increase in whale deaths off the Jersey Shore, he speculated. The Endangered Species Act and Marine Mammal Protection Act mandates all boats longer than 65 feet travel at a speed of ten knots or less in certain times and areas, specifically to protect the North Atlantic Right Whale, which is endangered. However, this recent analysis of Automatic Identification System (AIS) data on cargo ships entering the Port of New York/New Jersey showed that the vast majority of cargo boats go faster than ten knots, which is breaking the law. Pallone said he wants the Coast Guard off New Jersey to "go after the worst offenders. «In this Jan. 4 letter he sent to the U.S. Coast Guard and NOAA, Pallone highlighted a recent report that showed 84 percent of boats such as cargo ships failed to comply with speed rules. «More than four in five large boats fail to abide by the vessel speed rule put in place to protect highly endangered right whales and other marine life," said Doug O'Malley, Director of Environment New Jersey. "Fewer than 350 North Atlantic right whales are left on this planet. Ship strikes, along with fishing gear entanglements, are the leading causes of death, despite a speed limit at key times of year and in places where right whales congregate. Allowing large vessels to routinely ignore speed limits and break the law isn't acceptable. «According to NOAA, vessel strikes and entanglements have caused more than 77 percent of deaths and injuries to the North Atlantic right whale since 2017."Over the past few years, there has been an Unusual Mortality Event for whales and other marine mammal species across the mid-Atlantic coast and the leading culprit of these deaths have

been vessel strikes, which is tragic since they are entirely preventable," said Anjuli Ramos-Busot, New Jersey Sierra Club Director.

Inséré 18/03/24 DOSSIER Enlevé 18/04/24

DNV – how shipping is evolving

DNV shared perspective on how the maritime industry is evolving, including predictions for supply of alternative fuels, ESG data, growth in alternative fuel ships, rise in incidents, and fear of cyber attacks

According to DNV's forecasts, by 2050, biofuels will provide a quarter of all aviation fuels, and 20 per cent of maritime fuels, said Remi Eriksen, Group President & CEO, DNV, speaking at an event at Nor-Shipping in Oslo.

DNV forecasts a rapid growth in biofuel for ships over the next 10 years.

Supply of ammonia and e-fuels for ships is expected to reach a bigger scale later, from mid-2030s, he said.

We are unlikely to see e-fuels at scale earlier than the mid-2030s because they are made from renewable electricity. While we still have some fossil generated electricity, it makes sense to use the renewable electricity to displace it. So, we may only see e-fuels on a big scale when we have so much renewable electricity generation, we have some left over after giving our grids what they need.

While this renewable energy infrastructure is being built, 'blue' hydrogen can be made using carbon capture and storage and supplied to shipping, he said. "We need CCS to be matured. Let's start with blue."

If all the wind power we had installed today globally was used to make maritime e-fuels, it would only provide 50 per cent of maritime industry needs in 2050, he said. This illustrates how much renewable energy we will need.

Another question is how many oil tankers we will need in the future. According to DNV's forecasts, oil demand from the transport sector (road vehicles, trains and ships) will halve to 29m barrels of oil per day by 2050, he said.

Emissions data for customers

Shipping companies are increasingly being asked by their customers to provide data about emissions made in providing transport services, said Knut Ørbeck-Nilssen, CEO maritime with DNV. These form part of the "Scope 3" (value chain) emissions of its customers.

If lower emitting ships get more business as a result, we can say that decarbonisation can be 'commercially driven', he said.

DNV plans to play a role as an "independen trusted player," verifying emissions data provided by shipping companies, he said.

Changes to fuelling

At the time of the event in June 2023, only 40 per cent of newbuild vessels are being built to only run on conventional fuels, Mr ØrbeckNilssen said.

DNV counts that there are currently 911 LNG fuelled vessels in operation or in order, and 127 methanol fuelled vessels in operation or in order. LPG is so far only used as a fuel by LPG carriers.

There is a lot of interest in biofuels now, and DNV sees that e-fuels and blue fuels are "a little further out in time".

As of 2023, "we can easily say the [future] fuels will be late, in short supply and infrastructure will take a long time to develop," he said.

There is not yet a competition between fuels, because the industry will need everything which can be made available.

Rise in incidents

DNV's annual analysis of maritime safety made the sad observation that incidents rose in 2022, after a decade of improvements. 2022 saw the highest number of incidents for 11 years.

The main causes were machinery damage and machinery failure.

It is difficult to pinpoint the cause, but one theory is that it is related to Covid, in two ways – vessels missed out on maintenance (due to difficulty making visits to ships), and seafarers had more fatigue, he said.

There are concerns that the new technologies being brought onto ships to handle new types of fuels could lead to more incidents, if seafarers are not properly trained to use them. DNV calculates that for the industry to reach its decarbonisation by 2050 target, there will need to be new training for 750,000 seafarers.

Cyber-attacks

Another big area of concern is the "tremendous increase in cyber-attacks," he said.

In a survey of seafarers, 81 per cent said they needed more training on digital technologies, and 52 per cent said they preferred in-person training.

A separate survey of 800 maritime professionals asked how big they thought the cyber threat was. 80 per cent said they thought a cyber-attack would lead to closure of a major port or waterway; 68 per cent believe there will be a grounding due to a cyberattack; 60 per cent believe there will be a collision, and 56 per cent believe there will be physical injury or loss of life.

DNV recommends that cybersecurity should be treated as part of operational safety, he said. Specific crewmembers should be given responsibility for cybersecurity onboard.

Inséré 19/03/24 HISTORIEK HISTORIQUE Enlevé 19/04/24

Shipwrecks: Images and Perceptions of Nineteenth Century Maritime Disasters (I)

Mark Staniforth

In the nineteenth century the long sea voyage across thousands of miles of open ocean to Australia was a step into the unknown. International migration at this time usually involved travel by sea, as it had in previous centuries. Ships were the primary long distance transportation method and the movement of passengers was one of their most important

functions. It has been estimated that more than 1.6 million immigrants travelled to Australia by ship between 1788 and 1900, nearly half of these people were assisted immigrants of one type or another and they came primarily from Great Britain with smaller numbers from Europe.

In the popular imagination the ocean represented hazard and uncertainty - an alien environment in which the possibility of shipwreck loomed large. Passengers felt themselves to be at the mercy of the elements and being directly exposed to the extremes of the weather in a moving structure was a new and disconcerting experience. This fear of shipwreck can be seen in a letter from P. Harnett to his brother from Cape Town in 1832 who writes that: 'you and the family must have been frequently tormented by anxious hopes and fears of my safety or probably have heard that the vessel was wrecked and as a matter of course that I was lost' .

In most respects shipwrecks, like other tragedies involving transportation, are civil or 'man made' disasters yet they also exhibit some of the characteristics of natural disasters. These include evoking in the victims feelings of powerlessness in the face of overwhelming natural forces and a timeframe which sometimes extends over a period of hours or even days.

These feelings of vulnerability resulted in fear and distress as most passengers were completely ignorant of their vessel's ability to withstand the wind and waves. The general public's fears about the dangers of shipwreck were to some extent the result of, and were certainly magnified by, the newspapers, books, handbills and periodicals of the time.

Water below decks was particularly disconcerting leading passengers to imagine that the dangers were far greater than they were in reality. On some occasions fear became the all-pervading and dominant emotion among the passengers. Much of this fear was unfounded, however, as remarkably few ships were overwhelmed and sunk by the force of weather alone. In fact, shipwreck was not the greatest danger at sea - disease, sickness and accident accounted for many more deaths.

The greatest social effects of the loss of passenger ships were felt in the wider community particularly on those who lost loved ones and friends. Shipwreck also engendered a sense of 'there but for the grace of God go I' among those people who had been or who intended to be passengers. Shipwreck events were of particular interest to those involved in maritime trade because of the significant economic investment in ships and cargoes but they were also important to the wider society in the form of vitally needed cargoes. In more general terms the public has always had a fascination with tales of disaster and survival particularly those which involved incredible hardship.

There was an immense variety of written material produced about shipwrecks in the nineteenth century including manuscript descriptions of shipwreck disasters in the form of letters, journals and diaries written by passengers. These reveal some of the individual approaches employed to cope with the tragedy of shipwreck. The diary of Sarah Davenport, who was on board the Urania when it was wrecked soon after leaving Liverpool, illustrates the panic which resulted when shipwreck became a reality:

.. *the vessel struck about half past ten o'clock she struck on the sand bank i shall never forget it the cries and screams [of] wemon and children and some of the men was terrified they did not know what they was doing . As soon as Daylight broke the Life boats came and took us off the wrecked vessel.*

Despite losing virtually everything in the wreck of the Urania, Sarah Davenport showed great determination to get to her destination. Together with her husband and three children she set off again in another ship for Australia; however her woes did not cease there, as she lost her youngest son, Albert, to disease, and had a still born child during this second voyage. The reaction to disaster is not the same for different individuals or groups and not all passengers demonstrated the same resolution as Sarah Davenport. After being

shipwrecked when the Juliana was driven ashore in 1839, 21 adults and 29 children remained at the Cape of Good Hope, unwilling to risk continuing to Australia in another vessel.

The wrecks of passenger ships in the nineteenth century spawned a whole genre of books, magazine articles, handbills, penny magazines and images of shipwrecks. One of the earliest of these is the Chronicles of the Sea which described the loss of the Amphitrite in 1833. Newspapers represent an important source of information about these maritime disasters. The popularity of these written accounts is indicative of the public's wider fascination with disaster. This is probably as true today as it was in the mid nineteenth century.

Generally images of shipwreck events varied in their degree of accuracy. The most accurate were usually drawings produced shortly after the event and done from memory by the participants themselves, particularly if the individual had some level of artistic talent. Shipwrecks were also a popular subject for artists who produced oil or watercolour paintings or drawings. During the nineteenth century, despite the introduction and development of photography and by the end of the century of moving footage, there are very few photographs of shipwreck events as they occurred. There are many examples which were taken shortly after the event showing the resulting destruction of the vessel on the beach or rocks.

Images of shipwreck events were sometimes used as the basis for lithographs or engravings for the illustrated newspapers. However, some engravers who worked for the illustrated newspapers produced imaginative 'artist's impressions' of shipwrecks which certainly conveyed a sense of the great dangers associated with shipwreck but which carried the drama to extremes producing visual impressions which exceed the bounds of credibility. As historical documents they cannot be relied upon to provide even a reasonable approximation of historical reality as such images were romantic rather than accurate depictions of shipwreck events. Consequently it is necessary to carefully assess the source and type of image to decide on the accuracy of the depiction.

In recent years disasters have started to attract the attention of historians interested in the social and economic costs of events in which large numbers of 'ordinary people' lost their lives. Shipwrecks have been widely acknowledged as the worst civil disasters in Australian history in terms of the number of deaths in a single catastrophe. In his chapter on disasters in Australians - A Historic Atlas Stuart Piggin borrows Donald Horne's now cliched phrase 'the lucky country' to describe Australia's experience of disasters. Piggin based his claim of a relatively low loss of life in Australian disasters largely on a comparison with New Zealand in the recent history of air and rail disasters. As he quite rightly points out in terms of the number of deaths which occurred, the crash of an Air New Zealand airliner on Mount Erebus and the Tangiwai rail crash were far worse than anything which Australia has experienced this century.

Piggin cites the Australian Encyclopedia as the 'most accessible historical information on peacetime disasters' including in his definition of disasters 'wrecks and shipping disasters'. In this paper I intend to demonstrate that the Australian Encyclopedia, as well as a number of the other 'standard works' which deal with shipwrecks are frequently unreliable.

In general Piggin's analysis fails to seriously address maritime disasters in Australia apart from a single sentence in which he acknowledges the loss of the emigrant ship Cataraqui as the worst civil disaster in Australian history. The Cataraqui was wrecked on King Island on 4 August 1845 with the loss of nearly 400 lives including 365 passengers which represents the greatest number of deaths in a civil disaster on the coast of Australia. The loss of the Cataraqui has been considered in detail by Marjorie Morgan and Andrew Lemon in their excellent book Poor Souls, They Perished.

Unfortunately, some historians have resorted to published secondary sources when discussing shipwreck disasters rather than examining the primary documentation. In his unpublished doctoral thesis Frank Crowley claims that between 1860 and 1914 just six emigrant and six ordinary passenger ships were wrecked on the outward voyage to Australia. Crowley's claims appear to have been based primarily on information about wrecks and shipping disasters provided in the Australian Encyclopedia. As far as I can determine there were at least 15 emigrant and passenger ships lost between 1860 and 1900. Crowley lists four wrecks in his thesis which for various reasons should not be included more importantly he fails to mention seven wrecks which did occur, including three which resulted in considerable loss of life among the passengers.

My recent research has revealed that at least two of the shipwreck events listed in the Australian Encyclopedia did not, in fact, involve passenger vessels on the Australian run. The first of these was the loss of the Megaera which the Australian Encyclopedia claimed was a 'government ship, with 400 people aboard for Australia' and which was beached on lonely St. Paul Island (South Indian Ocean) on 19 June 1871 with no lives lost. In fact, Megaera was a Royal Navy storeship destined for the conflict in Abyssinia and only had crew on board . The second example was the loss of the Strathmore, which was wrecked in the Crozet Islands (South Indian Ocean) on 2 July 1875 with just 38 survivors from among the 51 passengers and 38 crew aboard. Unfortunately, the Strathmore was bound for New Zealand and did not have the nearly 400 people destined for Australia which the Australian Encyclopedia suggests. Overall, the Australian Encyclopedia includes only 22 of the 42 passenger ship wrecks which are listed in Table 1.4

Another important and regularly consulted source on wrecks and shipping disasters is Charles Hocking's two volume Dictionary of Disasters at Sea during the Age of Steam, 1824-1962 which was published by the prestigious Lloyds Register of Shipping in 1969. This could be mistaken for a definitive, if somewhat brief, coverage of shipping disasters. While Hocking lists most of the shipwrecks which resulted in extensive loss of life he nevertheless fails to include four shipwrecks which each resulted in more than 100 passenger deaths. On a more general level this work is even less comprehensive than the Australian Encyclopedia; only 13 out of the 42 passenger ship wrecks which are summarised in Table 1 appear in Hocking's work.

Equally, the reliability of some of the information provided is questionable. Hocking describes how the Great Queensland vanished at sea during a voyage from London to Melbourne in 1876 with '569 passengers and crew' on board. He goes on to suggest that this was 'probably the worst disaster in the history of Australian emigration'. This is clearly revealed as incorrect by the Times which states in two articles in December 1876 that when the Great Queensland vanished there were just 34 passengers and 37 crew on board; a significant loss of life but not the catastrophic disaster which Hocking suggests.

In recent years there have been a number of books written which briefly describe the events surrounding the loss of almost all vessels in the Australian region. Principal among these are the five volumes of Australian Shipwrecks-. Bateson's volume considers all vessels which were destined for Australia no matter where in the world they were wrecked and he accurately covers all of the passenger ships wrecked before 1850. Unfortunately Loney's volumes only consider wrecks if they were lost in Australian waters. Thus only if a passenger ship from Europe happens to have reached Australian waters before being wrecked will it be described in Australian Shipwrecks Vols 2 and 3. Finally there are the computer databases kept by maritime archaeologists in each state which contain extensive and generally accurate information about shipwrecks on the Australian coast. Unfortunately these have yet to be consolidated into a national register and remain largely inaccessible to the general public.

There are no accurate statistics available on how many passenger ship voyages were made to Australia in the nineteenth century. The reason for this gap in the historical statistics is primarily the result of a definitional problem about what constitutes a passenger ship. The number of passengers on board each ship, the port of origin and even the overwhelming numbers of ship arrivals in the nineteenth century make accurate data series extremely difficult to establish. For the purposes of this paper I have chosen to consider only inward-bound international passenger ships from Europe. These are defined as vessels which had on board more than 30 passengers, immigrants or convicts and which were wrecked after embarking their human cargo in a European port and before disembarking them in the Australian colonies.6 A rough estimate based on this definition would probably be in the region of 10,000 allowing for an average of 100 arrivals per year over the century.

There were at least 41 passenger ships lost during the voyage to Australia in the nineteenth century which if the estimate of 10,000 voyages is approximately correct represents about 0.4% of the total number of voyages. Of the more than 1.6 million passengers who embarked for the voyage to Australia at least 3,396 lost their lives in shipwrecks which represents approximately 0.2% of the total.

Table 1

Passengers ships wrecked on the voyage to Australia from Europe in the nineteenth century

Decade	number of shipwrecks	shipwrecks with no deaths	Total number of deaths
1800-09	0	0	0
1810-19	0	0	0
1820-29	0	0	0
1930-39	6	3	459
1840-49	5	2	525
1850-59	13	6	1058
1860-69	9	5	726
1870-79	5	1	378
1880-89	1	0	270
1890-99	1	1	0
Total	41	19	3396

One general point which is immediately obvious from these figures is that only in about half of the cases of shipwreck were there any deaths among the passengers. Thus, if the chances of a passenger actually being shipwrecked in the nineteenth century were actually relatively low then the chances of dying in a shipwreck event were even lower.

The greatest number of shipwrecks and the largest number of deaths occurred in the 1850s. It would be a mistake, however, to immediately conclude that the decade of the 1850s was in any way more dangerous than any other decade as it also corresponds to the peak in immigration caused by the gold rush. More than 670,000 immigrants arrived on board several thousand vessels - far more than any other decade. More extensive research is required before general conclusions about the rises and falls in the relative numbers of shipwreck events in different decades of the nineteenth century can be made.

Comprehensive, comparative figures for the Atlantic crossing from Europe to North America, where extremely large numbers of emigrants made the passage, are also lacking in the historiography. There are occasional accounts of shipwreck events and isolated statistics for certain periods such as the years 1847-51, when 44 passenger vessels out of 7,129 from Britain were wrecked with the loss of 1,043 lives . However, in the absence of systematic quantitative analysis, such figures remain 'occasional streaks of colour that happen, by some accident of documentation, (to) randomly penetrate the haze which obscures our wider understanding of shipwreck disasters'.

Some of the more important questions which can be asked about shipwrecks is why they occurred and what types of shipwreck events posed the greatest danger to the passengers. There were a number of general types of hazard which resulted in ships being wrecked. These have been grouped into five general types for the purposes of this paper which have been defined as follows..

Fire including explosion of cargo
Icebergs including becoming embayed by ice
Collision including with other vessels or lightships
Foundering including storms, stress of weather and vanishing at sea
Running ashore including striking isolated rocks, sandbanks and reefs

These hazards cover the vast majority of shipwreck events in the nineteenth century though they are not entirely comprehensive; rare events such as the cargo shifting or the vessel hitting a whale did happen. Ascribing a single reason for a particular passenger shipwreck event to one of these hazards can occasionally be difficult as the example of the loss of the ship Wanata in 1866 indicates. This vessel was damaged in a gale, collided with another vessel (at which point it was abandoned), before catching fire and finally sinking.

Even more difficult to establish were the underlying causes of any particular shipwreck disaster. Questions of negligence (the captain or crew being at fault) had to be balanced against technical failure (a part of the ship breaks) and extreme environmental conditions (storms). The Royal Commission into Shipwrecks reported in 1873 that the losses of all British merchant vessels between 1850 and 1872 were as a result of natural causes (storms) (30.5%), unseaworthy, overloaded vessels (4.5%) and bad navigation (ignorance and drunkenness) (65%). These proportions can only be considered as indicative of the possible causes of passenger ship wrecks. Passenger ships were subject to the provisions of the Passenger Acts and to an increased level of government inspection and regulation compared to the average British merchant vessel.

In addition, and at certain times, recently introduced technology may have contributed to particular disasters. For example, when the immigrant ship Tayleur ran ashore on the coast of Ireland in 1854 it was more than 50 miles off course. It was suspected that the ship's compass had been affected by the iron hull which was still a relatively new construction method at that time.

Convict transportation provided the earliest movement of people from Great Britain to Australia. Between 1788 and 1868 more than 168,000 convicts were carried by ship to Australia. The first vessel to be lost en route to Australia which resulted in deaths among the passengers did not occur until 1833 when the first of five convict transports was

wrecked. In itself, this is quite remarkable as over 420 successful voyages had already been made carrying more than 60,000 convicts to the Australian colonies (See Bateson 1983, Appendices). In 1833 the female convict transport Amphitrite was wrecked on the coast of France with the loss of 108 female convicts and twelve of their children. The circumstances surrounding the wreck of the Amphitrite were such that there was an opportunity to land the prisoners in safety before the ship was destroyed on the rising tide. This opportunity was not taken as there appears to have been some suggestion that the surgeon and captain were afraid of letting the women go ashore in case they escaped. Certainly, in this case, the absence of a guard detachment on board female convict ships would have made it difficult, if not impossible, to prevent some of the female convicts from escaping had they been landed. The fear of escape is a recurrent theme in the wrecks of convict ships: in the case of the loss of the male convict transport George III there are reports that shots were fired by the guards to prevent escape even as the ship filled with water. In the decade between 1833 and 1842 five convict transports were lost with a total death toll of 602 convicts and their children. The overall death rate through shipwreck among the convict transports was about 0.35% or about one convict in 280.

Only two passenger ships were destroyed by fire in the nineteenth century; a remarkably low figure when one considers what would appear to be a high fire risk posed by timber ships with their canvas sails, decks caulked with pitch and sometimes carrying cargoes which could include gunpowder and highly inflammable alcoholic spirits. The barque India was destroyed by fire in the South Atlantic Ocean in 1841. The fire resulted when: *The Third Mate and one of the boys were below ... drawing off spirits, when the candle they used accidentally fell on some spilled Rum which immediately caught fire, and the flames spread with such rapidity that all efforts at extinguishing the tremendous blaze were unavailing; and the ship soon became one mass of flame*.

There were seventeen deaths among the 186 passengers but not one was as a direct result of the flames. When the first of the India's boats was launched, the passengers, in a state of panic, rushed the boat overloading it and causing it to capsize - seventeen passengers drowned.

The other vessel lost through fire was the Katherine Sharer which was found to be on fire while approaching Hobart in 1855. The passengers and crew wisely abandoned the vessel as four hours later the fire reached the cargo of gunpowder causing a tremendous explosion which resulted in pieces of the mast later being found more than a mile away.

The iceberg hazard was even more uncommon as only one vessel is believed to have been lost by becoming embayed by ice in the Southern Ocean. This was the loss of the clipper ship Guiding Star which vanished while on a voyage to Australia with 481 passengers and 62 crew on board in 1855. This was an even greater disaster than the loss of the Cataraqui which had occurred a decade before.

Collision resulted in just two losses - significantly both resulted in heavy loss of life. The Northfleet was lying at anchor off Dungeness in the English Channel one night in 1873 when it was struck by the steamship Murillo. Most of the 379 passengers were asleep at the time and considerable panic ensued. Unfortunately the Captain did not realize the seriousness of the damage and it was fifteen minutes before distress signals were sent up. A number of small vessels took off 85 passengers and crew but the eventual death toll included approximately 310 passengers. The emigrant ship Kaputzda sank after a collision in the South Atlantic in 1887.

To be followed

Inséré 20/03/24 NIEUWS NOUVELLES Enlevé 207/04/24

USN Searching for Missing Sailors off Somalia as US Launches Second Strike

CENTCOM is reporting that it is searching for two missing sailors from one of the vessels deployed off the coast of Somalia as the U.S. also continued its strikes on Houthi positions in Yemen. American officials continue to say their efforts are aimed at degrading the rebels' ability to launch missiles and drones against commercial shipping in the region. At 3:45 a.m. local time on January 13, U.S. forces conducted a strike against a Houthi radar site in Yemen. CENTCOM classified it as a "follow-on action on a specific military target associated with strikes taken on January 12 designed to degrade the Houthi's ability to attack maritime vessels, including commercial vessels."

The **USS CARNEY** is the only vessel reported involved in the latest strikes which were more targeted and isolated versus January 12. CENTCOM says they used Tomahawk Land Attack Missiles.

At the same time, CENTCOM said two sailors from one of the vessels in the region have been reported missing. Rescue operations are currently ongoing to locate the two sailors. They were reported missing at sea while conducting operations off the coast of Somalia, but CENTCOM said for operational security purposes, "we will not release additional information until the personnel recovery operation is complete."

Associated Press citing unnamed officials is reporting that the missing individuals are Navy Seals that were on an interdiction mission. They are saying it was a separate operation from the protection efforts in the Red Sea for commercial shipping. It may have been targeting a ship suspected of carrying weapons and they are suggesting one Seal was washed away during the boarding and the second one by protocol followed in a rescue attempt. The search and rescue effort is underway.

The second round of strikes came hours after the Houthis vowed to retaliate on the U.S. and British after the first strikes. They said the strikes would not stop their attacks on shipping and as if to prove it they launched a new attack later on January 12. The United Kingdom Maritime Trade Organizations reported that an unnamed ship saw a missile explode in the ocean approximately 400 to 500 meters from its position which was approximately 90 nautical miles south of Aden, Yemen in the Gulf of Aden. TankerTrackers.com and others later reported that it was a laden crude oil tanker that reported the missile. The same unnamed vessel reported that it was being followed by three small boats but the vessel was able to proceed unharmed. Later, UKMTO reported that other vessels sailing approximately 80 miles south east of Aden also saw small boats making approaches and in one case a ship said two small boats followed it for nearly an hour.UKMTO numbered these as the seventh and eighth incidents in 2024 after it issued 24 incident warnings in 2023. CENTCOM reports since November 19, 2023, Iranian-backed Houthi militants have by its count attempted to attack and harass vessels in the Red Sea and the Gulf of Aden 28 times.

Source : MAREX

Inséré 21/03/24 DOSSIER Enlevé 21/04/24

The biggest crew concerns – OTG event

Today's crewmembers are often given technology which is difficult to use, and are often trained to use systems which are different to the ones they will encounter onboard, we heard at an OTG event in London

Some big concerns for crew, now and in the future, might include the growing separation between good and bad companies, technology which is not very user-friendly, and technology training which is not relevant to the systems someone will be using onboard.

The long tour durations for seafarers, still around 11 months, are perhaps not as big a concern as many imagine, we heard at the "Charting a course to success" Panel Discussion event organised by Ocean Technologies Group (OTG), a maritime technology company specialising in Human Capital Management Solutions, during London International Shipping Week on Sept 12. The event brought maritime leaders together to share views on strategies and solutions needed to empower the maritime workforce to perform.

Other highlights included perspectives from IMO's future secretary general, and the possibility e-navigation regulation is not going in the right way; a review of what today's seafarers think; and whether too many seafarers are rejected for employment for health reasons which do not really affect their work, including high blood pressure and early-stage pregnancy.

IMO's next Secretary-General

Arsenio Antonio Dominguez Velasco of Panama, who has been elected as the next Secretary-General of IMO starting in January 2024 for a four-year term, gave an opening talk about the event, stating that IMO is open to input from industry about how it can do things better.

He cited the e-navigation rules as an area where a change in direction might be appropriate. "Wé ve been working for years on e-navigation. Is it taking us in the right way? If not, it is something we need to look at," he said.

He is the current director of IMO's Marine Environment Division. "We've been very good at looking at environmental regulations. Perhaps we need to talk to [other areas]," he said.

"It is good to have these dialogues. I want to enhance the interaction [with industry] and see how we can move forward. The more we share the experiences the better we can regulate."

"It's a few challenges we have ahead," he said. "We have 175 member states and have to find cohesiveness."

"On decarbonisation, we need the energy sector, without them we won't be able to do it. [But] they need us to transport the fuels. So, theré s a bit of trade off there," he said.

"Diversity is a key area of work in the organisation," he said. As a technical organisation, it can be "difficult to be inclusive."

Peter Schellenberger

Peter Schellenberger, a maritime consultant who is a former VP supply chain with Thome Group among other roles, said that the shipping industry's role as the "backbone of global trade" is questioned by its current challenges in sustainability and crew retention.

There is a growing separation between good and bad shipping companies, he said. At one end we have "serious operators that follow rules and want to make things better," at the other end we have those "who go for the lowest possible input."

Smaller shipping companies can sometimes be better than larger ones in how they treat crew, he said. “Large organisations tend to be impersonal. Small companies know their captains for years.”

Mr Schellenberger thinks the shipping industry may be underestimating the size of the safety risks which seafarers are subjected to.

He does not believe that the industry is ready for autonomous shipping, or “shorefaring”, operating ships from shore. “We have such a captain-oriented way of decision making,” he said.

A move to autonomous shipping would require changes to the industry’s operational models. “I’m not sure how long that will take,” he said.

The satellite communications system Starlink is already widely being perceived as a 'game-changer’, he noted, offering communications at lower cost and faster speed than was available before.

Mr Schellenberger shared some observations from the latest Seafarer Happiness Survey. Some seafarers reported corruption in seafarer recruitment, where seafarers are forced to pay fees to an agency to secure jobs onboard. Then, they often find their terms on board are different to as described in the contract.

Many seafarers say that their health onboard is not given enough priority. This is “an issue which I find very unsettling,” he said. “Owners save a couple of cents a month. We heard cases where not enough drinking water is available on board.”

“If we don’t have regulations to help us, [the industry] should say, 'this is not acceptable.’”

Shipping companies need to do more than just comply with regulations when considering how to treat crew, and what training they need, he said. “There’s a big gap between regulatory training and what is perceived as helpful.”

The responses show that physical and mental health is very important to today’s crew, including access to remote support and advice, he said.

Many seafarers said they need more time for training.

Captain Jacqueline Burton

Captain Jacqueline Burton, head of Creative Design, Kongsberg Maritime and who formerly spent 20 years working in shipping in the US Naval Reserve and at sea as a master of LNG carriers, said that her wish is that maritime technology was “made for the people who use it”.

“The usability side of maritime [technology] has not advanced,” she said.

Captain Burton is also chair of the board of SAMS Norway, a Norwegian business cluster that focuses on developing systems for sustainable autonomous transport solutions used on land, air, and sea. She is on the board of the Norwegian branch of WISTA (the Women's International Shipping & Trading Association).

The training provided to crew today about the technologies they use could also be much improved, see said. The training is like going through the pages of a manual, not showing people how the technology can help them solve problems.

Further, shipping companies do not seem to realise what a waste of time it is when someone is trained to use equipment from a different model or manufacturer to that on the ship which they will be serving on. For example, the ship has an ECDIS from one manufacturer and they have a training course to use an ECDIS from another manufacturer, where all the menus are different. She has been sent on several training courses which turned out to be irrelevant, she said.

In any case, maritime electronics products should be designed for easy usability, so they do not need any training, just as no-one needs a manual for their phone, she said.

Another wish was that food served to crew onboard ships could be more exciting. "I have been served with rice every day. Chicken for lunch every day. They don't care about nutrition in what they are feeding you onboard," she said.

Seafarer performance is typically best in the middle of someone's 'tour' on a ship, she said. "It takes a week, 2 weeks to get people comfortable."

But after about 4 to 5 weeks of good performance, it may decline again as people start thinking about going home. "They are looking down the gangway," she said.

How long at sea

There was an interesting discussion about how long seafarers should stay at sea. An attendee from the Bahamas Flag said he had been involved in discussions with the International Labour Organisation about reducing the maximum time a seafarer may spend at sea from 12 to 11 months. Surely 11 months is still far too long?

InterManager's Kuba Szymanski said that many seafarers would rather be at sea for 11 months than at home for 11 months. During the pandemic, many seafarers asked if they could stay on the vessels for longer, concerned that if they went home, they may not be able to get back on a ship.

Neil Dulling, manager of the Environmental Centre of Excellence Europe with shipping company Mitsui OSK Lines (MOL) said that the company once tried cutting tour length for its crew. They saw the unanticipated consequence that seafarers went on to immediately work with other employers, because they really wanted to work for 11 months. This meant they were less likely to return. "Our retention rates went down," he said.

However, 12 months is seen as a maximum time a crewmember should be on a ship. MOL is proud that, during the pandemic, no MOL seafarer ever stayed on a ship longer than 12 months, he said. "That's what a proper organisation needs to do".

Captain Jacqueline Burton noted that companies ought to be able to be flexible, letting people choose how long to stay. "What if one guy wants 6 months, one wants 10 months?"

Long tours can be "great when you are single and in your 20s," she said. "You get plenty of money and do lots of great things."

Another factor is that some ships are harder work than others, and you don' t know what the ship will be doing when you sign up. A particularly arduous assignment is on vessels transporting gas between Ras Laffan (Qatar) and Jebel Ali (UAE) during the summer, with a port call every 36 hours, she said.

Each port call requires mooring crew to be outdoors for four hours in the heat, and people were passing out. But there is no way of operating the vessels without crew having to be outdoors.

Ronald Spithout noted that while many seafarers say they want a 12-month tour, the accident rates can rise after 10 months.

Covid

John-Kaare Aune, CEO of ship manager Wallem Group, noted that there were cases during the Covid pandemic where shipowners were very restricted in making crew changes by the charterers.

In one crew change, the charterer had told a shipowner that if there was any Covid on the vessel after the crew change, and any subsequent delay, the shipowner would be fully liable for it. Wallem, as manager of the vessel, "made sure the team was double checked," he said.

Kuba Szymanski, secretary general of the International Ship Managers' Association (InterManager) noted that third party ship managers had been more responsible than shipowners in some cases during the Covid pandemic.

In many cases it was the ship managers who were insisting to owners that crew should be relieved from vessels even if the costs of doing so were very high, while shipowners wanted to keep vessels moving so they could maximise their revenues.

At IMO in November, there will be a "post Covid analysis – what went wrong and what went right," he said.

The maritime industry arguably coped much better with Covid than the airline and logistics industry, he said.

But a problem in the maritime industry was that it does not seem to have anyone willing to take responsibility for the overall seafarer experience, he said.

Pregnancy

One audience member noted that shipping companies are routinely denying pregnant women from being able to work on ships as soon as they become pregnant. As well as losing the ability to work, they also lose contact with the industry, while also receiving no benefits or maternity leave.

"I have a friend who was 5 months pregnant working in a coffee shop, although she's a licensed master with 16 years [experience]," noted Ms Burton, the former LNG master. This person had previously been working on a coastal vessel, so could have got medical attention easily if needed.

"I left the sea before I started a family," she added. "There's no possibility my husband and I, both sailing, would be able to have a [family]."

Training budgets

John-Kaare Aune, CEO of ship manager Wallem Group, was asked if he is ever forced to cut training budgets and wages to price competitively with other ship managers. "For us it is much easier to work with other aspects of the budget, not training funds," he replied.

Wallem charges its clients per seafarer per month for training, and the money goes into a common fund. Wages are typically paid based on a current market wage for people of a certain nationality, he said.

Other comments

Erik Green, Managing Director at Green Jakobsen A/S, a consultancy in maritime performance, said that there is a direct link between human performance, physical safety, and 'psychological safety', how safe people feel as human beings in the working environment.

Based on the company's extensive surveys, "the vessels who understand psychological safety also perform better," he said.
"There is no divergence of interest between having crew feeling good and safety."

Chuck Kemper, Chief Human Resources Officer with American Bureau of Shipping (ABS) said that it links back to the quality of leadership people are getting. "Safety has a high correlation to excellent leadership," he said.

Ronald Spithout, managing director for "OneHealth" for maritime healthcare solution provider VIKAND, and a former president of Inmarsat Maritime, said he would like to see the shipping industry be less harsh in rejecting seafarers in their medical examinations before a voyage.

For example, seafarers with hypertension (high blood pressure) are routinely rejected for work onboard ships, although 20 per cent of CEOs on land also have it and manage to continue with their jobs. "Why do we treat captains in a different way?" he asked.

Steve Yandell, assistant co-ordinator for seafarers and inland navigation with the International Transport Workers Federation (ITF) said he would like to see digital technology able to effectively monitor the hours seafarers are working. It is commonly heard that seafarers work longer hours than is legal or recorded.

John-Kaare Aune, CEO of Wallem Group, said his one wish is that "seafarers can be treated with the respect that they deserve."

Mr Aune would like to see better use of advanced digital technology, such as systems he has seen where someone can take a picture of a problem and instructions automatically come up with instructions about how to fix it.

Karen Waltham, a HR consultant, current commissioner with the UK government Maritime Skills Commission and former global head of talent and development with AET Tankers, noted that ten years ago, companies would not have had this discussion. "The passion you are showing is refreshing," she said.

One pathway to improving the way crew are treated could be bringing more professional HR managers into companies, she suggested.

Johan Gustafsson, chief revenue officer with OTG, said that the industry needs to evaluate how to spend money on based on factors other than the immediate effect on company bottom line.

"We have to understand that all the money that we spend on people is an investment for the future, and we will all have double digit return on that investment."

"Seafarers are key workers for the survival of people and global trade and the economy for many years to come. We need to make sure that we recognise that."

DS

Inséré 22/03/24 BOEKEN LIVRES BOOKS Enlevé 22/04/24

"De Lierse kruisnetvisser"

B O E K B E S P R E K I N G door : Frank NEYTS

Recent verscheen een zeer interessant boekje onder de titel "**De Lierse kruisnetvisser. Monografie over een uniek scheepstype**". Het betreft een uitgave van de Vlaamse 'School voor Scheepmodelbouw. Koen De Vriese tekende als auteur.

De school is gevestigd op de Provinciale Erfgoedsite Baasrode gelegen aan de Boven-Schelde. Over de jaren heen bracht de school een indrukwekkende collectie modellen tot stand. Binnenvaart, kustvaart, zeevaart, zeilschepen, motorschepen, werkschepen, werkboten, vissersschepen… het is er allemaal.

De school legt zich eveneens toe op restauratiewerk. Het restaureren gebeurt met dezelfde zorg voor historische juistheid die de school zo kenmerkt bij het maken van scheepsmodellen.

Zoals de titel al laat vermoeden behandelt dit boekje alle aspecten van een typische Lierse visboot. Een "Lierse kruisnetvisser" is een bootje met een platte bodem, een geringe diepgang en zonder roer, dat in de eerste helft van de vorige eeuw in Lier gebruikt werd bij het vissen op de Beneden-Nete. Volgens de mondelinge overlevering zouden deze kruisnetvissers een verbeterde uitgave zijn van de vaartuigen, die eerder gebruikt werden in de tijdens de winter ondergelopen beemden van de winterbedding van de Nete. Eén replica is bewaard gebleven en ligt ten anker op de Binnen-Nete aan de Werf, ter hoogte van het Buildragershuisje. Het draagt de naam 'Bertha'. Eenieder die zich interesseert in (oude) scheepstypes of zijn plezier vindt in modelbouw moet dit boekje (125 pagina's dik) aanschaffen. Waar voor zijn geld!Het boekje kost 20 euro. Met verzendings- en verpakkingskosten inbegrepen betaal je voor België 28 euro, voor Nederland 35,5 euro. Bestellen kan op de website **www.schoolvoorscheepsmodelbouw**

Inséré 22/03/24 NIEUWS NOUVELLES Enlevé 22/04/24

Barclays cuts 2024 Brent price forecasts on higher supply

Barclays lowered its Brent crude prices forecast for this year by $8 to $85 per barrel due to higher supply, but noted that oil looks undervalued. Barclays in a note on Thursday said the cut in forecasts is primarily due to "a higher starting point for inventories and a potentially longer path to OPEC spare capacity normalization. «But it added that it expects demand momentum to pick up sequentially and non-OPEC+ supply growth to decelerate sharply in 2024. Crude futures lost over 10% in 2023 in a tumultuous year of trading marked by geopolitical turmoil and concerns about the oil output levels of major producers around the world.

Large inventory draws failed to materialize in fourth quarter 2023, as demand slowed and supply came in stronger than expected, the bank said. On Sunday, rising supply and competition with rival producers prompted top exporter Saudi Arabia to cut the February official selling price of its flagship Arab Light crude to Asia to the lowest level in 27 months.

Barclays said "we think investors should weigh the risk of looser OPEC+ cohesion, but it should not be the baseline scenario. «Angola left OPEC, effective from Jan. 1, following a row with the producer group over the size of its output quota. The decision also follows an agreement signed between China and Angola on enhanced cooperation. Oil prices edged higher for the day on concerns about escalating conflict in the Middle East, with more attacks on Gaza and on shipping in the Red Sea, even as a surprise build in U.S. crude stockpiles capped gains. The bank highlighted there has been no material effect on supply despite rising Middle East tensions, adding that unplanned supply outages are trending at the lowest level in years.

Source: Reuters (Reporting by Ashitha Shivaprasad in Bengaluru, Editing by Tomasz Janowski)

Inséré 23/03/24 DOSSIER Enlevé 23/04/24

Mauritius 2020 grounding due to hunt for cell signal

The official report into the 2020 grounding of MV Wakashio in Mauritius found it was due to crew seeking a cellphone signal, among other circumstances.

The vessel did not have any satcom

It has been over three years since the 203,000 tons, 299.95 metre long MV Wakashio vessel ran aground off-shore off Pointe d'Esny, south of Mauritius on July 25th, 2020. In September, the Japan Transport Safety Board (JTSB) released its report on the probable causes of the accident and resulting spill of 1,000 metric tons of fuel into the Indian Ocean.

The release of the report comes after the vessel's Master, Sunil Kumar Nandeshwar, and first officer 45-year-old Sri Lankan national Hitihanillage Subhoda Janendra Tilakaratna, were arrested after the grounding on suspicion of negligence in operating the vessel.

Both were found guilty under the 2007 Merchant shipping act in the Court of Investigation in Mauritius by Magistrate Ida Dookhy-Rambarun. The magistrate labelled their actions as irresponsible, imposing twenty-month prison sentences on both men in December 2021. Dookhy Rambarun remarked how a failure to monitor the vessel due to distractions whilst looking for cell phone signal from shore effectively caused the accident.

In addition, Sunil Kumar Nandeshwar admitted during the proceedings to being moderately under the influence of alcohol at the time of the accident.

Despite the vessel being registered under the flag of the Republic of Panama, an agreement between the Republic of Panama, the Republic of Mauritius, and Japan meant Japan would conduct the maritime safety investigation.

A search for smartphone signal and ensuing accident

According to the report, the 'Master changed the passage plan in order to take a course approaching Mauritius for the purpose of receiving a smartphone signal'. The 20 strong crew onboard the vessel, which did not have satcom coverage, was sailing to the Port of Tubarão in the Federative Republic of Brazil without cargo onboard.

The report determined that whilst the vessel was navigating in the southwestern Indian Ocean the Master instructed Navigation Officer A1 on bridge watch to change the vessel's course. The original course would have provided a distance of 22 nautical miles between land and the vessel. The revised route reduced this distance to within 5 nautical miles, with the vessel ultimately grounding at just over 1 nautical mile from land.

The report underlines how the decision was made as to obtain smartphone signal.

With the vessel not scheduled to enter port at Mauritius, the Master decided detailed mapping charts for the voyage around the area of island the vessel was passing would not be necessary. The report investigations found that charts of the appropriate scale for the journey would have exposed how the water depth along the line of direction which the vessel was travelling was less than 20 meters.

After spending time at the birthday party of a crew member onboard which started at 17:00, the Master returned to the bridge at 17:50. The report explains how he did so as

'he thought that, with the vessel approaching Mauritius, he might finally be able to get a smartphone signal'.

Statements from the Mess Man who visited the bridge multiple times between the hours 16:00 and 20:00 were used as part of the investigation report. His initial mention in the report outlines how 'at around 16:00, the Mess Man, who had been engaged in cooking and other duties on board, went out onto the deck to clean up waste and thought it was strange that the land, which had been visible off to the vessel's side when the vessel approached land during previous coastal passages, appeared to be in the vessel's direction of travel'.

The report continues, 'at around 18:30, the Master ordered the Chief Engineer to reduce the main engine's revolutions per minute from 72 to 68'. Navigation Officer A1 is said to have believed that the Master reduced speed to stay within the smartphone signal reception area off Mauritius as long as possible.

Again, at around 18:45 the Mess Man is said to have visited 'the bridge to bring dinner to the Master and Chief Engineer, the Mess Man observed the Master and Chief Engineer engaged in operating their individual smartphones in an attempt to get a Wi-Fi connection' .

After spending some time searching for signal, 'at around 19:18, the Master pointed out that the vessel's distance from the shore was very close at 1.5 M[iles].' At this stage the Navigation Officer A1 responded by altering the vessels course from the 234° it had been set to at 17:48 to about 227°.

At 19:25, the Master, while still discussing smartphone coverage with Navigation Officer A1, felt an impact with the hull. 'Thinking something was odd, checked the speed gauge, where he saw that the speed had fallen from approximately 11 knots (kn) to approximately 9 kn'.

After realising the vessel had run aground on coral at 19:29, with its speed gauge now reading 0 kn, it took until 20:08 for the Master to notify the Coast Guard of the incident. At around 20:29, an alarm sounded indicating a leak in a fuel oil overflow tank.

The birthday party

The report provides details of a birthday party abord the ship in the lead up to the grounding. The party, scheduled for 17:00 on the day of the grounding, was attended by the Master and other crew members.

The report describes how the Master joined the party at several points between 17:00 and when the ship ran aground at 19:25. The 'Master joined the birthday party and was chatting with crew members while consuming about two glasses of whiskey and water' from 17:00 until 17:50.

An aerial photograph of the MV Wakashio in Mauritius in the days after it grounded. Although the vessel had not yet broken apart, oil can be seen spilling from the vessel (image from the report released by the JTSB)

With the Master at the birthday party, the report explains how he trusted Navigation Officer A1 with the 'ship manoeuvring while on bridge duty', meaning 'the Master did not personally check the course suggested by Navigation Officer A1 and instead continued his conversation with Navigation Officer A1 and the Chief Engineer about how to get a smartphone connection' .

Unfortunate sea conditions

Unfavourable weather conditions and local Covid-19 related delays meant the arrival of a salvage tug took days to reach the vessel. Harsh waves and swells caused sustained damage to the ship's hull during this period, eventually releasing around 1,000 metric tons of fuel into the water.

The report details how despite worsening sea conditions in the form of 'swells from the southeast moved in a northeasterly direction' the vessel's hull remained grounded.

The vessel's stern was not so fortunate. The investigation found how 'the vessel's stern continued to strike hard against the seafloor with such violence that some crew members in their cabins fell from their bunks while sleeping'.

On the morning of July 31st, 'the vessel's heading shifted from 353° to 027° due to the effects of waves with swells and her main engine's setting loosened from the hull's striking the seafloor'. Once more, the vessel was impacted by the conditions as 'on August 1st, the main engine rose one or two inches (approximately 25 to 51 mm) from its seating each time the hull pitched and rolled'.

Attempts were made to stabilise the ship hull on July 31st ahead of further worsening weather conditions. The report reads, 'the Salvage Team injected water into the vessel's No.8 cargo hold for the purpose of stabilizing the hull's attitude'. Equipment and supplies delivery also began on July 31st at 08:00 and stopped after 45 minutes due to sea conditions.

Multiple attempts were made by tugboats to come alongside the vessel and join a tug line on 31st July, 1st August and 2nd August. All attempts were unsuccessful due to low visibility and worsening sea conditions.

The investigation cited the unfortunate sea conditions as a central factor in the failure of salvage attempts.

The vessel's integrity

On August 15th, a full 21 days after MV Wakashio grounded, the 'bow and stern completely separated and the hull broke into two'. No oil was spilt into the ocean for almost two weeks after the grounding. However, the vessel's integrity worsened with the weather conditions.

Cracks had first been recorded in the vessel by crew members who observed holes in the engine rooms bilge tank, resulting in seawater entering on July 27th. The report reveals that the crew uncovered additional findings, stating, 'that the forepeak bulkhead was bent on either July 28 or 29'.

The report made multiple mentions of further deterioration before August 15th. Including, the main engine rising 'one or two inches' on August 1st, the observation of buckling of the bulkhead and frame between the engine room observed on August 2nd, the area above the vessel's propellor shaft began to buckle and the level of seawater flooding the engine room rose on August 4th.

The report indicated how the cracks and eventual separation of the bow and stern in the aftermath of the crash ultimately led to the oil spill.

The Salvage Team dumped the Vessel's bow portion at sea on August 19th after receiving instruction to do so from the Government of Mauritius. The salvage company began removing the vessel's stern portion on February 17th, 2021. The work was not completed until January 16th, 2022, almost 18 months after the vessel initially grounded.

An image depicting the vessel's bow after it separated from the stern (image from the report released by the JTSB)

The oil spill

The report estimates that approximately 4,100 metric tons of oil remained in the vessel as of 08:00 on July 25th 2020 – the day of the accident.

Approximately 1,000 metric tons of fuel oil in the one of the fuel oil tanks spilled from a rupture that occurred in the star-board stern's plating shell. The spilled oil spread from the accident location towards mainland Mauritius.

The investigation report outlined the extent of the damage on the Mauritian shoreline, stating 'the oil spilled on the sea washed ashore along a wide section of the southeastern coast of Mauritius, from Blue Bay to Trou d'Eau Douce, covering a linear distance of approximately 25 km and a coastline length of approximately 35 km'. Oil also spread into coastal inlets due to the weather conditions including the effects of wind and currents.

The report identified how 'the Government of Mauritius had deployed within its borders large oil fences, oil recovery equipment, boats, and other equipment and materials for dealing with a Tier 2 spill.' The specified response to a Tier 2 oil spill 'is a moderate spill, which can be managed by the National Oil Spill Response Team with some external help'.

A series of attempts to prevent the vessel's oil spilling into the Indian Ocean were made during the Tier 2 response period in the weeks after the grounding. On July 26th the Mauritius Coast Guard and Special Mobile Force were tasked with the response to the oil spill. Between the 7th and 12th of August the Government of Mauritius secured three oil tankers which were successful in pumping out approximately 3,1393t of fuel oil from the Vessel.

Confirmation that fuel oil was spilling from the vessel did not come until August 6th. After this confirmation, the Prime Minister of Mauritius issued a Declaration of Environmental Emergency, including a statement declaring that a Tier 3 response was required.

In response to the development, 'personnel, equipment, and materials sent from the French Republic (Navy), the Republic of India (Coast Guard), Japan (Japan Disaster Relief team), and other countries as well as international organizations such as the United Nations, the European Union, and the International Tanker Owners Pollution Federation Limited (ITOPF) arrived in Mauritius as needed and each began activities on site'.

Despite the efforts of all parties involved, unfortunately, the tank's oil could not be contained, leading to its spillage into Mauritian waters.

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Inséré 24/03/24 NIEUWS NOUVELLES Enlevé 24/04/24

Euronav to acquire hydrogen engine manufacturer CMB.TECH

Euronav NV and CMB NV ("CMB"), its controlling shareholder, announced that they entered into a share purchase agreement for the acquisition of 100% of the shares in CMB.TECH NV for a purchase price of USD 1.150 billion in cash.

CMB.TECH is a diversified cleantech maritime group. CMB.TECH builds, owns, operates and designs large marine and industrial applications that run on dual-fuel diesel-hydrogen and diesel-ammonia engines and monofuel hydrogen engines.

CMB.TECH offers hydrogen and ammonia fuel that it either produces or sources from external produces to its customers. CMB.TECH is active throughout the full hydrogen value chain through four different divisions: Marine, Technology & Development, H2 infra, and

Industry. The value creation of the new strategy is driven by CMB.TECH's "future-proof" (or low carbon emitting) fleet of 106 low- carbon vessels, of which 46 are under construction.

The transaction fits into the company's renewed strategy of diversification, decarbonization and accelerated optimization of the company's current crude oil tanker fleet. The parties believe that the Transaction will lead to the creation of the leading, future proof shipping platform, with the company becoming the reference in sustainable shipping.

CMB and Euronav believe that the addition of CMB.TECH to Euronav's business will enable a flywheel strategy – positioning the group to tap into each step of the energy transition towards low carbon shipping, with a clear vision on value creation for its shareholders.

Euronav's older tanker tonnage provides excellent opportunities to recycle capital over time into more future- proof, attractive and diversified end-markets and contract types. In addition, Euronav's current customer portfolio is located at the centre of the energy transition and looking for low-carbon tanker shipping services.

CMB.TECH operates through four different divisions. The largest division of CMB.TECH is the marine division. It builds, owns, operates and designs a wide range of low and zero-carbon ships powered by dual-fuel diesel-hydrogen and diesel-ammonia and monofuel hydrogen engines: offshore wind support vessels, dry bulk vessels, container vessels, chemical tankers, and others (tugboats and ferries). The integration of the drivetrain, the storage and the bunkering of hydrogen and ammonia, is implemented with a diverse and experienced in- house engineering team in partnership with Original Equipment Manufacturers and shipyards.

CMB.TECH's H2 infra division offers hydrogen and ammonia fuel to its customers, either through its own production or by sourcing it from third party producers. Within H2 infra, the necessary technology and infrastructure is designed, developed and operated to produce and distribute green hydrogen and ammonia. The H2 infra division acts as a flywheel for both the Marine and Industry division – supporting that the green hydrogen and green ammonia value chain is a distinct part of a financially sustainable solution for the energy transition. A particular focus on hydrogen and ammonia production and storage completes the entire value chain to deliver the clean fuels of the future.

CMB.TECH's Industry division develops hydrogen powered heavy-duty industrial applications. The focus on hydrogen solutions is driven by a commitment to offering affordable, reliable and sustainable solutions that reduce emissions and lower the environmental footprint of CMB.TECH's clients. The advanced technology allows the conversion of existing diesel engines into dual-fuel and monofuel engines, providing flexibility and cost-effectiveness. The engines include high-speed options for smaller-scale applications, as well as medium-speed and slow- speed engines for marine and heavy-duty applications.

CMB.TECH has a strong track record with successful commercial projects throughout its various divisions with global best in class customers, and in addition also collaborates with a wide range of original equipment manufacturers on the development of its engines and applications.

Inséré 25/03/24 DOSSIER Enlevé 25/04/24

Inséré 26/03/24 HISTORIEK HISTORIQUE Enlevé 26/04/24

Inséré 27/03/24 NIEUWS NOUVELLES Enlevé 27/04/24

Inséré 28/03/24 DOSSIER Enlevé 28/04/24

Inséré 29/03/24 NIEUWS NOUVELLES Enlevé 29/04/24

Inséré 30/03/24 BOEKEN LIVRES BOOKS Enlevé 30/04/24

Inséré 30/03/24 DOSSIER Enlevé 30/04/24

Inséré 31/03/24 NIEUWS NOUVELLES Enlevé 30/04/24

Inséré 01/04/24 DOSSIER Enlevé 01/05/24

Inséré 02/04/24 HISTORIEK HISTORIQUE Enlevé 02/05/24

Inséré 03/04/24 NIEUWS NOUVELLES Enlevé 03/05/24

Inséré 04/04/24 DOSSIER Enlevé 04/05/24

Inséré 05/04/24 NIEUWS NOUVELLES Enlevé 05/05/24

Inséré 06/04/24 BOEKEN LIVRES BOOKS Enlevé 06/05/24

Inséré 06/04/24 DOSSIER Enlevé 06/05/24

Inséré 07/04/24 NIEUWS NOUVELLES Enlevé 07/05/24

Inséré 08/04/24 DOSSIER Enlevé 08/05/24

Inséré 09/04/24 HISTORIEK HISTORIQUE Enlevé 09/05/24

Inséré 10/04/24 NIEUWS NOUVELLES Enlevé 10/05/24

Inséré 11/04/24 DOSSIER Enlevé 11/05/24

Inséré 12/04/24 NIEUWS NOUVELLES Enlevé 12/05/24