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Methanol Is Ready for Use as Marine Fuel

In preparation for the International Maritime Organization's upcoming 2020 sulphur limit, the shipping industry started considering a number of solutions, including low sulphur fuel oil (LSFO), marine gas oil (MGO) and Exhaust Gas Treatment (scrubbers).

While some experts believe that the answer lies in a replacement for dirty fuels, others believe that scrubbers are the way to go, however, the industry expressed its concerns over the costs of these solutions in more than one occasion.

World Maritime News spoke to **Chris Chatterton, Chief Operating Officer, the Methanol Institute**, on the solutions offered to the shipping industry, with a focus on methanol as an option, and the costs which shipowners could face as of 2020.

"The solutions on offer to the shipping industry range from the expensive and unpalatable to the elegant and ultimately highly sustainable," according to Chatterton.

Methanol is the option that has probably received the least coverage despite offering a pathway to a sustainable, 2020-compliant, low carbon future for the industry, achievable at manageable cost and with minimal changes to the operational profile of the majority of affected vessels, he explained.



When asked about the current stage of development of methanol as a replacement for dirty marine fuels, Chatterton said that methanol *"is ready to go as a marine fuel now, and could be playing a much bigger role post-2020."* There is a number of reasons for this, he explained, the first being that as the marine bunker market shifts from spot to the use of

contract terms, methanol becomes ever more competitive against low sulphur fuel oil (LSFO) or gasoil.

As explained, there are very few technical challenges to adopting methanol as marine fuel on newbuilds or conversions and certainly fewer than with LNG.

"No changes were made inside the MAN 2-stroke and Wärtsilä 4-stroke methanol dual-fuel engines on the water today, just the addition of new injectors and fuel rail systems."

"For the fuel supply system, it would be usual to install double-walled piping and possibly the use of nitrogen as inert gas in the fuel storage tank itself as an additional safety measure, as methanol is a liquid at ambient temperature and in the event of a leak would vent with gravity (in contrast, LNG would vent into the atmosphere as a gas)."

This also makes it simple to perform engine work or repairs to fuel delivery systems as methanol can be easily purged from fuel lines for completely 'dry' work with little 'clean up' as with a traditional fuel, he added. Methanol dual-fuel engines also feature sealing oil for the injection ports, which trap any potential leaks.

"It should also be considered that the cost of a methanol-fuelled vessel would be considerably less than a gas-fuelled ship, mainly due to methanol's drop-in fuel characteristics, versus cryogenic technology."

"In terms of converting an existing vessel, we estimate that the costs for methanol would be 75% less than that for LNG."

Additionally, in terms of its emissions performance, Chatterton said that methanol ticks all the boxes, with 2020-compliant SO_x, NO_x and PM emissions and providing what will ultimately be a carbon-free future for shipping, easily allowing it to meet the industry's ambitions in respect of the Paris Agreement.

"Methanol-powered ships are in operation now and the revision of the IGF Code by IMO will fully complete the regulatory picture within a few years. In the interim, classification society guidance is available today. There have been a number of projects and studies into methanol's viability and suitability as a marine fuel, which have concluded that there are no obstacles to its adoption by the industry alongside other clean conventional and alternatives."

Citing IHS Markit, he said that global methanol demand will increase from 49m metric tonnes in 2010 to 95m mt by 2021. Given methanol's lower energy content, today's global marine fuel market would be the equivalent of 650 million tonnes per annum of methanol. Speaking about the spread of interest in methanol as fuel, Chatterton said that the interest ranges from small pilot boats to tankers, ferries and potentially cruise ships, as it is ideally suited for application on short-sea shipping, coastal and inland vessels that spend much of their time in an emissions control area close to land or large centres of population.

Availability of Methanol

Chatterton: The availability of methanol is one of its strong points as a marine fuel. As a widely used petrochemical feedstock, it is present at hundreds of ports worldwide – and at nearly all the current centres for conventional marine bunkering. Methanol is the world's most widely shipped chemical commodity, with an estimated 26.7 million tonnes shipped in 2017, according to Clarksons Platou.

What needs to be developed is the bunkering infrastructure to support widespread distribution – though this is also true of LNG as fuel.

Options include bunkering from trucks (as with early LNG as marine fuel projects), or via dedicated vessels and it is perfectly feasible for existing bunker barges to be converted to handle methanol.

Onshore storage of methanol is simpler than LNG because no cryogenic facilities are required as methanol is a liquid at ambient temperature and there are some well understood and readily available methods of safely storing and handling methanol that present no exceptional safety risks.



Methanol vs. LNG

Chatterton: The shipping industry has certainly flirted with LNG as fuel and it has found it to be a viable solution for non-gas carriers. However, conversions and newbuildings are expensive, technically complex and operations are challenged in terms of supply infrastructure. Critically, while LNG solves the SO_x/NO_x emissions slate, its CO₂ and methane emissions profile means it cannot be a long term solution for the decarbonization of shipping. Further, LNG requires dedicated bunker supply chains that require enormous sums of public/private funding.

Methanol as marine fuel has few of these disadvantages. As a liquid fuel it is easy to store and handle despite having a lower flashpoint than conventional fuels and it is less harmful to the environment or marine life in the event of a spill.

Retrofits and newbuildings using methanol as marine fuel are simpler and cheaper than LNG and the experience gained on the ropax ferry Stena Germanica and tankers operated by Waterfront Shipping is that methanol is well-suited as a low emission, high performance marine fuel.

Regarding the topic of THE marine fuel of the future, Chatterton said that shipping is waking up to the fact that it is moving from a single-fuel industry to a multi-fuel model as it transitions from a carbon-intensive industry to one with a low carbon future.

"Methanol may not be the fuel of the masses by 2020, but it could be the marine fuel of choice for a broad category of vessels through the remainder of the century and beyond."

Interview conducted by [Erna Penjic](#), Editor, World Maritime News

Image Courtesy: Methanex/The Methanol Institute/Stena Line

WATER-RANT

Dr. R. Van Cleempoel: ongerust over de toekomst van historisch waardevolle schepen in de maritieme collectie van Antwerpen.



Gaan de historische binnenschepen de verhuis van het maritiem park op de Scheldekaaien naar het Droogdokken eiland overleven?

Dr. Roland Van Cleempoel is al tientallen jaren bezieler van het binnenscheepvaartpatrimonium in de zeehaven die haar kracht put uit de overslag naar de binnenvaart. Miljoenen tonnen goederen worden al honderden jaren van oceaanschepen overgeladen in of uit aken, spitsen, Kempenaars, 'baquets' en talloze andere kenmerkende schepen. Hierdoor is Antwerpen de draaischijf par excellence tussen de grote zee- en oceaanovaart en de binnenvaart die het transport tot diep in Europa verzekert.

De voorzitter van het Rijn en Binnenvaartmuseum – gevestigd in drie historische binnenschepen in het Bonapartedok van Antwerpen vraagt zich af wat er met de schepen die in het Maritiem Park, een onderdeel van het voormalige Nationale Scheepvaartmuseum (Het Steen) gaat gebeuren. De collectie van schepen onder de loodsen wordt al jaren stiefmoederlijk behandeld. De schepen moeten verhuizen om de verstevigingswerken van de Scheldedijken en -kaaien toe te laten. De bestemming is het droogdokkengebied aan de noordkant van het Kattendijkdok, waarover de stad onlangs heeft beslist dat daar binnen afzienbare tijd een maritiem bezoekerscentrum / museum moet gaan komen.

Dr. R. Van Cleempoel: wat zijn de overlevingskansen voor de historische binnenschepen?



Langs verschillende wegen bereikt ons het bericht over de maatregelen die genomen (zullen) worden om de maritieme collectie over te brengen van de afdaken aan de Schelde naar de droogdokkensite. Het gaat hier vooral om de drie binnenschepen:

- **De CEPHEE** bij 1937,
- **De SINT- ANTONIUS** bij 1912 en
- **De baquet (bakske sabot) MAR MAR bij 1898**
(Ref: " De bacquet van Charleroi – een verdwenen Belgisch binnenschip" auteur A. De Vos voormalig-directeur Nationaal Scheepvaartmuseum. [Inventaris Varend Erfgoed](#) Vlaanderen)

Deze schepen zijn vooral de zorg van het museum Rijn- en Binnenvaart. De socioculturele waarde van deze schepen staat buiten kijf; zie beschrijving van de schepen in nota Maritiem Erfgoed Antwerpen.



Even grote bekommernis voor de jachten, sloepen en maritieme items van zeevaart en haven die in de loop van vele generaties zijn verzameld. De berichten die ons bereiken over het slopen en afstoten van deze binnenschepen en maritiem park, verontrusten ons zeer.

De 3 binnenschepen zijn in de loop der jaren iconen geworden voor de Belgische binnenvaart; zeer typische uitgestorven schepen waarop generaties schippersfamilies gewoond hebben. De ganse Belgische binnenvaart kent deze schepen en vraagt duidelijk om deze schepen te bewaren om schippers en mensen aan de wal de levensomstandigheden – hoe ze woonden en werkten – te laten zien en dit vooral voor de volgende generaties.

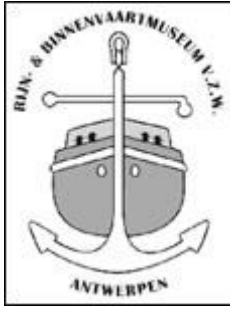
De houten Waal Cephée is geklasseerd; de 2 andere schepen niet.



Het minste wat we kunnen zeggen is dat ze niet goed opgevolgd en behandeld zijn ondanks onze jarenlange vele vragen daaromtrent. Hun huidige staat wordt ingeroepen om ze te ontmantelen en niet meer op te stellen in het toekomstige maritiem bezoekerscentrum van het Droogdokeneiland. Deze 3 schepen zijn in goede staat naar deze plek overgebracht en behoren tot het industrieel archeologisch erfgoed van de Belgische binnenvaart.

Ze zouden samen met de Lauranda de kern kunnen vormen van een heus binnenvaartmuseum op de nieuwe site; aangevuld met de collectie van het drijvend binnenvaartmuseum aan boord van 3 schepen LIOMAR – MON DESIR – ANGELE afgemeerd in de Bonapartedok Nieuwpoortkade aan het Mas.

Gezien deze schepen indertijd zijn ondergebracht onder de afdaken moet het ook mogelijk zijn met de moderne technieken om ze er vanonder te halen en over te brengen naar de nieuwe site. Wanneer we praten over een nieuw maritiem museum moeten er toch ook echte schepen te zien zijn en niet alleen op schilderijen of tekeningen. Over deze problematiek wordt veel gesproken door de varende schippersgemeenschap en zeker door de vele gepensioneerde schippers die deze schepen nog zeer goed gekend hebben. De vragen komen zowel uit Vlaanderen als uit Wallonië.



Het vernietigen en niet bewaren van deze schepen gaat bij zeer vele mensen niet begrepen worden.

We hopen dat de aangestelde architect(en) en degenen die verantwoordelijk zijn voor deze overbrenging dit zullen lezen en overleggen met de verschillende maritieme verenigingen.

Dr. Van Cleempoel R.

Voorzitter Museum Rijn- en Binnenvaart

Inséré 27/12/18 BOEKEN LIVRES BOOKS Enlevé 27/01/19

"Heavy Weather Fishing" & "Vuurtorens in vogelvlucht"

BOEKBESPREKING door : Frank NEYTS.



Bij de Nederlandse uitgeverij Flying Focus noteren we de uitgave van twee prachtige fotoboeken, "Heavy Weather Fishing" en "Vuurtorens in vogelvlucht".

Recent verscheen het 22ste fotoboek van Flying Focus, "Heavy Weather Fishing". Dit boek werd voorgesteld op het vliegveld van Texel en is geheel gewijd aan de Nederlandse (en een beetje Belgische) vissersvloot in actie tijdens zwaar weer op de Noordzee.

Sinds de aanschaf in 2004 van het speciale tweemotorige stormvliegtuig heeft fotograaf Herman IJsseling nagenoeg alle stormen op de zuidelijke Noordzee gevlogen. Regelmatig werden ook de kotters die nog op zee waren

gefotografeerd. Uit al het beschikbare fotomateriaal is een bijzondere selectie actiefoto's samengesteld en gebundeld in het nieuwe boek. Tegelijkertijd verscheen er een fotoboek over de Nederlandse vuurtorens met de titel "Vuurtorens in vogelvlucht", een prachtige selectie luchtfoto's van deze nautische monumenten langs de kust.



De twee nieuwe boeken hebben een formaat van 23x23 cm met 96 pagina's. "Heavy Weather Fishing" werd met Engelse tekst uitgegeven. "Heavy Weather Fishing" (ISBN 978-90-79716-20-3) en "Vuurtorens in vogelvlucht" (ISBN 978-90-79716-19-7) werden op landscape format met harde kaft uitgegeven. De boeken kosten 24,50 €. Aankopen kan via de boekhandel of rechtstreeks bij Flying Focus BV, Postbus 55, 1790 AB Den Burg, Nederland. Tel. +31 (0)222 728128, Fax +31 (0)222 728111, e-mail: info@flyingfocus.nl, www.flyingfocus.nl

Inséré 29/12/18 HISTORIEK HISTORIQUE Enlevé 29/01/19

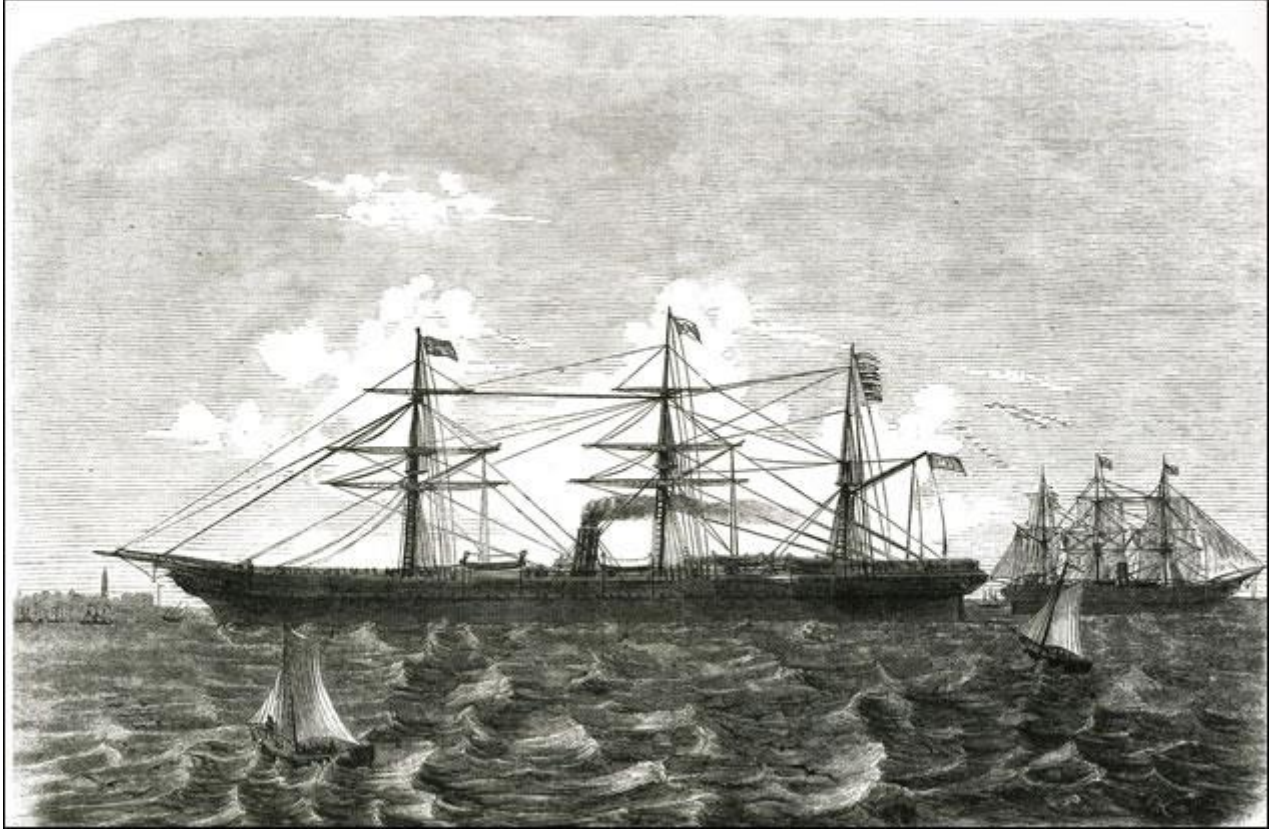


Une tragédie en Atlantique : Austria

par Philippe Urvois

Pas de nouvelles de l'Austria. Un entrefilet discret paraît sous ce titre dans le New York Times du 24 septembre 1858, indiquant que le vapeur de la société transatlantique HAPAG, basée à Hambourg, est en retard. Il était attendu entre le 18 et le 22 septembre à New York.

Parti d'Allemagne au début du mois, ce navire en tôles rivetées de 97,5 mètres de long, navigant à la voile et à la vapeur, est pourtant puissant et vélocé. Sa vitesse de croisière est en moyenne de 10 nœuds dans des conditions de mer favorables, avec des pointes à 12 ou 13 nœuds. Le bateau, qui accomplit là sa troisième rotation transatlantique, est quasiment neuf puisqu'il a été lancé un an plus tôt, en juin.



Le 1^{er} septembre, il a embarqué près de cinq cents passagers à Stade, en aval de Hambourg, car ce port n'est pas assez profond pour accueillir ces nouveaux géants des mers construits pour rallier l'Amérique. La plupart des voyageurs, hommes et femmes, sont jeunes et décidés à quitter l'Europe du Nord pour fuir la misère et tenter leur chance dans un pays neuf. Certains ont attendu le départ dans des petites pensions de Hambourg et ont acheté, dans les nombreuses échoppes du port, quelques effets utiles au long voyage qu'ils s'appêtent à passer dans l'entrepont, juste au-dessus des 400 tonnes de fret qu'emporte le navire.

Le prix du billet de ces passagers de troisième classe correspond à un an de salaire pour un travailleur journalier et à trois ans de gages pour une simple bonne. Nettement plus chères, les seconde et première classes ne comptent que cent vingt et soixante-dix places. La catégorie supérieure est principalement occupée par des Américains voyageant pour affaires ou ayant rendu visite à leur famille en Europe. Quelques célébrités de l'époque, comme Henriette Wulff —une Danoise proche du poète Hans Andersen à qui elle a inspiré le conte de La Petite Poucette—, fait également partie de cette minorité de privilégiés.



Avant de s'élancer dans l'Atlantique, on sait que l'Austria a fait une escale à Southampton, d'où il est reparti le 4 septembre vers 5 heures de l'après-midi, après avoir embarqué quelques passagers supplémentaires. Puis, le 7 septembre, au large du cap Lizard, il a croisé l'Arthur, un autre navire. Ensuite, c'est le silence...

Le 25 septembre, soit le lendemain du premier entrefilet paru dans le New York Times, le quotidien publie un témoignage reçu par télégraphe d'Halifax. Le capitaine Shaw, tout juste arrivé dans le port canadien à bord de l'Arabia, indique qu'il a vu, le 15 septembre à 7 heures du matin, une épave enflammée qui pourrait être celle du vapeur disparu. Les journalistes n'en savent pas plus, mais les propos de ce capitaine sont confirmés par le commandant d'un autre navire, le Rosenhearth.

L'attente fait donc place à l'inquiétude mais le doute subsiste encore : ces informations restent fragmentaires et on est également sans nouvelles du

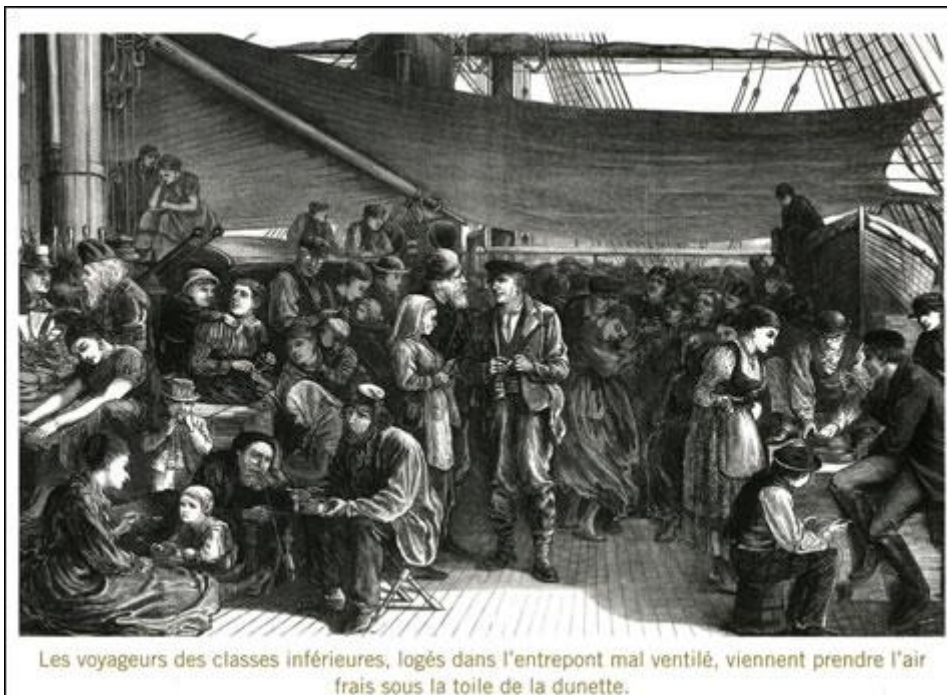
Alps de la Cunard, à destination de New York. Ce navire marchand ayant quitté Southampton un jour après l'Austria, mais à vide, est susceptible de se trouver dans les mêmes parages que lui.

Le doute est levé le 27 septembre. Le capitaine Shaw est en effet catégorique : l'épave qu'il a aperçue en flammes au large de Terre-Neuve est bien celle de l'Austria. S'il n'a pu distinguer le nom du navire, il décrit parfaitement sa figure de proue, décorée d'un aigle à deux têtes. Que sont donc devenus les passagers et les cent trois membres d'équipage ? Le pire est à craindre. D'autant que le capitaine Spencer, du Daniel Webster, déclare aussi au New York Times qu'il a croisé, le 20 septembre, un grand nombre de cadavres enflés et déformés « avec des oiseaux de mer sur eux ».

C'est le 28 septembre que les premiers récits de la catastrophe commencent à paraître dans la presse américaine, sur la base des témoignages de douze rescapés de l'Austria, débarqués deux jours plus tôt à Halifax, à bord du Lotus.

Le colonel Chartres Brew est l'un de ces rescapés. Inspecteur en chef de la police de la Colombie-Britannique, âgé de quarante-trois ans, l'homme a embarqué sur le vapeur à Southampton. C'est en réalité un agent secret britannique qui a pris des notes tout au long du voyage. Ainsi apprend-on que la traversée de l'Austria a bien mal commencé. Juste après avoir quitté Southampton, le capitaine a, en effet, décidé de mouiller devant l'île de Wight à cause du mauvais temps. Le 5 septembre, vers 4 heures du matin, un accident s'est produit au moment de relever l'ancre : à la suite d'une fausse manœuvre, sa chaîne a fauché plusieurs marins. Deux d'entre eux ont été blessés et un troisième, projeté à la mer, est porté disparu...

LE MÉDECIN FAIT PURIFIER L'ATMOSPHÈRE « RENFERMÉE ET FÉTIDE » DE L'ENTREPONT



L'Austria a néanmoins appareillé et fait route au moteur, cap à l'Ouest, avec des vents contraires et une mer grosse. À partir du 12 septembre, le temps s'améliore progressivement et la vitesse du bateau passe de 10 à 13 nœuds. Le 13, les passagers profitent d'un début d'après-midi ensoleillé pour

fuir l'atmosphère « renfermée et fétide » qui règne dans l'entrepont, rapporte à la presse le rescapé Théodore Glaubensklée, un professeur d'allemand de la Free Academy de New York, embarqué en première classe. « Les passagers venaient tout juste de prendre leur déjeuner quand le maître d'équipage et quatre matelots sont descendus. Ils ont ordonné à tous les passagers de se rendre sur le pont et ont dit qu'ils allaient faire des fumigations dans le navire », indique aussi Sven Petersen au New York Times.

Les propos de ce marin suédois, qui a lui aussi échappé au naufrage, seront confirmés a posteriori par Ernest Renaud, le capitaine d'un voilier nantais qui arrive sur zone peu de temps après le début de l'incendie. Lui aussi va recueillir des témoignages, qu'il résume dans une lettre à un ami : « Le médecin du bord ayant jugé nécessaire de sanifier la partie du navire occupée par les passagers de troisième classe, on chargea de ce soin le maître d'équipage qui, à cet effet, mit dans un vase une certaine quantité de goudron. Puis, ayant fait rougir un fer à la cuisine, il l'y plongea afin de faire dégager une vapeur épaisse pour purifier ces lieux malsains. Mais, soit que le roulis ait fait chavirer le vase, soit qu'il ait éclaté lui-même, on vit le goudron courir sur le pont en serpentant et formant autant de petits ruisseaux enflammés. De prime abord, aux cris "au feu" qui se firent entendre, la panique fut générale et les premiers sur les lieux jetèrent sans ordre de l'eau sur le goudron qui, par ce moyen, n'eut que plus de facilités à se répandre partout et à propager l'incendie. »



Chartres Brew est à ce moment-là à l'arrière du navire et voit tout à coup un épais nuage s'échapper du centre du navire. En se penchant au bastingage, il constate que le feu atteint déjà le pont inférieur et sort par les hublots. Le navire fait route face au vent, ce qui attise l'incendie... À bord, la panique se généralise. Selon les membres de l'équipage, Heydtmann, le capitaine de l'*Austria*, est alerté par les cris. Quand il sort de sa cabine, il se rend d'abord sur le pont pour donner les premières consignes. Il ordonne ensuite d'actionner les pompes à vapeur et de les diriger sur le foyer de l'incendie, tout en gardant ses machines à moyenne puissance. Hélas ! Les mécaniciens lui signalent que les tuyaux de plomb, qui alimentent ces pompes, ont déjà fondu. Ils voient alors leur capitaine, hébété, errer à l'arrière du navire, puis traverser le pont en flammes en se blessant gravement. Petersen, le marin suédois, le décrit quelques instants auparavant, mains jointes et répétant en secouant la tête : « Nous sommes tous perdus, oh mon Dieu, nous

sommes tous perdus ! »

LE CAPITAINE LÂCHE PRISE ET DISPARAÎT DANS LES EAUX DE L'ATLANTIQUE NORD

Un autre survivant, Philipp Berry, est proche d'un canot de sauvetage sur le côté au vent, à bâbord. Quelques membres d'équipage essaient de le mettre à l'eau sous le regard d'une foule compacte, mais les palans qui le soutiennent ne sont pas filés à la même vitesse. La poupe en partie immergée, le canot est alors traîné par l'*Austria* qui n'a toujours pas ralenti son allure.

C'est à ce moment que Philipp Berry voit arriver Heydtmann. Ce dernier tente de monter à bord de la chaloupe en se suspendant à un bout qui pend depuis le pont ; il rate son saut, trébuche et s'agrippe à un autre cordage. Traîné dans l'eau par son propre navire, il finit par lâcher prise et disparaît dans les eaux froides de l'Atlantique Nord...

L'*Austria* continue sa route, sans capitaine, à 8 ou 10 noeuds, et Berry comprend alors que les marins affectés aux machines ont sans doute tous succombés. Il observe, un peu plus loin, la chute d'un autre canot de bossoir qui se fracasse contre la coque du vapeur, tuant d'un coup une cinquantaine de personnes, aussitôt englouties par les flots.

Ce qui reste de l'équipage n'assure plus la moindre coordination des opérations. Quand bien même il aurait pu le faire, l'*Austria* n'est pas équipé d'un nombre de canots suffisant. Il n'en compte que huit qui peuvent contenir chacun cinquante personnes, ce qui donne une capacité de quatre cents personnes, alors qu'il y en a plus de six cents à bord. La perte de plusieurs embarcations de secours rend la situation encore plus difficile. C'est la ruée. Chacun pour soi... Surchargées avant même d'être mises à l'eau, les embarcations encore disponibles ne peuvent plus être manoeuvrées et se retrouvent, les unes après les autres, en fâcheuse posture. Seul un canot, dans lequel ont pris place une partie des marins, sera utilisé correctement.

Pendant encore plus de trois quarts d'heure, le vapeur poursuit sa navigation folle lorsque se produit une forte explosion. Deux des trois mâts de l'*Austria* tombent presque aussitôt et le stoppent, le gréement s'étant vraisemblablement pris dans l'hélice. Juste avant l'explosion, Philipp Berry a réussi à mettre la main sur une bouée de sauvetage qu'il passe autour de son torse. Ne supportant plus la chaleur de l'incendie, il saute à l'eau avec deux

autres personnes et se retrouve rapidement à 3 ou 4 milles de l'Austria. Il sera le premier passager à être récupéré par un voilier en train de louvoyer vers le vapeur.

Il s'agit du Maurice, un trois-mâts barque de 279 tonneaux construit en 1855 à Paimboeuf et appartenant à l'armement Le Boterf et Greslé de Nantes. Venant du havre du Grand-Bréhat, tout au Nord de Terre-Neuve, il est lourdement chargé de morue et fait route vers l'île de Faial, aux Açores. « Le temps était magnifique, raconte Ernest Renaud, son capitaine. À 2 heures après midi, on me dit voir devant un bateau à vapeur. À 2 heures et demie, je le reconnus; à 3 heures, je vis distinctement que ce navire était la proie des flammes. Le feu prenait de l'avant à l'arrière, la mâture était brûlée et il n'en restait pas vestige. Je fis route sur ce navire, espérant sauver ceux qui ne l'auraient pas abandonné.»



LE MAURICE HISSE SES COULEURS ET S'APPRÊTE À RECUEILLIR LES NAUFRAGÉS

Le Maurice est alors à 8 milles de l'Austria, par 44°01' de longitude Ouest et 45°06' de latitude Nord. Il remonte lentement au vent dans le sillage du vapeur en perdition, croisant des cadavres à la dérive. Le petit temps ne facilite pas son approche. Vers 5 heures et demie, il arrive enfin sur les lieux du drame et se tient au vent du navire incendié, afin de préserver ses voiles des cendres chaudes qui voltigent. Le Maurice hisse alors ses couleurs et s'apprête à recueillir des naufragés, accrochés aux débris épars du navire qui flottent alentour. Il met ses canots à la mer.



«Maintenant, les expressions me manquent pour vous peindre les scènes déchirantes que nous avons sous les yeux, écrira plus tard Ernest Renaud au ministre de la Marine. Au moment où mes deux embarcations accostèrent l'Austria, une foule de ces malheureux se jetèrent à l'eau malgré les recommandations de mes officiers et, pour majeure partie, trouvèrent la mort dans les flots. Beaucoup de cadavres flottaient déjà sur l'eau; ce spectacle était effrayant. Une mère, s'attachant ses trois petits enfants autour d'elle, se jette à

l'eau pour se noyer avec eux. Nous sauvons la mère seule, elle pleure aujourd'hui ses enfants, dont elle avait voulu partager le sort. Un père disparaît aux yeux de son fils sauvé dans le canot, au moment où il allait arriver au bout de ses efforts. Une jeune personne de dix-neuf ans disparaît au moment où, du canot, son frère et sa soeur lui tendaient les mains.

Bien que réfugiés sur le beaupré, ces passagers ne pourront échapper aux flammes. Cette scène va marquer les esprits, comme en témoigne cette gravure d'Ernst Hartmann, publiée par le journal allemand *Illustrirte Zeitung*, le 30 octobre 1858.

« Partout, semblables scènes de douleur, partout des cris d'appel, de rage, de désespoir, joints aux cris arrachés par les plus horribles souffrances; mais l'oeuvre de destruction allait tellement vite qu'après un voyage à l'Austria, les embarcations, empêchées par les cadavres, ne purent accoster qu'à deux longueurs

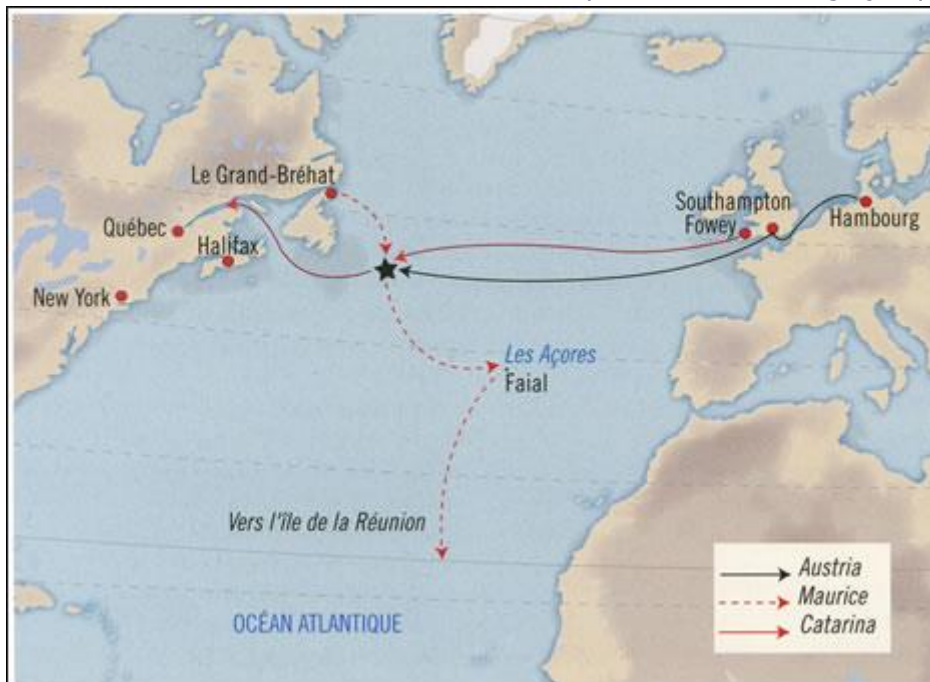
de canot. Beaucoup de ces naufragés sont à bord, presque nus et le corps couvert de brûlures. Un enfant de huit ans parvient, au milieu de cet affreux désordre, à se soutenir sur les flots en se traînant de cadavre en cadavre et à rejoindre ainsi l'embarcation de salut. Ces malheureux étaient presque tous suspendus le long du bord, à des cordes fixées aux lisses du navire, quelquefois à vingt ou trente sur la même corde. Quand le feu intérieur la brûlait, ils disparaissaient tous pour ne réapparaître que noyés.

« Sur le beaupré, une scène navrante se passait : au moins deux cents personnes s'y trouvaient réfugiées ; le beaupré était un tube de tôle et, le navire se trouvant évité l'arrière au vent, la flamme s'engouffrait dans ce tube, qui devint rouge. Les premiers dessous sont morts calcinés, garantissant la seconde couche humaine qui, elle-même, était léchée par la flamme, qui la couvrait en forme de dôme. Mais le plus horrible, c'était de voir des malheureux enfermés dans leurs cabines. Ayant trouvé tout passage pour fuir intercepté, ils venaient chercher de l'air aux hublots du faux-pont, nous demandant un secours impossible et se disputant entre eux une place qui ne devait leur donner qu'une minute de plus d'existence. »

IL FAUT SANS CESSER RÉCONFORTER, NOURRIR ET SOIGNER LES NAUFRAGÉS

À la tombée du jour, les canots du Maurice ont effectué quatre rotations et recueilli soixante-sept personnes. À bord de l'Austria, certains passagers se jettent à l'eau sans espoir d'être secourus, car ils pressentent que la nuit va interrompre les opérations de

sauvetage. La houle a grossi et le vapeur semble s'enfoncer par l'avant. Il tourne sur lui-même au ralenti, mettant systématiquement un de ses bords hors de portée des embarcations du Maurice. Ne voulant pas mettre en danger la vie de ses propres marins, Ernest Renaud décide effectivement de suspendre le sauvetage jusqu'au matin.



Mais il allume ses feux de position pour rassurer et encourager les naufragés et louvoie toute la nuit pour se trouver au petit jour au plus près de l'Austria.

Aux premières lueurs de l'aube, le capitaine découvre que le canot d'un navire norvégien, le Catarina, a déjà fait le tour du vapeur et revient à vide, Sans savoir

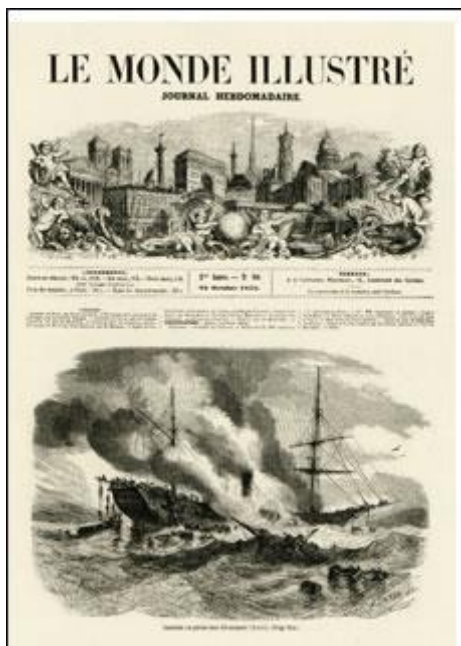
que ce navire a réussi à sauver vingt-deux passagers du vapeur dans la nuit, il décide de reprendre sa route vers Faial.

Le soir du 14 septembre, il note dans un courrier à l'intention de sa soeur qu'il a rencontré le trois-mâts anglais Lotus, qui se rend à Halifax et qu'il a transbordé dessus douze rescapés, dont le colonel Chartres Brew. Ainsi parviennent les premières nouvelles du naufrage à Halifax.

À bord du Maurice, il faut néanmoins réorganiser le bord pour faciliter la cohabitation de l'équipage avec les rescapés. Ernest Renaud demande à ses hommes d'ouvrir leurs coffres pour donner des vêtements aux naufragés : ils leur cèdent la totalité de leurs rechanges. Des tentes sont également dressées sur le pont avec les voiles de secours du trois-mâts barque, mais le ciel n'est pas de la partie. Pendant les sept jours de mer qui le séparent des îles portugaises, le Maurice affronte du gros temps et le voyage tourne au calvaire. Il faut sans cesse reconforter, nourrir et soigner les naufragés. Ernest Renaud est sur tous les fronts. «Je veille partout et si toutefois je dors, c'est assis sur un banc, la tête sur la table, écrit-il à sa soeur Clara. Je vous assure que quand j'ai fini, j'ai le coeur bien gros de voir de telles souffrances; il en est un surtout dont le corps ne fait plus qu'une seule brûlure, je ne puis comprendre comment il a pu nager jusqu'aux embarcations.»



LA TRAGÉDIE DE L'AUSTRIA EST COMMENTÉE PAR LES JOURNAUX DU MONDE ENTIER



Le 17 septembre, le Maurice passe devant Flores mais des vents contraires le font tomber sous le vent de l'île. Il gagne donc directement Horta, sur l'île de Faial, où il arrive le 19. Ernest Renaud commence alors le tour des consulats afin que les rescapés soient pris en charge. Mais il obtient partout la même réponse : « Ces messieurs me proposèrent de les jeter avec mes embarcations sur le pavé d'Horta, prétendant que la charité des habitants ne les laisserait pas mourir de faim, rapporte-t-il au ministre français de la Marine. Je refusai nettement, ne voulant pas débarquer mes passagers sans leur assurer un protecteur. Enfin, n'obtenant pas de décision, je me déterminai à repartir pour les conduire en France, bien que ma destination fût l'île de la Réunion. Alors ces messieurs, voyant que j'étais parfaitement décidé à partir, envoyèrent prendre les naufragés. Je pus partir à 7 heures du soir pour ma destination. »

Les rescapés les plus gravement atteints vont rester à l'hôpital jusqu'à la fin septembre. Les autres sont hébergés au Shakespeare et au Rainbow, deux hôtels de Faial. C'est un marchand local, Achille d'Orey, qui paie leurs pensions, les consuls américain et anglais refusant de les prendre en charge.

Toutes ces péripéties sont rapportées par la presse américaine et la tragédie de l'*Austria* est maintenant reprise et commentée par les journaux du monde entier. Elle va alimenter la chronique durant tout l'hiver, trouvant un large écho dans les pays concernés par l'émigration et, bien sûr, en Allemagne.

Si les témoignages des rescapés occupent d'abord la une des journaux, c'est ensuite la recherche des responsabilités qui passionne l'opinion. La presse américaine et la presse allemande vont s'affronter sur ce sujet qui s'inscrit dans un contexte de concurrence féroce entre les compagnies maritimes. Pour l'HAPAG, cette affaire vient obscurcir un horizon jusque-là dégagé. La presse américaine fustige le comportement du capitaine et de l'équipage de l'*Austria*, en se basant notamment sur le témoignage de Philipp Berry.

Ci dessus: le 23 octobre 1858, l'hebdomadaire français *Le Monde illustré* publie cette gravure d'Évremont de Bérard. Elle valorise le sauvetage des passagers de l'*Austria* par le *Maurice*, alors que la presse américaine met surtout l'accent sur l'incendie.

Les journalistes allemands tentent, au contraire, de montrer que le capitaine Heydtmann a tout mis en œuvre pour gérer la situation, mais qu'il était impossible pour un être humain d'exercer dans ces terribles circonstances le moindre contrôle sur un

équipage.



Une enquête administrative est lancée dès le mois d'octobre par le Sénat de Hambourg et conclut, le 12 décembre, que l'*Austria* a été victime d'une malchance incroyable et que la panique a empêché l'équipage de faire son travail correctement. Des conclusions évidemment soutenues par l'HAPAG.

ERNEST RENAUD REÇOIT L'ORDRE ROYAL DE L'AIGLE ROUGE ET LA LÉGION D'HONNEUR

L'opinion publique n'est pas convaincue par ces explications et certains journaux ne tardent pas à douter de l'origine du sinistre. Le *Hamburger Handelsblatt* va même jusqu'à voir dans l'incendie la main d'une compagnie rivale de l'HAPAG, la *Norddeutsche Lloyds* basée à Bremerhaven. Philipp Berry, seul témoin vivant de la disparition d'Heydtmann, rapporte aussi dans le *New York Times* une étrange version des faits. Selon lui, l'origine de l'incendie ne tiendrait pas à l'usage de goudron enflammé pour assainir l'entrepont, technique il est vrai peu courante, mais aux chaudières du bateau. « Les faits sont tout simplement les suivants, raconte-t-il. Le dimanche 12 septembre, la nouvelle se répandit parmi les passagers que le capitaine avait parié qu'il serait à New York le 18 septembre. La veille, il nous avait pourtant dit que nous n'arriverions pas avant le 19 au soir. » Le capitaine aurait donc poussé ses machines au-delà de leurs limites, Philipp Berry affirmant avoir vu peu après « des flammes hautes de 20 pieds sortir du conduit de cheminée ».



Les témoignages recueillis par Ernest Renaud accréditent plutôt la thèse officielle et la polémique sur l'origine du sinistre ne fera pas long feu. Discret, le capitaine du Maurice évite, en tout cas, de « charger » les acteurs du naufrage, respectant l'action du capitaine de l'Austria et allant jusqu'à manifester une certaine solidarité à son égard. Il ne donnera, de même, guère de détails lorsqu'il évoquera la présence d'autres navires sur les lieux du sinistre. « Il est pénible de signaler des fait honteux pour le corps des marins et de l'humanité, écrit-il dans son rapport de mer. Au moment où j'étais en panne à effectuer le sauvetage, trois navires ont passé en vue. Je distinguais leurs bois et, par conséquent, les capitaines commandant ces navires devaient bien voir la mission que j'accomplissais dans le moment, qui était aussi la leur. Ces messieurs se sont éloignés du sinistre sans seulement songer que leurs semblables réclamaient leurs secours. J'aime à espérer que ce ne sont pas des Français, n'ayant pas vu leurs couleurs. »

L'humanité et le dévouement d'Ernest Renaud, petit homme au front dégagé et au visage carré, portant moustache ou barbe taillée, font en tout cas

l'unanimité dans la presse et l'opinion publique. Traité en héros, il se voit décerner une médaille du Sénat de Hambourg. La Prusse lui attribue aussi l'ordre royal de l'Aigle rouge et la France le fait capitaine de l'ordre impérial de la Légion d'honneur. Il partage toutes les marques de reconnaissance et les gratifications qui en découlent avec son équipage.

S'il n'est pourtant pas accueilli en grande pompe lorsqu'il revient pour la première fois à Nantes en avril 1859, il va cependant bénéficier de la considération de ses concitoyens jusqu'à la fin de sa vie. Peu après sa disparition, en 1875, le conseil municipal de Nantes donne son nom à un quai du port, proche de la butte Sainte-Anne. Un quai que foulent aujourd'hui les Nantais sans savoir qu'il porte le nom d'un capitaine qui fit honneur aux valeurs des gens de mer.

Bibliographie : Cet article est très largement inspiré du catalogue de l'exposition L'«Austria», une tragédie dans l'Atlantique, présentée jusqu'au 11 novembre au musée d'Histoire de Nantes, au château des ducs de Bretagne. Le catalogue a été réalisé par Pierre Chotard et Gaëlle David.

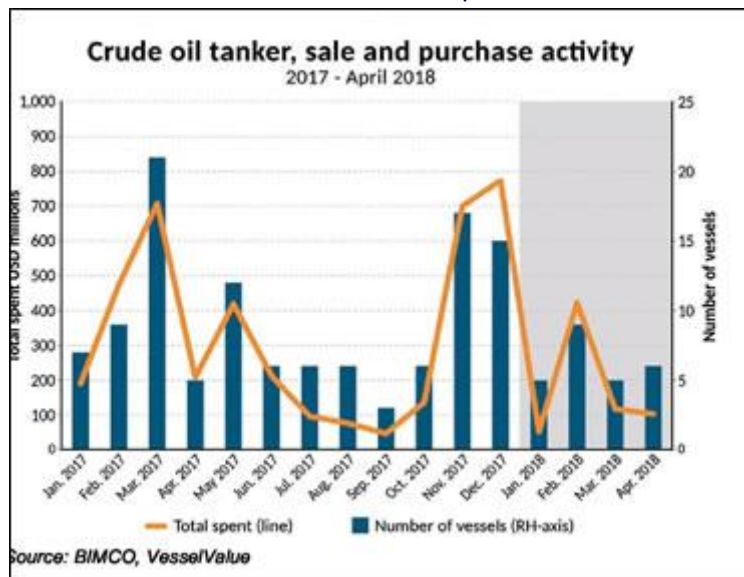
Chasse-marée n° 244 Septembre 2012

Inséré 31/12/18 DOSSIER Enlevé 31/01/19

Tankers face an uncertain future

Just when you thought it could not get any worse for the tanker shipping industry, the US is re-imposing sanctions on Iran, which will come into force after the six months wind-down period ends on 4th November 2018.

The immediate effects are less tangible but will surely add more uncertainty to the whole shipping industry that has plenty of uncertainty to deal with already, BIMCO's Peter Sand said in his recent markets roundup.

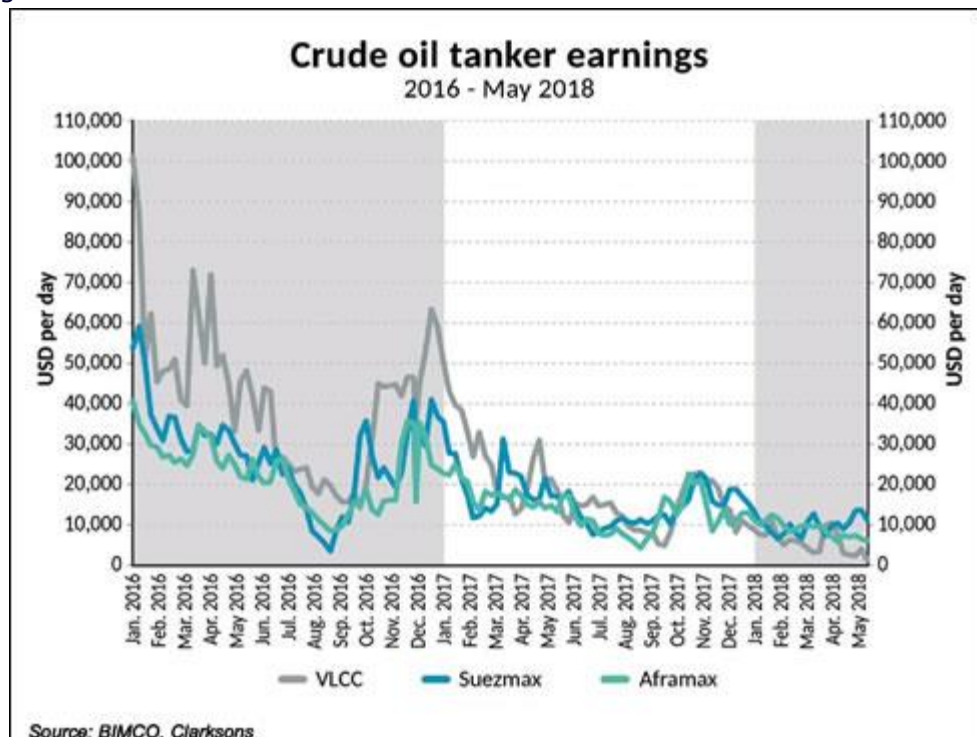


Freight rates for both crude oil tankers and product tankers are mostly in loss making territory. Hardest hit are the larger crude oil tankers. For example, on 25th May, average earnings for VLCCs, Suezmaxes and Aframaxes stood at \$4,238; \$18,073 and \$17,930 per day, respectively.

In the product tanker sector, average earnings were almost as bad, ranging from \$10,561 per day for an LR2, \$6,500 per day for an LR1 to \$9,121 per day for an MR.

In the International Energy Agency (IEA) April Oil Market Report, the agency queried whether OPEC could claim 'mission accomplished' shortly, on rebalancing the global oil market after several years of supply being significantly higher than demand.

BIMCO believed that the oil market still has some way to go before being balanced. Global oil stocks appeared to be significantly above a 'reasonable' target (same stocks/consumption ratio as before the building up of stocks). The tanker industry will enjoy a noteworthy higher level of demand when global oil stocks are drawn further down, Sand said. Moreover, a better oil market balance may also cause a return to an oil price contango, which is likely to indicate an increased demand for tankers for floating storage.



Supply

March 2018 was the busiest month for crude oil tanker demolition, specifically for VLCCs, since 2003, with 10 units sold for demolition. Such high activity also led to a lack of growth during the first four and a half months of 2018.

Even though demolition of product tankers was high – as 1.1 mill dwt left the fleet - this sector still grew by 0.9% from January through April.

Whereas today demolition is affecting the freight market balance, ordering of new ships represents an omen of what is to come.

Currently, it seems that owners and investors who are starving in the freight market have little appetite for ordering new ships for future delivery.

Crude oil tanker ordering is up by just 6% to 6.6 mill dwt (including 20 VLCCs) during the first four months of 2018 from a year ago, whereas product tankers are down by 33% to just 1.4 mill dwt from 2017.

Owners and investors have also cooled their interest in secondhand tonnage, with an average of only six ships changing ownership a month this year. This is 50% down on the 2017-average monthly S&P business.

The current freight market conditions has also meant that less money was spent, even though asset prices have moved up since the low levels of 2017.

Sand said that BIMCO had revised its previous estimate for crude oil tanker demolition upwards, from 9 mill dwt to 13 mill dwt for this year. The immediate effect is that the estimated fleet growth for 2018 comes down to 2% from 2.7%. During the first four months of 2018, 8.5 mill dwt of crude oil tanker capacity was demolished.

This year is one of prime focus for the crude oil tanker sector with fleet growth below 2% particularly, if 2019 turns out as forecast with fleet growth above 3%, due to a lower demolition figure than seen this year. In an average crude oil tanker market, the fundamental conditions only improve if fleet growth is less than 2%, Sand warned.

Amongst product tanker companies, patience is paramount. The fleet is growing slowly but earnings aren't improving. Quite a few new orders surfaced in November and December, 2017, but interest has cooled somewhat since then.

Staying away from the shipyards is essential for reaping the benefit that two years of tepid fleet growth (2018/2019 at 2.8% and 2.6%, respectively) could bring in the form of higher freight rates.

Outlook

Global oil stocks level, not only OECD oil stocks, remains the only factor to watch out for. It is also the one factor where hard data is available. Nevertheless, indirect measures point to stockpiles still being too high for normal tanker demand to resume.

This year thus far has seen such a narrow focus on VLCC ordering that the obvious question is - how much is too much? The developments in shipping in general and within the oil tanker sector in particular are focused on the larger ship sizes, but it remains important not to prepare too far in advance for what is forecast to come.

The better earnings that should come out of a stronger demand scenario, may end up disappointing, if there is large overcapacity, Sand said

Another problem - the sanctions against Iran have already had an impact on trade. But will we be able to single out the effect of US sanctions against Iran, when they kick in? The answer is - probably not to their full extent - as tankers are impacted by so many other factors – some more problematic.

For example, the ongoing crisis in Venezuela and Libya has limited oil production in those countries. Imagine if that situation was reversed? The world would then be awash with oil,

something which is likely to keep the oil price in backwardation - a situation where the spot price of oil is higher than the expected future price of oil.

In addition, more pipelines are being built worldwide, and they are all equally critical to tankers – as they take seaborne demand away. Amongst the newer pipelines are the Sino-Myanmar pipeline to Kunming, the second Sino-Russian pipeline to Daqing and the East-West Petroline from Arabian Gulf to Yanbu in the Red Sea.

Another trend to keep an eye out for is to what extent will Europe keep its high products imports. In recent years, in particular we have seen Middle East refineries built for exports, with more to come online in the next couple of years.

But will those refineries end up producing for domestic purposes? Sand asked in conclusion.

Newbuildings

Remaining on much the same theme, Gibson Shipbrokers said that much attention had been given in recent months to continued activity in VLCC newbuildings.

However, what has gone largely unreported is the fact that ordering activity has been completely different in the other tanker segments, starting from Suezmaxes down to MRs. Most notably, investment in new tonnage has been minimal in the LR1/Panamax size group. Just four tankers have been ordered thus far in 2018 (to the end of May), while ordering was also very limited over the previous two years. Without doubt, the lack of investment interest was driven by poor performance in this segment.

In recent years, LR1s have also faced an additional challenge in terms of the increased competition from both smaller and larger product carriers, frequently reporting lower earnings compared to other sizes.

Not surprisingly, owners have showed preference for smaller MRs or bigger LR2s when ordering a new tanker. With the exception of Handysize tankers, as at the end of May, LR1/Panamax have the smallest orderbook, at 7% relative to the existing fleet.

The Suezmax orderbook has also become notably smaller. Only two firm tanker orders, plus four shuttle tankers, have been placed thus far this year, while investment in this sector was also sparse in 2016 and 2017. As a result, the Suezmax orderbook has now fallen below 9%, relative to the existing size of the fleet, nearly three times smaller than than the position two years ago.

The MR orderbook stands close to 10% thus far this year with just 26 confirmed orders, compared to over 70 last year. It is also worth pointing out that the Handysize orderbook is almost non-existent, numbering just three tankers yet to be delivered.

However, this is largely a reflection of owners' preference for the larger MR size range when ordering new tonnage.

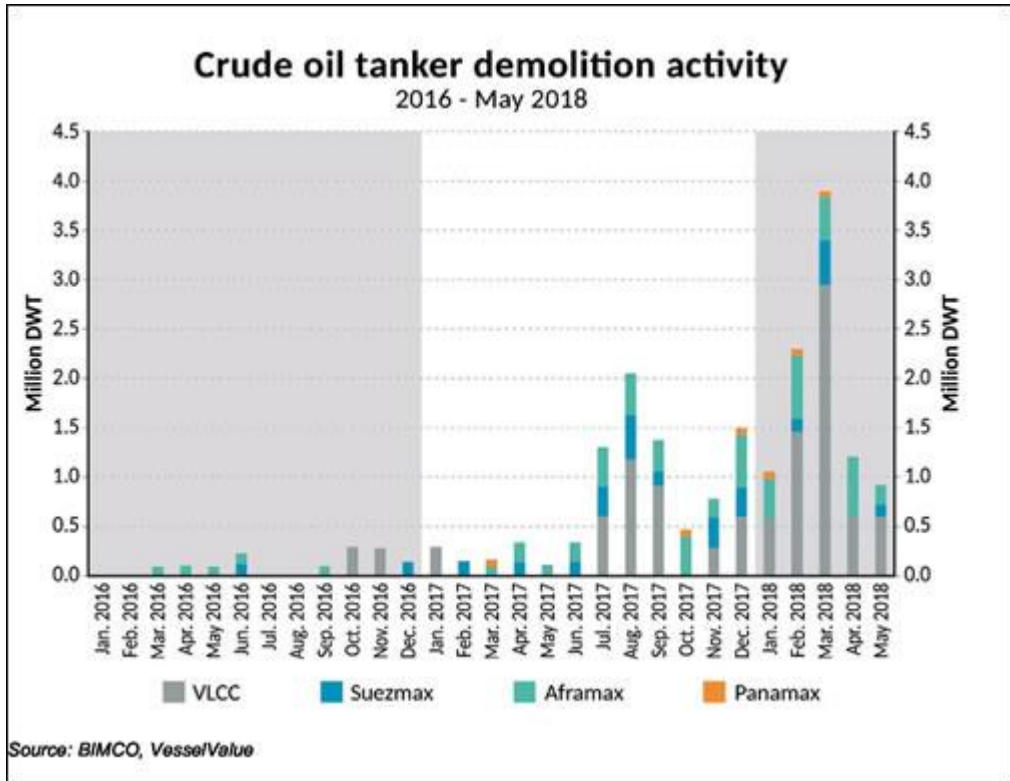
Finally, LR2/Aframax have the second largest orderbook of all size groups, largely as a result of robust investment in 2017. Yet, this has also slowed this year, with 12 confirmed orders year-to-date.

As such, the orderbook remains notably below that of VLCCs, as just under 12% of the LR2/ Aframax fleet is on order versus 16% in the VLCC segment.

The above developments indicate that the growth in fleet size for most size categories could slow down notably next year, particularly if the demolition market remains active. Scheduled deliveries for Suezmaxes, LR2/ Aframax and LR1/Panamax are expected to fall in 2019 to their lowest level since 2015. The number of scheduled deliveries in the MR segment in 2019 is on par with this year's level, yet still notably below the number of new deliveries seen between 2014 and 2016.

This paints a much healthier picture in terms of fleet growth going forward.

However, in order to see a much-needed rebound in tanker earnings, the current trend of robust ordering in the VLCC segment should not be repeated in other tanker classes, Gibson warned.



In another move, in order to tackle environmental issues, the Chinese government announced even tighter regulations and taxation on the independent refiners and blenders (teapots) in an effort to weed out small operators and deal with tax evading players.

Outright closure of refineries with capacities under 2 mill tonnes per annum would be implemented should the independents fail to meet the new guidelines. In March, it was announced that the teapots were to start buying ethanol to blend with fuel to meet the government's regulation that by 2020, gasoline must contain 10% ethanol. China's largest independent refiner Dongming Petrochemical has already obtained permits to start ethanol blending.

However, trouble could be brewing for China's independents from several directions. The Beijing government has introduced new tax rules and shrinking diesel demand coupled with higher crude prices are beginning to threaten their survival and profits are being pressed for the first time since their meteoric rise.

Inséré 02/01/19 NIEUWS NOUVELLES Enlevé 02/02/19

Shippers' Law: Taking the heat for MSC Flaminia fire

Federal judge finds chemical manufacturer and NVOCC liable, not the shipowner or liner company. A judge ruled Deltech Corp. and Stolt Tank Containers B.V. were responsible for the MSC Flaminia fire.

BY CHRIS DUPIN



In litigation growing out of the 2012 explosion and fire aboard the containership **MSC FLAMINIA**, which left three crewmen dead and thousands of containers destroyed, a federal judge found the

manufacturer of the chemical and the manufacturer's NVOCC liable for the accident, not the shipowner or the liner company, Mediterranean Shipping Co. Judge Katherine B. Forrest of the Southern District of New York wrote that she "specifically finds that the fire aboard the Flaminia was not caused by the design or neglect of the owner. She noted, "Many of the original claims have been resolved, including those alleging wrongful death and bodily injury. The remaining claims are based on theories of negligence, statutory violations and breaches of contractual obligations." For those claims, Forrest split the trial into three phases. Phase I, concluded last year, determined the cause of the accident was a runaway chemical reaction — auto-polymerization of cargo consisting of 80 percent grade divinylbenze (DVB80) stowed in one of ship's holds. DVB is a chemical used for the synthesis of ion-exchange resins, an important component of water purifiers. While there was what Forrest called a "thicket of claims, cross claims and counterclaims asserted by an array of parties" in the litigation, her Phase II decision found Deltech Corp., the manufacturer of the DVB, and its NVOCC, Stolt Tank Containers B.V., responsible for the accident. As a result, she said many of the legal arguments presented during the trial "simply do not matter." (In Re M/V MSC Flaminia. S.D.N.Y. No. 12-cv-8892. Sept. 10.) Forrest said a "Phase III" trial will follow if an upcoming mediation process does not resolve the remaining damage issues. Deltech made what Forrest said was a "fateful choice" to ship three tank containers filled with DVB out of New Orleans instead of a more northeastern port that would have resulted in a shorter voyage and that the chemical was stored under hot sun at a terminal in New Orleans for 10 days, then loaded into a hold adjacent to heated containers filled with another chemical, diphenylamine (DPA). That heat "was a substantial contributing factor to the auto-polymerization," she said. To the extent proportionality is relevant to later damage calculations, she assigned Deltech's portion of liability as 55 percent of the total and Stolt's 45 percent. She found "Stolt possessed extensive information regarding the heat-sensitive nature of the DVB, yet it failed to pass information to the ocean carrier, MSC, in an effective manner regarding the dangers of heat exposure." The court also said Stolt was "responsible for arranging loading of the DVB earlier than it should have and arranging for the container being transported to a terminal in New Orleans "even though it had a reasonable basis to anticipate that the tanks would sit stagnant for a number of days. Stolt's actions were a significant contributor to the conditions that allowed for additional heating of the DVB and thus the conditions that led to auto-polymerization." The decision comes at a time when there is increasing concern about fires on containerships. In September, Sean Dalton, chairman of the cargo committee of the International Union of Marine Insurance, said, "Containership fires and the increasing occurrence of misdeclared cargoes is a worrying trend. "He pointed to the fire onboard Maersk Honam in March that resulted in the death of five crew members as

"the most recent example of this issue and the loss is likely to generate the largest general average claim in history." In a general average claim, shippers or their insurers are asked to contribute to the cost of saving a ship and its cargo "As vessels continue to grow larger, the accumulation of cargo values coupled with the increasing risk of onboard fires needs to be addressed urgently by all stakeholders," IUMI noted Last year, IUMI said it supported a proposal presented by the German Insurance Association GDV "that sets out an improved concept for firefighting facilities on board a containership." "We believe a new technical solution is needed to improve current firefighting practice on container vessels, particularly as these ships are continuing to grow in size," said Uwe-Peter Schieder of GDV's marine and loss prevention unit. "We suggest creating individual fire compartments below deck to prevent fire from spreading. These compartments would be fitted with fixed carbon dioxide and water-based firefighting systems. Boundary structures would also be fitted above deck to align with the water-cooled bulkheads below and also fitted with fixed fire-fighting systems. In addition, we also recommend the installation of enhanced fire detection systems." Just last week Maersk implemented new stowage guidelines for dangerous goods. It said even though all cargo aboard Maersk Honam was accepted and stowed as per the requirements of the International Maritime Dangerous Goods Code, the fire had showed a need for stowage of dangerous goods to be reviewed in order to optimally protect crew, cargo, environment and vessels. Forrest said a number of parties asserted tort claims in the Flaminia litigation based on theories including general negligence, negligent failure to warn and strict liability against other companies. In her opinion she found:

- BDP, which acted as Stolt's documentation department, was not at fault. "It is true that BDP was under a contractual obligation to Stolt to ensure certain information was contained on the master bill of lading instructions and that it failed to do so. However, the evidence at trial established that this breach did not contribute to the loss; it led to no damage."
- Although MSC possessed substantial information regarding the heat-sensitive nature of DVB, it said it lacked sufficient information that the tank containers "not only contained a heat-sensitive product but — very importantly — had already been exposed to conditions that transformed them into ticking time bombs." She noted there is a specific, industry-accepted manner of conveying necessary information regarding safe handling of dangerous goods: a dangerous goods declaration, but said Stolt did not effectively utilize them.
- Chemtura, with its DPA chemical shipment adjacent to the DVB, "acted entirely appropriately" and "bears no responsibility for any losses." Its chemical was delivered in good condition, and while its containers were a contributing heat source to the auto-polymerization, its cargo was properly labeled.
- Conti, the shipowner, provided a seaworthy vessel.
- NSB, the vessel operator, "had appropriately trained crew" and the ship had an adequate CO2 fire suppression system. When the polymerization of the DVB resulted in a white, smoky cloud of gas being emitted, the decisions made by the crew were appropriate. While Forrest had previously found crew activity on the ship more likely than not created a spark that ignited the explosion, she did not assign fault for that act.

Source : American Shipper

Inséré 03/01/19 NIEUWS NOUVELLES Enlevé 03/02/19

Exmar Refinances 10 Ships

Belgian owner and operator of gas carriers Exmar has received a firm commitment for the refinancing of its ten owned pressurized vessels.



The fleet is currently 100% chartered out and will be refinanced through several sale and leasebacks with unnamed Japanese owners for a period of up to six years, the company revealed.

The refinancing will generate approximately USD 60 million of free cash to Exmar.

The transaction is subject to documentation and expected to close in

the fourth quarter of this year with a partial drawdown in 2018 and the balance in the first quarter of 2019.

The ships are all Hong Kong-flagged, built between 2008 and 2010, ranging in capacity from 5,019 to 3,518 cbm

Inséré 05/01/19 BOEKEN LIVRES BOOKS Enlevé 05/02/19

Svitzer Tugs (Worldwide)

BOOK REVIEW By: Frank NEYTS



In September 2017 Coastal Shipping Publications published "Svitzer Tugs (Worldwide)", written by Bernard McCall. The story of Em. Svitzer

Bjergningsentreprise (Svitzer) begins in 1833 when Emil Zeuthen Svitzer, a Danish entrepreneur, established a salvage business after noticing many losses occurring on trade routes to and from Denmark.

Its business extended to harbor towage in due course. The company has expanded considerably over the past two decades and claims to have 430 vessels working in about 100 different locations throughout the world. Because of the huge size of the Svitzer fleet, Coastal Shipping Publications is covering it in two volumes. This first volume, issued in June 2017, looks at the company's tugs working in the UK and has just been followed by the second volume which covers the tugs working outside the UK. This second volume begins in Denmark, the home of the company, and moves on to the other Scandinavian countries and then northern Europe. The book continues to look at tugs in Canada, the Caribbean, the Far East and finally Australia where Svitzer has gained prominence.

"Svitzer Tugs (Worldwide)" (ISBN 978-1-902953-86-1) is a paperback book, A5 size, of 113 pages, lavishly illustrated. The price is £10.95 plus £1.75 European postage. Ordering via the bookshop, or directly via the publisher, Coastal Shipping, 400 Nore Road, Portishead, Bristol BS20 8EZ, UK. Tel/Fax: +44(0)1275.846178, www.coastalshipping.co.uk, e-mail: Bernard@coastalshipping.co.uk

Inséré 05/01/19 DOSSIER Enlevé 05/02/19

Un pôle Nord made in China

Pour sécuriser ses ressources en matières premières, Pékin investit sans compter au-delà du 66e parallèle. Une stratégie qui mise sur l'ouverture de nouvelles voies maritimes dues à la fonte de la banquise

Une glace qui craque, des icebergs qui se détachent, de nouvelles routes maritimes qui peu à peu apparaissent et attirent l'intérêt des investisseurs pour les réserves de pétrole, de gaz, de fer, de zinc qu'abritent ces régions jusqu'ici inhospitalières... Même le tourisme pointe son nez au nord du 66e parallèle, rompant un silence boréal multimillénaire. Sans l'ombre d'un doute, « l'ouverture » de l'Arctique, sous l'effet du réchauffement climatique, est le changement géographique le plus important depuis la fin de l'ère glaciaire.



A la différence de l'Antarctique, « protégé » par des traités spécifiques, l'Arctique a un petit côté Far West : comme les poissons, qui remontent tous vers le pôle à la vitesse de 75 kilomètres par décennie, les convoitises migrent vers le nord.

Pour tirer profit de ces routes, de ces gisements, de ces terres rares, de ces richesses halieutiques, la compétition est ouverte. Chaque pays riverain cherche à attirer les investisseurs et à accroître ses espaces réservés. Mais la surprise de 2017,

c'est un pays qui ne fait même pas partie des six qui bordent l'océan Arctique, Russie, Canada, Etats-Unis (avec l'Alaska), Danemark (avec le Groenland), Islande et Norvège : la Chine.

Le 9 novembre, un événement majeur a eu lieu, qui n'a fait presque aucun bruit. Lors de son voyage à Pékin, Donald Trump, suivi d'une nuée d'hommes d'affaires, a passé un accord avec ses hôtes qui se sont déclarés prêts à investir 43 milliards de dollars en Alaska pour exploiter, liquéfier et transporter du gaz naturel. Le plus gros investissement jamais conçu dans l'Arctique, toutes industries confondues.

En apprenant cette nouvelle, le spécialiste des mondes polaires Mikaa Mered, qui enseigne à l'Université des Sciences appliquées de Laponie, en a eu le cœur net : « Les Chinois sont désormais maîtres de l'Arctique, tranche cet expert de la Commission européenne. Ils étaient présents dans des projets au Canada, ils ont investi dans les deux grands projets gaziers en Russie, leurs relations se réchauffent avec la Norvège, ils ont passé un accord de libre-échange avec l'Islande, ils ont mis la main sur la quasi-totalité des principaux projets miniers au Groenland. On pensait qu'ils auraient du mal à prendre pied aux États-

Unis, à cause des positions de Trump à leur égard. Finalement ils y parviennent en seulement six mois... »

Le président américain s'est laissé convaincre par le gouverneur Bill Walker et les élus de l'Alaska, pour la plupart républicains. Depuis la baisse des prix du pétrole, l'économie et les finances de cet État souffrent, et ce projet Alaska LNG est considéré comme la planche de salut. Il s'agit de liquéfier du gaz du nord de l'Alaska, de le transporter par un gazoduc de 1288 kilomètres vers un terminal à Nikiski, au sud d'Anchorage.

Les partenaires initiaux étaient Exxon Mobile, TransCanada, BP, ConocoPhillips. Refroidis (hum...) parla rentabilité incertaine du projet, ils se sont retirés l'an dernier. Pour la Chine, le « retour sur investissement » immédiat n'est pas un souci. Sa priorité, c'est de sécuriser des sources d'énergie pour maintenir sa croissance sur plusieurs décennies. « L'Arctique représente avant tout un accès aux matières premières dont a besoin leur industrie. Plutôt que de les acheter, ils ont décidé de posséder les mines, pour rester maîtres de la quantité et des prix », commente Mark Rosen, spécialiste du pôle Nord au CNA, un think tank de Washington proche du Pentagone.

Les Chinois ont sauté sur l'occasion et rondement négocié ce deal. Un consortium de trois groupes va reprendre en main l'affaire (même si l'Alaska restera majoritaire) : l'industriel China Petrochemical Corp (Sinopec), le fonds souverain CIC et la banque d'État Bank of China. Pékin entend importer 75% du gaz qui sera exploité.

Pour les États-Unis s'ouvre la double perspective de 12 000 emplois et d'une réduction de 10 milliards de dollars du déficit commercial avec la Chine (de 350 milliards l'an dernier). De quoi désintégrer la rhétorique antichinoise que prônait le candidat Trump. Le temps où la Chine « violait les États-Unis » est désormais un souvenir.

UNE STRATÉGIE BIEN MÛRIE

Depuis quand la Chine prépare-t-elle sa conquête ? Selon la chercheuse Anne- Marie Brady, auteur d'un livre sur les ambitions polaires de la Chine (1), cette stratégie a été dessinée au début des années 2000 mais, pendant plus de dix ans, elle est restée sous le radar. En 2014, Xi Jinping a affiché sa volonté de « rejoindre les rangs des grandes puissances polaires », une phrase immédiatement intégrée et déclinée dans chaque strate de l'appareil d'État. Avec l'espace, l'océan et internet, les pôles ont rejoint la liste des horizons à conquérir. Aucun autre pays n'a une stratégie aussi construite, avec les moyens de la mener.



Des ouvriers acheminent du matériel sur le « Xue Long », le « Dragon des neiges », un brise-glace chinois acheté à l'Ukraine en 1993.

Anne-Marie Brady parle d'une « vision complètement neuve du monde ». De nouvelles cartes,

« verticales », ont été dessinées par l'administration des océans dès 2004, avant d'être adoptées par l'armée deux ans plus tard : l'Arctique et l'Antarctique ne sont plus sur les bords, mais au centre. Ces cartes, rendues publiques en 2014, sont « la représentation visuelle de la nouvelle realpolitik globale de la Chine : pragmatique, explicite sur les intérêts nationaux chinois, coopérative quand il faut l'être et prête à faire face à un éventuel conflit », écrit la chercheuse.

L'ambition polaire de Xi Jinping a été intégrée dans le projet One Belt, One Road (« une ceinture, une route »), cette nouvelle route de la Soie que Pékin vante depuis quatre ans. Il s'agit d'investir dans les transports et les infrastructures des pays par lesquels passe le commerce chinois. Deux voies ont été dessinées, l'une terrestre (passant par l'Asie centrale) et l'autre maritime (allant vers l'Afrique de l'Est et vers l'Europe via le canal de Suez). En juin, un mois avant la visite du leader chinois en Russie, le Comité national pour le Développement et la Réforme a officiellement ajouté une troisième « route de la Soie », celle des glaces.

Anticipant leur fonte, la Chine prépare l'avenir, avec comme horizon le très, très long terme. Son but étant de retrouver la place de première puissance commerciale mondiale qu'elle a toujours occupée, du moins jusqu'aux guerres de l'opium au XIXe siècle. « L'Arctique, c'est une partie d'échecs où il faut réfléchir vingt coups à l'avance, et la Chine est très douée, analyse Malte Humpert, fondateur de The Arctic Institute, un think tank de Washington. Les Européens et les Américains, avec leurs élections tous les quatre ou cinq ans, avec leurs contraintes de rentabilité, sont trop focalisés sur le court terme. » Selon lui, c'est Pékin qui fait le bon choix : « Au moment de la conquête de l'Ouest, s'interrogeait-on sur la rentabilité à court terme de la ligne de chemin de fer entre Saint Louis et San Francisco ? »

Les Chinois ne regardent pas à la dépense : en moins de cinq ans, ils ont investi 89 milliards de dollars dans les infrastructures des pays d'Arctique (2). Soit près de 20% du PIB annuel réalisé au nord du 66e parallèle. Ils prennent des gants, restant le plus souvent minoritaires dans les projets et privilégient la coopération. Pékin ne lésine pas sur le soft power, le pouvoir de séduction. Le 7 novembre, l'ambassadeur chinois à Reykjavik s'est félicité du fait que l'Institut Confucius (l'équivalent de notre Alliance française) avait depuis 2008 formé 3 000 Islandais à la langue chinoise... soit 1% de la population du pays !

POUTINE S'ENTHOUSIASME

Le symbole le plus visible de cette politique est le développement de la navigation. Cette année, neuf cargos chinois de l'armateur national Cosco seront passés par la route nord-est, essentiellement pour acheminer des matériaux de construction vers l'usine de gaz de Yamal. Ils étaient cinq l'an dernier.

Les routes maritimes de l'Arctique sont déjà accessibles plusieurs mois de l'année. Les gros porte-containers devront attendre encore quelques décennies, la dangerosité de la navigation polaire nécessitant des technologies actuellement en développement. Mais Pékin s'y prépare. La future route centrale (voir carte), dans des eaux internationales, est celle qui fait le plus rêver les Chinois. « Compte tenu de leurs ambitions commerciales, c'est pour eux vital, juge Malte Humpert. Déjà, 80% de ce que nous consommons aujourd'hui sont acheminés par bateau. Or tout ce qu'ils importent ou exportent passe par des détroits compliqués (Malacca) et des canaux (Suez, Panama). »

L'État chinois ne possédait jusque-là qu'un seul brise-glace « lourd », le « Xue Long », consacré à la recherche, acheté à l'Ukraine en 1993. Ce « Dragon des Neiges » a commencé à amasser des informations sur les routes futures. Un second gros brise-glace, le « Xuelong 2 », est en construction dans le chantier naval de Jiangnan, près de Shanghai. L'armée développe par ailleurs une flotte de brise-glace de taille moyenne. Pour Pékin, marquer ainsi son intérêt pour les nouvelles routes polaires doit aussi permettre d'être associé à l'élaboration des règles qui les régiront.

Jusque-là les Russes voyaient d'un très mauvais œil toutes ces manœuvres. Pour Poutine, l'Arctique est un prolongement naturel de la Russie. En mars, à l'occasion d'un forum sur l'Arctique organisé à Arkhangelsk, sur la côte nord, il s'est enthousiasmé sans vergogne sur la fonte pourtant dramatique des glaces : « Imaginez. Actuellement, le long de la voie du Nord, 1,4 million de tonnes de marchandises sont transportées par cargos; en 2035, ce seront 30 millions. Cela vous donne une idée de la croissance dont je parle! »

Mais, pas plus que les Américains, les Russes ne sont libérés de l'étreinte du court terme. Ils sont incapables de déboursier les dizaines de milliards de dollars nécessaires aux infrastructures ou forages. Soumis à des sanctions européennes et américaines depuis 2014, ils ne peuvent plus compter sur les investisseurs occidentaux. Ils se sont donc résolus à se tourner vers les Chinois, qui ont su exploiter cette faiblesse et obtenir des conditions favorables pour leurs approvisionnements futurs. Pour Malte Humpert, l'Ouest est tombé dans le piège. Ainsi, ce sont des Chinois qui ont pris des participations dans les deux grands projets de gaz naturel du Nord russe : Yamal LNG (dans lequel Total a pris 20%) et Arctic LNG 2.

De même, ce sont eux qui financent le port en eaux profondes près d'Arkhangelsk, au bord de la mer Blanche, et sa liaison par chemin de fer (projet Belkomur) qui permettra de le relier à l'Oural, la Sibérie et la Chine... Et cette année, la coopération n'a fait que se renforcer.

Mark Rosen, l'expert du CNA, ne cache pas son inquiétude. Pour l'environnement, d'abord. La Chine n'est pas connue pour son respect scrupuleux de ce dernier, et l'Arctique est une région ultra fragile. C'est une mer fermée, difficile d'accès : « Le moindre accident pétrolier

serait une catastrophe. » Ensuite, l'OPA chinoise sur les matières premières risque de placer la Chine en situation de monopole sur certains métaux - ceux qu'on trouve dans les smartphones, par exemple. En termes stratégiques, pour les autres pays, c'est plus que préoccupant.

OR, FER, ZINC, URANIUM...

Le cas le plus sensible est probablement celui du Groenland, gigantesque territoire autonome du Danemark, qui louche vers l'indépendance. Des groupes chinois projettent déjà d'y investir 4 milliards de dollars. Cela peut sembler modeste, mais cela représente 185% du PIB annuel de cette île de seulement 56 000 habitants (soit la ville de Lorient). Les Chinois ont déjà mis la main sur des mines de zinc, fer, terres rares, or, uranium. Minuscule, l'administration groenlandaise est incapable de réguler et de contrôler correctement ces activités extractives très polluantes. Enfin, le Groenland est une terre stratégique à plusieurs titres : situation géographique - aux portes de l'Amérique - ; présence d'une base militaire américaine ; richesse de ses métaux rares. « Si la Chine envoie des milliers d'ouvriers dans ces mines et qu'ils décident de rester, cela changera la dynamique géopolitique de l'ensemble de l'Arctique », juge Mark Rosen.

Pour mieux contrôler la ruée vers ses ressources, conclut-il, l'Arctique aurait besoin d'une banque de développement commune aux différents pays impliqués. Histoire de penser le long terme. Comme des Chinois. •

1. «China as a Polar Great Power », Cambridge University Press, juin 2017.
2. « Unconstrained Foreign Direct Investment : An Emerging Challenge to Arctic Security », Mark E. Rosen, Cara B. Thuringer, PAM août 2017.

Inséré 07/01/19 NIEUWS NOUVELLES Enlevé 07/02/19

Belgians combine wind and mussel farming

A consortium of Belgian companies and researchers has concluded that tasty mussels can be cultivated around wind turbine foundations. The first products from the North Sea Aquaculture project area are a success, said marine engineering contractor Deme, one of the participants in the venture. It is the first time that mussels have ever been farmed using rafts on wind farms, according to the company. "The next generation of wind farms will also be producing food in addition to energy," said Wannes Voorend, biotechnologist at the Colruyt Group Fine Food. The mussels were caught on the Belgian coast testing area as part of the North Sea Aquaculture projects. The first tasting took place this week: the mussels found to be delicious, said Deme. "These Belgian mussels have a higher meat content at 36% to 39% than other common mussels and emerged from the Colruyt Group's taste-and-use tests as being particularly flavoursome," added Deme. Nancy Nevejan from the University of Gent added: "In addition, what is noticeable is that these mussels grow particularly quickly. Over 12 months, they reached full size, while the Zeeland soil mussels need 18-20 months to reach maturity." Philippe De Backer, secretary of state for the North Sea, added: "Our national dish is mussels with fries. I'm very pleased to see that within some time, we will be able to serve true Belgian mussels. I believe that our North Sea has the ability to become a true sea farm on the long term, which will be a breeding base for not only mussels but also oysters and seaweeds." Today the mussels are therefore still part of a research project but the ultimate aim is to market them. Stefan Goethaert, director of Colruyt Group, said: "We believe there's certainly a market for Belgian mussels.

As soon as scaling-up is a reality, this product can be marketed, but considering we are now still in an innovation project with a proof-of-concept, this may take some time.”

Source: theconstructionindex.

Inséré 09/01/19 HISTORIEK HISTORIQUE Enlevé 09/02/19

L'île Tromelin

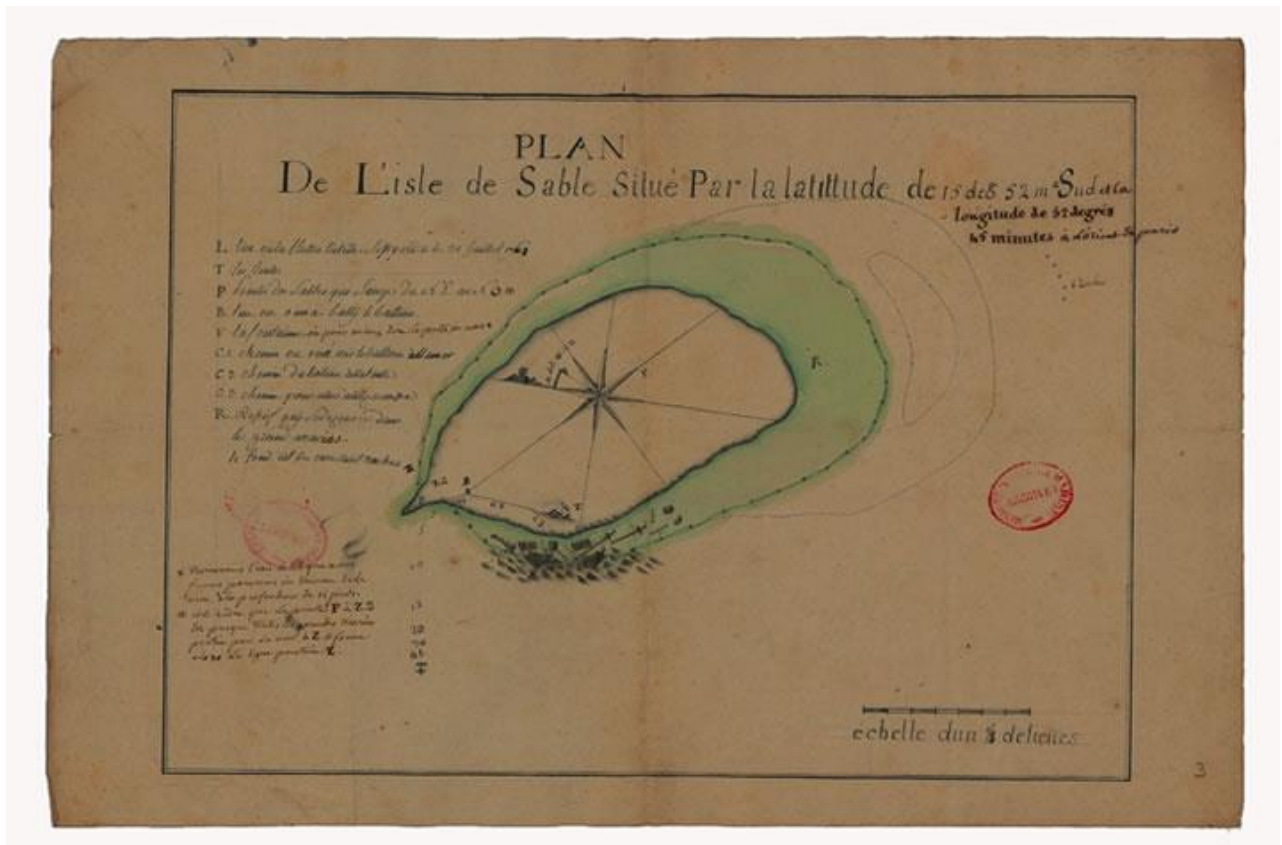
L'île Tromelin est une petite île française, clairement ce n'est ni la Corse, ni l'île de Ré... Elle fait 1km², et on y trouve principalement du sable, de l'herbe, des broussailles et quelques arbustes. Le point le plus haut s'élève à 7m et le climat est... comment dire ? L'île se trouve dans l'océan Indien, il y fait entre 20 et 26°C en moyenne toute l'année, mais elle se situe sur le chemin de nombreux cyclones qui n'épargnent rien ! De fait, il n'y a pas d'arbre, pas une seule construction et très peu de vie animale. Faut l'avouer, y'a rien à bouffer, y'a pas d'ombre et pas d'eau douce, c'est pas facile !

L'île a été découverte en 1722 par un navire français : le Diane. Rapidement, elle est baptisée « Île des sables ». Parce qu'il n'y a que ça... Après avoir découvert l'île, on la revendique et on se casse. Il n'y a clairement rien à y faire.

Jusqu'au jour, où...

Le naufrage de l'Utile

En 1761, une frégate française, L'Utile, part de Bayonne pour rejoindre les Indes Orientales. L'équipage compte 142 hommes. Le bateau passe par Madagascar et repart avec 160 personnes de plus. Des esclaves. Des hommes, des femmes et des enfants. Le capitaine doit les déposer sur l'île Maurice (appelée à l'époque Île de France) malgré l'interdiction de la traite par le gouverneur. Au diable les lois, nous sommes au large de l'océan Indien...



Sauf que ça va merder... Eh oui ! A cause d'une erreur d'orientation, le bateau fait naufrage sur les coraux aux alentours de l'île Tromelin. C'est un peu l'angoisse, le bateau coule rapidement, l'équipage réussit à sortir à temps de l'Utile, mais les esclaves enfermés dans les caves se noient. Seuls 60 parviennent à s'en sortir et à rejoindre l'île avec l'équipage. Ils sont 200 sur 1km², alors on l'avoue aisément, à Paris, c'est bien pire, on compte 20 000 personnes par km². Mais à Paris y'a des maisons, des franprix et des livreurs de pizzas. Sur Tromelin, y'a rien à grailer et aucun endroit pour se protéger du vent.

Rapidement, tout le monde se met au travail, il faut récupérer le plus de bois possible de l'épave mais aussi quelques ustensiles. Ils parviennent même à prendre quelques vivres. Après avoir creusé un puits pour avoir de l'eau presque potable, tout le monde tente de chasser des oiseaux de mer et pêcher pour nourrir tout le monde. C'est le début de la survie. Sans vouloir spoiler, mais un peu quand même, la survie va durer 15 ans pour certains d'entre eux.

La survie sur l'île Tromelin

Sur place, c'est le capitaine du bateau qui gère l'organisation, Jean de Lafargue, ainsi, tout le monde reste à sa place, les échelons sont clairs. Le problème, c'est qu'il vrille complètement, il perd la tête. Sans doute lié à un syndrome post-traumatique, il a perdu son bateau, son argent et a bien manqué perdre la vie. C'est Barthélémy Castellan du Vernet qui le seconde et qui finalement, va prendre sa place. Il propose de construire deux campements. Un pour l'équipage et l'autre avec ce qu'il reste pour les esclaves. Il va même lancer des travaux de construction d'un bateau. Enfin, d'un radeau... A Tromelin, tant que ça flotte, il y a de l'espoir



Au bout de deux mois, Bart et ses hommes ont réussi à faire une embarcation pas trop mauvaise. On peut y mettre 122 hommes ! C'est pas mal déjà mais une vingtaine de matelots et les femmes, les enfants et hommes malgaches restent sur l'île avec un petit stock de nourriture. Mais ce n'est clairement pas assez, alors on mange une patte de la moindre tortue qui passe. Pareil avec les oiseaux et bien sûr les poissons. Clairement, avec l'arrivée des hommes sur l'île l'environnement a changé. Tout le monde était pépouze, et maintenant y'a de terribles prédateurs sur Trovelin. Les mecs sont une véritable catastrophe écologique, mais bon, faut bien survivre. Ils découpent des coraux pour en faire des habitations. Et il en faut du corail pour construire un mur ! Avec les plumes d'oiseaux, ils se créent des vêtements tressés. Pour ce qui est des outils, il y a quelques couteaux qu'ils affûtent sur des galets et utilisent des gamelles rescapées du naufrage comme récipients, c'est pas terrible mais c'est toujours ça.

La chose assez incroyable, je trouve, c'est que les naufragés de Tromelin ont réussi à garder le feu allumé pendant 15 ans. Jusque là, même dans Koh-Lanta ils peuvent le faire. Mais le truc, c'est qu'il n'y a pas un seul arbre sur l'île... Deux palmiers tout au plus. Il y a bien l'épave du bateau, mais ça ne fournit pas du bois pendant 15 ans...

Barthélémy Castellan de Vernet

Barthélémy est donc parti sur son radeau avec une partie de l'équipage et après quatre jours en mer, ils ont atteint la côte de Madagascar, puis la Réunion et enfin l'île Maurice. Il demande à ce qu'on lui prépare un bateau pour venir chercher les esclaves et le reste de son équipage. Le gouverneur refuse catégoriquement une première fois, puis une deuxième et une troisième et... bref. Quelle est la raison ?

Le gouverneur a interdit le trafic d'esclaves malgaches pour éviter des conflits entre les deux îles et Lafargue et Castellan sont passés outre la loi. Alors maintenant que Lafargue est mort, Barthélémy Castellan se démerde avec sa culpabilité. Il ne peut rien faire et

pourtant, il insiste. Ensuite, il rentre à Paris où il parle du problème, une partie du milieu intellectuel parisien se soulève, et puis c'est la guerre de Sept ans et la Compagnie des Indes fait faillite, alors... on oublie les naufragés...

Les tentatives de sauvetage

En 1773, le feu brûle toujours sur l'île et un bateau qui passe au large se rend compte qu'il y a du monde sur l'île mais impossible de s'approcher, alors il les signale auprès des autorités. Enfin le pays décide de faire quelque chose pour sauver les naufragés de Tromelin. Un navire de sauvetage est envoyé la même année. C'est un échec. Le capitaine n'arrive pas à atteindre la côte, il n'y a pas assez de fond, il y a des rochers et des coraux. En 1774, un deuxième bateau est envoyé : La Sauterelle. Deuxième échec. Cependant une chaloupe réussit à s'approcher et un marin rejoint les naufragés à la nage. Ils vont attendre plusieurs mois l'arrivée d'un autre bateau en vain... Le marin construit alors un radeau, il embarque avec six naufragés, trois hommes et trois femmes en 1775. On ne les a jamais revu. Le radeau a disparu en mer. Et puis ENFIN, le 29 novembre 1776, le chevalier de Tromelin envoie une corvette : La Dauphine. Il ne reste plus que huit survivants sur l'île. Sept femmes et un bébé. Tout le monde est sauvé et en hommage on donne le nom du bonhomme à l'île.



En 1947, en métropole, on s'intéresse à l'île. Par sa situation géographique, on peut y installer une station météorologique. Aujourd'hui, elle est encore en place et fonctionnelle.

Inséré 11/01/19 DOSSIER Enlevé 11/02/19

Why not use waste heat?

At a meeting of IMarEST's UAE branch held towards the end of last year, Copenhagen-based Bawat introduced a patented system that represents arguably the simplest technology to treat ballast water.

This is claimed to be a unique system that does not interrupt revenue earning cargo operations, does not need UV, filters or chemicals and optimises energy efficiency by exploiting the engine's waste heat. It also complies with the IMO D2 performance standard.

At the meeting, Klaus Andreasen, Bawat senior sales manager, claimed that this BWMS represents a breakthrough technological advance in ballast water treatment. This in-voyage system ensures zero impact on ship performance and zero disruption to cargo and ballast operations while the vessel is in port.

Bawat's BWMS is based on pasteurisation with no use of chemical compounds, UV-radiation or filters. Pasteurisation is a combination of heat and time and is a widely used process in the food industry, he explained.

Ballast water is pumped through a pasteurising unit, consisting of plate heat exchangers and a retention tank. When passing through the pasteurisation unit, the ballast water is heated and kept, while still in flow, within a retention section for up to about 75 seconds, depending of the pasteurising temperature.

The heating takes place in one or two plate heat exchangers and the heat is provided by on board surplus heat sources – eg, main engine jacket cooling water or exhaust heat.

Following pasteurisation, the ballast water passes through the regeneration section, acting as a pre-heater of the incoming ballast water, and cooler for the outgoing ballast water, taking the temperature down to four to seven degrees higher than the inlet temperature.

When the ballast water has been treated in the pasteurising unit it fulfils the Ballast Water Conventions outlet criteria to both USCG and IMO's way of testing methods. No holding time or retreatment is necessary. There are no filters used in the process, neither is chemical use required.

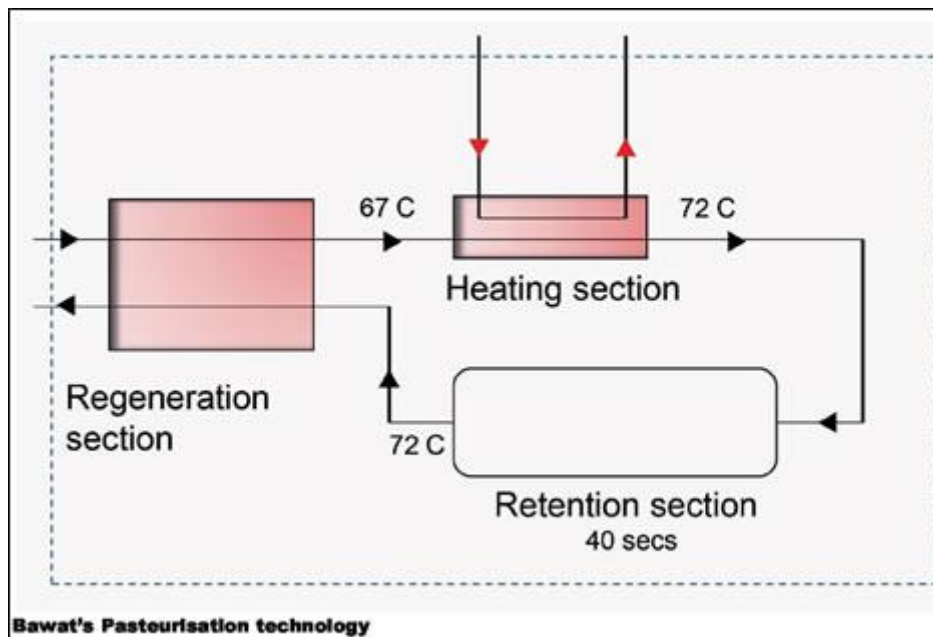
Since the water fulfils the Ballast Water Convention's outlet criteria when treatment in the pasteurising unit is completed, it gives the opportunity to treat the water in four separate ways. Using pasteurisation for water treatment avoids the risk of toxicity to both the environment and humans.

Andreasen emphasised the economic advantages for shipowners, for example, flexibility in offering four different treatment options in the same system, and adaptable to any ship size.

Containerised system

As an alternative quick response to fixed on board systems, Bawat has developed a containerised BWTS. This offers an onshore mobile treatment service to shipowners for water treatment at ports and terminals.

In addition, this mobile solution could be used as a backup service for ports aimed at ship's which are unable to discharge treated water. Shipyards could also see a mobile solution as an opportunity to treat ballast water from docked ships.



The mobile solution includes heat recovery, no use of consumables and with no end residue for treatment.

Andreasen explained that for tankers, X-proof was not an issue as equipment can be fitted in any location on board. The question is - how to get the heat up on deck

from the engine room jacket water for example. However, as most vessels use steam, getting it on deck is not a problem if taken from the economiser. Bawat uses standard components, which can be sourced from different suppliers as necessary making Bawat independent, he claimed. The company only designs the system and only the retention tank needs manufacturing. He also explained that Bawat can supply the equipment or get sub-contractors to do the entire manufacturing process and fitting. Although having a relatively low capacity of between 30 - 700 cu m per hour, this doesn't matter over a long tanker voyage, as the ballast water in a tank can be treated during the voyage.

He said that Bawat is going for USCG approval in the first quarter of next year and has already completed the land-based tests and is now embarking on shipboard testing using Lloyd's Register.

The company was established in 2011 and received IMO DNV GL type approval in October 2014 and from BV in May 2015. In June 2015, Bawat received an ABS certificate of design assessment was awarded USCG AMS status in February, 2015.

As at the beginning of June, Bawat had received the same amount of inquiries when compared with the whole of last year. However Andreasen warned that in general there could be delivery bottlenecks ahead caused by other parties, such as class societies.

Inséré 13/01/19 BOEKEN LIVRES BOOKS Enlevé 13/02/19

ICS publishes updated training and service record book

The International Chamber of Shipping (ICS) has published a new edition of 'Personal Training and Service Record Book', to help qualified seafarers and their employers maintain a comprehensive record of training and seagoing service.

"Good record keeping of training and seagoing experience is essential to support a seafarer's career at sea, and it is vital that shipping companies and seafarers are able to

use a standard international book,” said ICS Director of Policy, Simon Bennett. “This new edition of the ICS record book, which includes a record of participation in drills, will also help during port state control inspections and when seafarers seek to revalidate their certificates, as well as supporting shipping companies’ ISM Code processes.”

The revision of the ICS book coincides with the end of the transitional period for the 2010 Manila Amendments to the IMO STCW Convention, and takes full account of the latest STCW requirements, as well as developments, such as the entry into force of the ILO Maritime Labour Convention.

This latest ICS book is used by all grades of qualified seafarers and supplements a series of ICS training record books for trainee officers and ratings, in both the deck and engine departments, which have been used by tens of thousands of seafarers worldwide.

In order to encourage their widespread use, the new edition of the ICS ‘Personal Training and Service Record Book’ can be purchased by employers from maritime booksellers for as little as £5 a copy

Inséré 13/01/19 NIEUWS NOUVELLES Enlevé 13/02/19

The difficulties of enforcing regulations on the dangerous nickel ore trade

The extreme dangers of the nickel ore trade, where liquefaction of the cargo can cause a vessel to sink in a matter of minutes are, well known but enforcing regulations on this valuable business has proved to be difficult in remote mining and loading locations.

One is reminded of the DHL advert where goat farmers in a remote mountains are shown as the start of a global supply chain for cashmere sweaters, but the reality of the nickel ore trade from the southern Philippines, mainly for export to China, is a far grittier one that would challenge even the most creative advertising agency. This is despite nickel ore being a key component in one of the key green technologies – rechargeable batteries. Although its largest use is in stainless steel.

In what is a multi-billion dollar trade there might be an expectation of sophisticated loading facilities with purpose built wharves and conveyors. But as Andrew Malpas, president and gm, of P&I Correspondent Pandiman Philippines, explains the reality is a very different picture, something more akin to the “wild west”.

The mining and trade in the Philippines is centred around Surigao in northern Mindanao, a region currently under Marshall Law due to the long running Islamic insurgency in the region, which has worsened with the influence of ISIS. Marshall Law can make just visiting the area difficult with foreign government travel warnings meaning travel insurance policies are not valid.

A Master with a vessel arriving in Surigao expecting a port with a pier and loading facilities is in for a shock. There are no loading facilities at the provincial port and the real loading point can actually be an offshore anchorage some 60 km away. The nickel ore is mined at open cast facilities, stockpiled on the beach and then barged out for transshipment to handysize and supramax bulkers. Should there be pier at all it could well be built out of the same commodity being shipped – nickel ore.

With the ore stored in the open, and the tropical rains that the regularly lash the region, it is easy to see how the moisture content of the ore can become too high, potentially leading to liquefaction once the loaded vessel is underway. A change in weather patterns means

that the traditional dry and wet seasons that the region experienced say 20 years ago are no longer as pronounced and there are often heavy rains all year round. This means it is no longer necessarily safe to ship cargoes even in the so-called dry season.

When the cargo undergoes liquefaction the vessels can sink extremely fast, in as little as 30 seconds according to Malpas, with major loss of life. Since 2010 there have been seven vessels that have capsized on the Philippines and Indonesia nickel ore exports trades. The most recent Emerald Star, that sank in Philippines waters enroute from Indonesia to China last year, saw the loss of 10 of the 26 crew.

Nickel ore is classified as a Group A cargo under the 2016 revision of the International Maritime Solid Bulk Cargoes (IMSBC) Code which should in theory ensure that cargoes are safe for shipment.

While mines or shippers are supposed to provide certification that cargoes meet the standards of the IMSBC Code in reality these tests do not meet the standard of the code. "Our current concerns are the method and quality of the certificate being issued by the mines and that the nickel ore is inherently unsafe to carry and analysis and results inadequate and not in line with the IMSBC Code," Panidman said.



A recent circular from P&I club Skuld warned: "Very often the shippers' certificates are forged. The MC or TML declared by shippers are often inaccurate and the error can be as much as 10%." The circular added: "Local shippers/mines are very influential organisations and they are often armed. When a Master or local surveyors keep rejecting bad cargo,

local surveyors might receive death threats from shippers. Moreover, dry cargoes can be placed onto wet cargo as disguise. From our experience, even for samples collected at dry season, they still failed the lab test."

There is the simple "can test" described in the IMSBC which can be carried out alongside. In the test, which at best could be described as unsophisticated, one or two kilos of nickel ore is put in a tin can and banged on a hard surface around 25 times. If the ore starts to liquefy the cargo should be rejected. "The 'can' test is a rudimentary field test and does not supersede or replace proper analysis of the cargo for Flow Moisture Point and moisture content under controlled laboratory conditions," Pandiman warned.

With a combination of remote locations, extremely basic storage and loading facilities, powerful mining companies, and nearly year round heavy rains the extreme risks of the nickel ore trade are not about to go away and shipowners need to be fully aware of both the issues and the rights they have.

As the circular from Skuld comments: "For example, the removal of off-spec cargoes itself cost several millions of US dollars; in the event of a capsized, the cost of the loss of life goes well beyond monetary terms." It concludes that "prevention is always better than cure".

Contaminated bunker issue continues to spread

Why is the problem so complex?

It is chiefly for three reasons:

-The source of the contamination is still unknown. -The problem is widespread and not limited to a region or supplier. Incidents have been reported following fuel oil deliveries in the US Gulf, Panama, Caribbean, Singapore, Malaysia and most recently Hong Kong. Furthermore, it is not possible to pin point the bad batches of fuel oil.

-The presence of contaminants/adulterants cannot be detected by standard test methods meeting ISO 8217 thus making it very difficult for members to know if the bunker stem is contaminated.

What do we know about the contaminants?

USCG is the only authority to have released information on this issue so far, and both it and INTERTANKO have highlighted that compounds which normally do not form part of the marine fuel refining process have been detected in the bunkers when using advanced or more rigorous testing. These compounds include phenolic compounds, fatty acids, benzoic acids, cyclohexane diol isomers and dehydroabietic acid and other sticky compounds of an unknown nature. The presence of these or similar compounds in the bunkers is a breach of Cl.5 of ISO 8217 and Reg.18.3 of MARPOL Annex VI.

Exercise prudence

Some of the possible preventive actions owners and operators can take are:

- Raise awareness: Make the crew aware of the problems that can occur when using contaminated fuel so that they can exercise prudence.
- Heightened monitoring of machinery: Fuel pumps and injectors must be monitored very closely when using newly bunkered fuel. Any signs of machinery trouble must be investigated and fully documented and any affected parts must be preserved.
- Improved planning: Where possible, maintain a sufficient fuel reserve which can be burnt if it is confirmed that newly stemmed bunkers are contaminated and cannot be consumed. This will enable the vessel to reach the nearest safe port.
- Additional testing: Members and clients are advised to opt for advanced testing of the fuel samples to establish if contaminants are present. However, not all fuel oil testing laboratories offer such services and operators may experience delays in receiving the results of advanced testing.
- Exercise caution when considering use of additives and dilution: If members and clients opt for the use of additives to remove certain harmful contaminants from the fuel advice should be sought from makers of the engine and fuel injection equipment to prevent any harm to the machinery. Similar recommendations apply where dilution is being considered, in which case compatibility checks should also be done. When mechanical failures occur due to contaminated bunkers legal issues will arise either under a charterparty and/or the bunker supply contract.

Charterparties

Under time charterparties the starting point for both owners and charterers is what has been detailed in the bunker specifications clause. Owners might consider seeking cooperation of the charterer to do additional testing of the bunkers prior to consumption and if found to be contaminated, offloading them at the time and expense of the charterers. If the off-spec bunkers have been consumed, then detailed evidence will be needed from the owners to prove that the damage and/or loss resulted from the consumption of the off-spec bunkers. Under voyage charterparties, the charterer will not be involved in any way in the supply of bunkers and this will be an owner's matter to resolve under the bunker supply contract and the removal of the off spec bunkers from the vessel, if needed.

Bunker supply contract

Owners of voyage chartered vessels and time charterers should check which jurisdiction clause governs the bunker contract. Owners should also be aware of the time bar, which can be relatively short in such contracts. It would also be highly advisable that suppliers are requested to do additional testing of the bunkers being supplied, however, should the supplier refuse then buyers should reserve their position vis a vis the time bar in the contract.

Source: Gard

Inséré 15/01/19 DOSSIER Enlevé 15/02/19

Shipowners face risk of criminal liability for illegal demolition of end-of-life vessels

A Rotterdam court has found Dutch reefer operator Seatrade and two of its directors criminally liable last week for illegally selling vessels for demolition in South Asian yards in breach of the EU Waste Shipment Regulation. The decision appears to be the first time an EU shipowner has been held criminally liable for the illegal export of vessels for demolition to South Asian yards. The Dutch public prosecutor brought the cases against Seatrade over historic sales of vessels for demolition in India, Bangladesh and Turkey in 2012. The sales of the vessels took place via cash buyers. All vessels departed from Rotterdam and Hamburg on their last voyage to the South Asian yards. Seatrade and its directors were fined up to 750,000 euros and the directors have been banned from working in the shipping industry for a year. The public prosecutor also sought prison sentences for the directors, but the court did not impose these. The decision sets a precedent in the Netherlands. It makes it clear that shipowners who sell vessels for demolition in South Asian scrap yards in breach of the EU Waste Shipment Regulation risk facing criminal liability. It is the first successful prosecution of a shipowner for non-compliance with the EU Waste Shipment Regulation, which prohibits the export of hazardous waste to non-OECD countries, and bans the export of waste for disposal.

Importantly, the case reflects the political climate and the greater interest shown by European countries in environmental issues and may be followed by other European countries. Cases of illegal demolition of vessels are currently being investigated by national authorities, such as the UK and Norway. In Norway for example, the vessel the MV "Tide

Carrier” was arrested by the Norwegian environmental authorities, and these have been investigating its owners for illegally selling the vessel to a South Asian yard for demolition. Shipowners should therefore take greater notice of the regulations when considering demolition.

International law and the demolition of end-of-life vessels

Any shipowner considering selling an end-of-life vessel for demolition should first consider whether the sale complies with the Basel Convention. An end-of-life vessel will likely be considered as “waste” under the Basel Convention, since waste is defined broadly to include ‘substances or objects which are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national law’. Therefore, a sale of a vessel for demolition is likely to be considered a ‘transboundary movement of waste’ under the Basel Convention.

Shipowners should be aware that if there is anything onboard the vessel that could be considered ‘hazardous’ waste under the Basel Convention or under the national laws of the destination country of the vessel being scrapped, the country of import and any countries of transit will need to be notified of the movement of waste. In addition, the countries of import and transit will need to give their consent for the movement of waste. The Hong Kong Convention for the Safe and Environmentally Sound Recycling of Ships was adopted in 2009, but has still not been ratified by enough shipowning and scrapping countries so the Basel Convention remains the main international regulation. While an increasing number of demolition yards have been obtaining certificates and statements of compliance with the Hong Kong Convention, shipowners should be mindful that the Hong Kong Convention is not yet in force. There may be different certification providers and their standards of issuing the certification may not be entirely clear. Shipowners should therefore not decide on demolition yards solely based on a yard’s statement of compliance with the Hong Kong Convention.

EU rules and the demolition of end-of-life vessels

The Dutch case brought against Seatrade concerned the illegal sale of a vessel in breach of the EU Waste Shipment Regulation (the “Regulation”) that applies to ship demolition.

EU Shipowners with vessels trading in EU waters are advised to consider whether the sale of the end-of-life vessel for demolition complies with the Regulation. Importantly, the Regulation applies also to vessels of all flags that trade within EU waters – not just EU-flagged vessels.

Under the Regulation ship demolition of end-of-life vessels moving in EU waters is likely to be considered as ‘waste’, which is defined as ‘any substance or object which the holder discards or intends or is required to discard’. Shipowners should note that it is enough for an intention to discard the end-of-life vessel to arise for the vessel to be considered ‘waste’ under the Regulation.

If the intention to discard arises when the vessel is in EU waters, it is possible that the intention to scrap the vessel will make it ‘waste’ for the purposes of the Regulation. If the end-of-life vessel leaves an EU port destined for demolition in another country, the sale of the vessel is likely to be considered a shipment of waste; whether within the EU, exported from the EU to a third country, in transit through the EU to a third country, or imported into an EU state from a third country.

Shipowners should note that under the Regulation, the shipment of waste for disposal is prohibited from EU countries to non-EU, and non-OECD countries. The shipment of hazardous waste for recovery from the EU to non-EU and non-OECD countries is also prohibited.

There may be the possibility that the end-of-life vessel is a 'green-listed' vessel destined for recovery. If it is destined for recovery in an OECD country, it will be subject to the written notification and consent procedure under the Regulation. If the vessel is 'green-listed' waste destined for recovery to a non-OECD country, such as India, Pakistan or Bangladesh, it is important to check whether such countries have notified their position with the EU authorities as to the requirements of the import of such waste.

EU Shipowners with vessels trading in EU waters should therefore be aware that sales of vessels for demolition in a non-OECD country may be considered as shipment of waste for disposal, and therefore be prohibited by the Regulation. The decision of the Rotterdam court makes it clear that if a vessel is sold for demolition in a non-OECD country in breach of the Regulation criminal liability including fines and possible imprisonment for the directors making those decisions may follow.

Ship Recycling Regulation

While the Hong Kong Convention is not yet in force, the EU has adopted the "Ship Recycling Regulation", which effectively implements the Hong Kong Convention.

The Ship Recycling Regulation is effective, but at the time of writing is not yet applicable. The Ship Recycling Regulation applies to vessels flying the flag of an EU Member State. Vessels flying the flag of an EU Member State may be recycled only in safe and sound ship recycling facilities included in the European List of ship recycling facilities, which currently contains 18 shipyards, all located within the EU. The EU has also seen applications from yards in India, Turkey, China and the US hoping to be approved and included on the European List.

Conclusion

Recent increased national investigations into sales of end-of-life vessels for demolition in South Asian yards, and in particular the retrospective criminal charges brought against Seatrade emphasise the need for shipowners to be extremely careful when selling ships for demolition. In addition, a voluntary alliance of banks in northern Europe and Scandinavia has been encouraging their shipowner clients to declare their policies on scrapping to encourage best practice of demolition of end-of-life vessels. Given banks' reputational risks, this may become an even more important consideration in future financings for shipowners. It is advisable for shipowners to seek legal guidance on the laws applicable to their particular proposed sale before executing the same or face the consequences.

Source: Reed Smith

Inséré 17/01/19 NIEUWS NOUVELLES Enlevé 17/02/19

A Flettner Freighter in the Making

For centuries shipping depended on wind, but the industrial revolution changed that. Vessels were no longer stuck in the doldrums. However, with the Paris Climate Agreement in mind, shipping companies are looking at wind again for efficiency reasons.

Recently C-Job Naval Architects delivered the design for a wind-assisted general cargo vessel to Dutch shipping company Switijnk Shipping. The 8,500 dwt vessel will be equipped

with two Norsepower Rotor Sails that will supplement the main engines and is expected to achieve fuel savings of approximately 14 per cent.

Magnus effect



This vessel, called the FF8500, is a Flettner ship. They are a type of ship that uses the Magnus effect. In the design Rotor Sails are deck-mounted rotating cylinders that utilise the Magnus effect to create a propulsive thrust. The Magnus effect is a force that acts upon a spinning ball or cylinder in a moving airstream. Although the phenomenon is named after the German physicist, Heinrich Gustav Magnus, who described it in 1852, it was

originally observed by Isaac Newton almost two hundred years earlier.

The name Flettner ship comes from Anton Flettner, a German engineer, who built the first vessel, the Buckau, using this effect in 1924. This vessel successfully crossed the Atlantic in 1926.

C-Job Naval Architects was approached by Switijnk Shipping following its involvement in the European Union Interreg project S@IL, for which C-Job developed the earlier design of a 4,500 dwt Flettner Freighter. C-Job designed this smaller vessel with four Rotor Sails. However, after studying the prevailing wind patterns on Switijnk's proposed sailing routes, C-Job decided to design a new vessel with two larger Rotor Sails.

The Magnus effect acts at 90 degrees to the direction of the airstream. Because the Magnus effect acts perpendicularly to the direction of the airstream, the optimum wind direction for Flettner ships is from side winds.

Comparable

"Our experience from the Project S@IL study showed that Rotor Sails were the most viable choice compared to other wind assisted propulsion systems," explains **C-Job Business Manager Jelle Grijpstra**.

"And then, together with Finnish Rotor Sail supplier Norsepower, we concluded that two larger Rotor Sails were most effective for this project. This was because these would yield a comparable propulsive force to four smaller units. Also, with two Rotor Sails, one on the bow and one on the stern, there would be no chance of wind shadows affecting performance."

The Rotor Sails were chosen for this project because they are easy to use, safe, reasonably quiet, with no need for extra crew, and cheaper in investment compared to other systems. In addition, the effectiveness of Rotor Sails has been successfully proven.

Testing

The subject of the main engines of the FF8500 has yet to be decided upon.

"Switijnk has a well-defined vision of sustainable shipping and we are glad to sit down and share our knowledge with them. We have an extensive track record of integrating mission equipment, and we have looked at all the options available to help them achieve their ambitions. We have reserved space for LNG engines; although this will be dependent on LNG bunkering infrastructure along their sailing routes."

Due to the dependence on trade winds, a 100 per cent sailing vessel without an engine is not economically feasible within the commercial cargo transport sector. With the concept design of the vessel complete, the next stage of the project will consist of testing at Maritime Research Institute Netherlands (MARIN).

The intention of this velocity prediction research is to validate the design and to quantify the fuel savings to be gained.

"Once investors are convinced and the financing is arranged, then Switjnk can continue with the process of selecting a shipyard to build the vessel," Grijpstra adds.

Inséré 19/01/19 HISTORIEK HISTORIQUE Enlevé 19/02/19

Les raids sur Zeebruges et Ostende

Benoit Strubbe

Pendant la Première Guerre mondiale, les ports belges de Zeebruges et d'Ostende constituaient une grave menace pour les forces alliées. De par leur situation, face à l'embouchure de la Tamise et à proximité de la Manche, ces ports allaient devenir les bases d'opérations les mieux placées pour la flotte de sous-marins et de torpilleurs allemands. En outre, Bruges était reliée à la fois à Zeebruges et à Ostende par un canal. Cela permettait de construire un bon abri pour les bateaux du Marinekorps Flandern, hors de portée des canons britanniques. À la fin de la guerre, les bateaux allemands qui opéraient depuis ces ports belges avaient à leur actif un tiers des pertes alliées en tonnage. Par ailleurs, les alliés étaient obligés de passer par la Manche, que ce soit pour amener de nouvelles troupes ou pour assurer la communication avec les îles britanniques et leur approvisionnement. En réponse à cette menace, la Dover Patrol britannique tenta, au cours des nuits du 22 au 23 avril et du 9 au 10 mai 1918, de bloquer les accès aux ports de Zeebruges et d'Ostende.

Zeebruges et Ostende initialement ignorées



■ Afin d'assurer une meilleure protection de leurs sous-marins, les Allemands construisirent un bunker à sous-marins dans le port de Bruges. Celui-ci fut démoli à la fin des années 50 (Archives de la Ville de Bruges, Zeebruggefonds)

Marinekorps Flandern depuis les ports belges pouvaient s'avérer décisives d'un point de vue stratégique. Pourtant, il fallut attendre fin 1917 pour que les Britanniques se rendent compte de la gravité de la menace et décident de bloquer les accès portuaires de Zeebruges et d'Ostende. Pour comprendre cette hésitation, il faut prendre en considération le déroulement plus large de la Grande Guerre.

Lorsque la 1^{ère} GM éclata en 1914, l'idée dominante était celle, optimiste, que la guerre serait de courte durée. Dans les deux camps, on était convaincu d'une victoire rapide et glorieuse. Le plan Schlieffen, suivant lequel l'Allemagne entendait passer par la Belgique et le Luxembourg, neutraliser l'armée de terre française et s'emparer des ports français sur la Manche afin de pouvoir attaquer facilement la Grande-Bretagne, fut un échec. La progression allemande fut stoppée entre autres par l'inondation d'une partie de la plaine de l'Yser. Les Allemands n'avaient pu conquérir que Zeebruges et Ostende. Au départ, les Britanniques ne voulaient pas détruire ces ports, parce qu'ils pensaient pouvoir les reconquérir rapidement. Zeebruges et Ostende auraient alors pu s'avérer utiles pour le ravitaillement des troupes. De même, les Allemands n'envisageaient ces ports que comme un arrêt temporaire. Ils étaient tombés aux mains des Allemands relativement intacts; ils n'étaient protégés par aucun ouvrage de défense et n'étaient pas équipés pour l'amarrage, la réparation et l'entretien d'une flotte de guerre.

Les ports flamands prennent une importance cruciale



■ L'entrée de la division de la marine à Bruxelles (Imperial War Museums, Q49147)

Fin 1914, la guerre de mouvement avait débouché sur une guerre des tranchées.

L'optimisme initial s'était affaibli. De nombreux bateaux britanniques bombardaient la côte belge pour empêcher l'utilisation par les Allemands des ports d'Ostende, de Zeebruges et de Bruges. Dans le camp allemand, on voyait bien que la conquête des ports français sur la Manche n'était pas pour tout de suite. Les Allemands contrôlaient le port d'Anvers, bien équipé, mais ils ne pouvaient pas l'utiliser: emprunter l'Escaut eût équivalu à violer la neutralité néerlandaise, ce que les Allemands voulaient éviter. Pour cette raison, et par crainte d'un débarquement allié, le Marinekorps Flandern se mit à construire des ouvrages de défense côtiers et portuaires dans et autour de Zeebruges et d'Ostende. À partir de 1915, plusieurs batteries entrèrent en action, permettant de riposter aux bombardements britanniques. Il devint progressivement plus difficile d'attaquer les ports depuis la mer. Les sous-marins et torpilleurs allemands pouvaient désormais être employés plus souvent et plus efficacement depuis Zeebruges et Ostende. Les Britanniques, pour qui le trafic dans la Manche était crucial, plaidaient pour une attaque sur la flanc gauche du front, près de la côte, afin de pouvoir attaquer les ports belges depuis la terre par de lourds bombardements. Quant aux Français, ils voulaient se concentrer sur le front dans l'arrière-pays. Les Français étant plus expérimentés, leur idée s'imposa au détriment de celle des Britanniques, qui fut provisoirement rejetée.

La menace de la Flandern Flotille

Jusqu'en 1916, la marine allemande avait surtout investi dans la flotte de haute mer (Hochseeflotte) et dans le déploiement dans la Mer baltique, tandis que le Marinekorps Flandern était traité en parent pauvre. Cette attitude changea quelque peu après la bataille du Jutland (31 mai-1er juin 1916). Bien que les Allemands y remportèrent une victoire tactique, le blocus de la Hochseeflotte fut maintenu par les Britanniques. L'Allemagne comprit alors que ce blocus ne serait probablement jamais rompu et décida de mobiliser une partie des moyens réservés à la flotte principale devant la côte belge. Deux flottilles

de torpilleurs furent ajoutées provisoirement à la flotte du Marinekorps Flandern, qui put dès lors se montrer plus offensif. Cette mobilisation renforcée et plus agressive depuis les ports belges provoqua une certaine inquiétude au sein de l'État-major britannique. Cette inquiétude se renforça lorsque l'Allemagne proclama la guerre sous-marine totale au début de l'année 1917. Les sous-marins allemands semèrent la panique et le chaos dans la Mer du Nord et la Manche. La moitié du tonnage total des bateaux alliés fut coulé au cours de cette seule année.



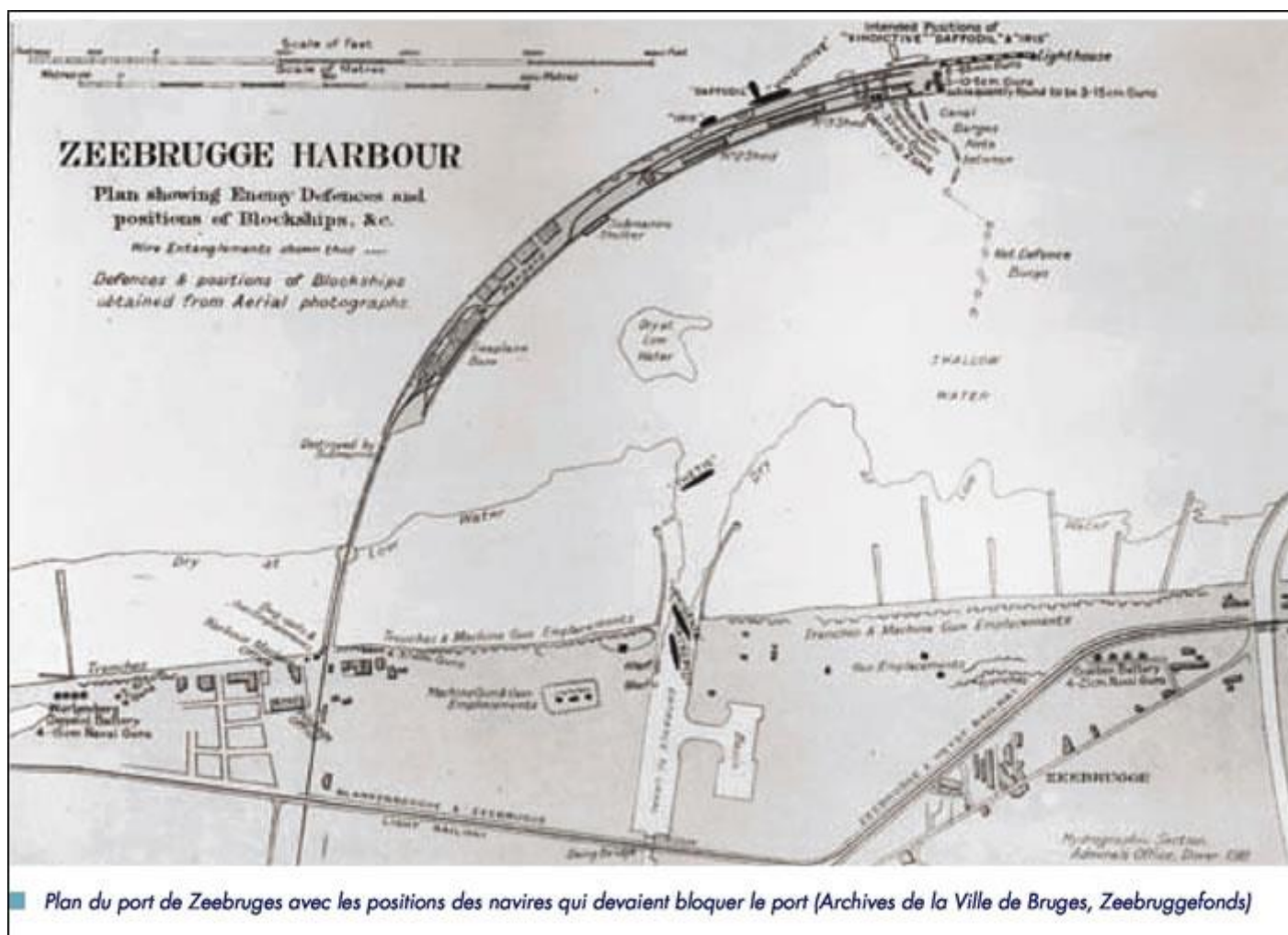
Mais les sous-marins n'étaient pas les seuls responsables de cette hausse des naufrages de bateaux alliés. Fin 1916 et début 1917, les Allemands organisèrent différents raids avec des torpilleurs sur la Manche. La Flandern Flottille

pouvait à présent perturber la ligne de communication et d'approvisionnement vitale entre la Grande-Bretagne et le continent.

Face à ce danger croissant, l'idée qu'il fallait trouver une solution finale pour les ports de Zeebruges et d'Ostende commençait à faire son chemin en Angleterre.

En 1917, on tenta une nouvelle fois de sortir de l'impasse des tranchées avec la troisième bataille d'Ypres (31 juillet-6 novembre 1917). Le commandement de l'armée britannique misait sur la percée du front près de Passendale pour reconquérir enfin les ports belges. Toutefois, cette offensive échoua. Le front n'avait été repoussé que de quelques kilomètres, coûtant la vie à des centaines de milliers de soldats. Le plan de reconquérir les ports belges depuis la terre fut dès lors progressivement abandonné. Le faire depuis les airs était tout aussi impossible en raison des abris en béton pour sous-marins que les Allemands avaient construits à Bruges. C'est ainsi que fin 1917, sous le commandement du vice-amiral britannique Roger Keyes, des plans furent échafaudés afin de bloquer les ports de Zeebruges et d'Ostende depuis la mer.

Le plan



Le plan britannique consistait à bloquer les ports d'Ostende et de Zeebruges en faisant couler de vieux navires de guerre remplis de béton en travers du chenal portuaire. Les sous-marins et torpilleurs allemands se retrouveraient ainsi emprisonnés dans les ports belges, au moins temporairement. Il fallut pas mal de temps pour mettre sur pied les plans d'attaque. L'ancien môle à Zeebruges était une cause particulière de tracas pour les Britanniques. Cette jetée en arc de cercle de deux kilomètres de long, devant l'entrée du port, avait été renforcée par les Allemands d'une série de batteries qui protégeaient l'ensemble du port. Il était crucial de détourner ces batteries afin que les bateaux de blocage puissent entrer sans difficulté dans le port. Cela nécessitait un débarquement de troupes britanniques sur le môle. Trois bateaux furent modifiés pour transporter ces troupes: l'ancien croiseur Vindictive et les ferry-boats Iris et Daffodil. Tandis que les troupes débarquaient, il fallait faire sauter un vieux sous-marin sous le viaduc reliant le môle à la terre ferme. Cela empêcherait que des renforts allemands ne viennent épauler leurs compagnons d'armes sur le môle. Pendant ce temps, les trois navires destinés à bloquer le port, le Thetis, l'Intrepid et l'Iphigenia, pourraient entrer dans le chenal portuaire plus ou moins tranquillement et se laisser couler dans l'entrée du port. Évidemment, les Allemands verraient ces bateaux arriver de loin. C'est pourquoi le plan prévoyait d'utiliser de petits bateaux rapides pour créer un épais rideau de fumée.

La situation à Ostende semblait beaucoup plus simple à première vue. Là encore, plusieurs batteries et nids de mitrailleuses protégeaient le port, mais il n'y avait pas de môle en arc

de cercle. Un débarquement de troupes semblait donc superflu. Il suffisait, semblait-il, que les navires de blocage Sirius et Brilliant se laissent couler en travers du chenal portuaire. La réussite du plan d'attaque allait dépendre de quelques facteurs cruciaux tels que les conditions climatiques, la marée et la synchronisation. Un temps calme était indispensable pour l'utilisation optimale des petits bateaux et pour la réussite du débarquement sur le môle de Zeebruges. Un vent soufflant vers l'intérieur des terres devait maintenir le rideau de fumée devant les bateaux. Une marée haute était nécessaire pour escalader le môle élevé et permettre aux navires de blocage lourdement chargés d'entrer sans encombres dans le chenal portuaire. Tous ces facteurs devaient en outre être réunis vers minuit pour une utilisation optimale de l'obscurité. Deux tentatives furent abandonnées en raison des caprices de la météo. La flotte appareilla une troisième fois dans la soirée du 22 avril 1918.

Raid sur Zeebruges: le 22 avril 1918



■ Position des navires de blocage Iphigenia et Intrepid dans le port de Zeebruges après le raid
(Archives de la Ville de Bruges, Zeebruggefonds)

Les deux parties de la flotte partirent ensemble jusqu'à quelques milles de la côte, avant de se séparer. L'objectif était que les flottes arrivent

simultanément à Zeebruges et Ostende, de sorte que les Allemands n'aient pas le temps de se prévenir mutuellement.

En effet, les plans du raid étaient tombés aux mains des Allemands lors d'une tentative antérieure. Lorsque les Allemands entendirent les moteurs des bateaux à Zeebruges, ils crurent d'abord qu'une attaque aérienne se préparait. Au bout d'un moment, ils comprirent que le brouillard au-dessus de la mer était en fait un rideau de fumée, et lancèrent quelques fusées éclairantes. Ils virent les cheminées britanniques et sonnèrent immédiatement

l'alarme sur tout le littoral. Des fusées éclairantes et des projecteurs éclairaient l'ensemble du môle. Le bruit des moteurs de bateaux était désormais clairement perceptible mais le brouillard approchant restait suspendu comme un voile au-dessus des navires. Les monitors britanniques avaient entretemps commencé leurs bombardements.

Un peu avant minuit, une rafale de vent soudaine dissipa le rideau de fumée. Les contours du Vindictive étaient désormais nettement visibles. Les batteries ouvrirent le feu. Lorsque le Vindictive atteignit sa position le long du môle, la majorité des passerelles qui avaient été montées sur le bateau spécialement pour le débarquement étaient déjà détruites. La moitié des soldats qui se trouvaient sur le pont en attendant de pouvoir débarquer étaient morts ou blessés. Le bateau poursuivit néanmoins sa route. L'Iris et le Daffodil approchaient également du môle. Vers minuit et quart, les premières troupes débarquèrent sur le môle, et à peu près au même moment, le sous-marin britannique explosa sous le viaduc. Les troupes de débarquement détruisirent quelques nids de mitrailleuses et canons. Vers minuit et demi, les navires de blocage passèrent le môle. Le Thetis, qui se trouvait devant, tomba immédiatement sous un feu nourri. Le vaisseau s'empêtra dans les filets que les Allemands avaient placé dans le port et s'échoua. L'équipage saborda le navire sur place. Pendant ce temps, l'Intrepid et l'Iphigenia avaient atteint l'entrée du port pratiquement inaperçus. Les deux équipages tentèrent de positionner les bateaux le mieux possible en travers du chenal portuaire avant de les faire exploser. Le raid semblait réussi, il était temps de se retirer.

Ostende, une attaque en deux temps

À Ostende, le Sirius et le Brilliant eurent moins de succès. Le rideau de fumée avait été dissipé de manière inattendue, faisant des deux bateaux une proie facile. Les bombardements des monitors britanniques ne parvinrent pas à faire cesser les tirs des batteries allemandes. Une pluie violente nuisait fortement à la visibilité et les Allemands avaient déplacé la balise de navigation marquant l'entrée du port. Par conséquent, les deux bateaux ne trouvèrent pas l'entrée du port et durent finalement être sabordés à l'extérieur du port, vers Bredene. Le raid sur Ostende fut un échec complet.



■ *Le Vindictive sabordé le long de la jetée à Ostende (collection Freddy Hubrechtsen)*

Une deuxième tentative eut lieu le 9 mai. La mission de bloquer le chenal portuaire fut cette fois confiée au Vindictive, rafistolé à la hâte après le raid sur Zeebruges, ainsi qu'au Sappho. Ce dernier n'atteignit jamais Ostende en raison d'une panne de machines. Le Vindictive y parvint, mais éprouva à nouveau des difficultés à trouver l'entrée du port. Après plusieurs allers-retours devant le port, le bateau finit par trouver l'entrée. Il entra dans le port sous le feu nourri des Allemands. Ces tirs eurent pour effet d'aggraver les dégâts subis lors du premier raid, et l'une des hélices se rompit. Le Vindictive put alors difficilement manœuvrer, et il s'avéra vite impossible de le positionner en travers du chenal portuaire.

Le capitaine saborda le navire sur place. Le chenal portuaire était à peine bloqué. La deuxième tentative ne fut donc pas non plus un succès retentissant.

Mission accomplie?



■ Cette peinture qui se trouve dans la Gemeenschapshuis de Zeebruges montre le raid sur Zeebruges, avec un certain sens du drame (Decler)

Les deux raids ont coûté la vie à plus de 200 militaires

britanniques au total. Dans le camp allemand, seuls quelques soldats ont perdu la vie. À la lumière des pertes encourues sur le front de l'Yser, c'était un chiffre acceptable pour les Britanniques. Mais avaient-ils atteint leur objectif? Comment ces deux raids étaient-ils perçus dans les deux camps? Comment ce fait d'armes a-t-il influencé le déroulement ultérieur de la guerre? Pour savoir si les Britanniques ont atteint leur objectif, il suffit d'examiner si les entrées des ports de Zeebruges et d'Ostende ont effectivement été bouchées. Pour Ostende, ce n'était pas le cas. Le *Vindictive* n'a pas pu se positionner en travers du chenal portuaire en raison de son hélice cassée. À Zeebruges, l'*Intrepid* et l'*Iphigenia* étaient mieux positionnés, mais un nouveau chenal de navigation a été créé derrière les bateaux au bout de quelques jours. Les sous-marins et contre-torpilleurs ont donc pu à nouveau quitter le port peu de temps après le raid. Cependant, le raid a été un succès pour le moral des Britanniques. Même si les raids n'avaient pas atteint le but escompté, on pouvait lire partout qu'ils avaient été une réussite. La machine de propagande anglaise continua de présenter toute l'opération comme un succès sans partage. Pendant des semaines, on affirmait que les ports belges avaient effectivement été fermés. Les nombreuses photos prouvent le contraire. On vantait aussi le courage des participants. Pas moins de onze *Victoria Crosses*, la plus haute distinction militaire en Grande-Bretagne, furent décernées pour les prestations des militaires britanniques durant les raids. De plus, par leur opération, les Britanniques avaient démontré qu'il était possible de percer la défense côtière allemande. Les raids permirent en tout cas de remonter le moral des alliés, qui en avaient bien besoin après la désillusion de la bataille de Passendale. Dans le camp allemand, les résultats des raids furent minimisés. Dans le rapport officiel de l'amiral Alfred von Tirpitz, on peut lire que peu de dégâts ont été occasionnés aux infrastructures portuaires, et que c'est à peine s'il y a eu des victimes. La propagande allemande présentait l'échec britannique comme une preuve de la défense supérieure de ses ports. Elle soulignait que les bateaux avaient à nouveau pu quitter le port au bout de quelques jours. En réalité, la confiance des Allemands était considérablement ébranlée. L'objectif des raids n'avait peut-être pas été atteint, mais les Britanniques étaient parvenus

à percer plusieurs fois la défense côtière allemande, et temporairement, à mettre pied à terre. C'est pourquoi les Allemands aménagèrent des fortifications supplémentaires par la suite, en particulier dans les ports.

Le danger maîtrisé

Après les raids, le nombre de navires alliés coulés par le Marinekorps diminua sensiblement. Si cette baisse n'était pas due aux raids, à quoi pouvait-on l'imputer? La réponse à cette question est multiple. Ainsi, quelques bombardements britanniques avaient endommagé les écluses des ports, entraînant leur fonctionnement sporadique, mais ce contretemps ne fut que temporaire et dura jusqu'à fin juin. Néanmoins, les matières premières allemandes s'épuisaient après quatre ans de combat, ralentissant la production de nouveaux bateaux. Par ailleurs, d'un point de vue structurel, les alliés appliquèrent à partir de 1918 quelques nouvelles techniques éprouvées pour lutter contre les sous-marins.



En outre, à partir de 1917, les alliés se remirent à organiser des convois. Les convois d'escorte avaient déjà prouvé leur utilité depuis plusieurs siècles. L'idée était simple: il s'agissait

de faire voyager ensemble plusieurs navires marchands escortés par quelques bâtiments de guerre. Il n'est donc guère étonnant que les alliés aient d'abord renoncé à utiliser cette technique pendant la Première Guerre mondiale. Les arguments contre les convois étaient multiples et variés. Si un convoi rencontrait un cuirassé ennemi, il n'avait pas l'ombre d'une chance, à moins d'être également protégé par un cuirassé. Or, il était beaucoup trop cher de faire accompagner chaque convoi par un cuirassé. De plus, lorsqu'on naviguait en convoi, il fallait limiter la vitesse du groupe à celle du bateau le plus lent, et attendre au port le départ d'un nouveau convoi pour pouvoir repartir, ce qui, pensait-on, faisait perdre beaucoup de temps et d'efficacité. Enfin, les Britanniques pensaient qu'en déchargeant tout un convoi, on risquait d'excéder la capacité du port.

Ces arguments furent toutefois réfutés un par un. Le blocus britannique des cuirassés allemands les empêchait de circuler librement et d'attaquer des convois. La perte de temps et d'efficacité s'avérait plus importante lorsqu'un navire était coulé. Enfin, il suffisait d'annoncer à temps l'arrivée d'un convoi pour s'assurer que le port concerné puisse se préparer au déchargement des navires. On se mit donc progressivement à organiser davantage de convois, avec succès. À cela s'ajoutaient quelques nouvelles techniques qui semblaient prometteuses. Fin 1917, l'ASDIC, ancêtre du sonar, fut mis au point par les

Britanniques. Cet appareil envoie des impulsions sonores qui se répercutent sur un objet immergé, l'écho étant alors réceptionné par l'appareil. La mesure du temps écoulé entre l'émission et la réception d'une impulsion permet de déterminer la profondeur (distance) de l'objet. C'est aussi durant la 1ère GM que fut développée la grenade anti-sous-marine, un explosif qui n'explose qu'à une profondeur donnée. L'ASDIC et la grenade anti-sous-marine allaient s'avérer des armes très puissantes dans la lutte contre les sous-marins.

Enfin, l'amiral Roger Keyes ne se contenta pas de planifier et de diriger les raids, il imagina aussi de nombreuses autres mesures pour entraver la circulation de bateaux allemands dans la Manche. Par exemple, il fit placer des filets anti-sous-marins supplémentaires avec des mines et organisa des patrouilles anti-sous-marins. Les sous-marins avaient alors le choix entre être coulés par les patrouilles ou s'empêtrer dans les filets de mines installés. Toutes ces mesures et circonstances firent que les sous-marins et torpilleurs allemands eurent de plus en plus de difficultés à perturber le ravitaillement des alliés dans la Manche.

Avant tout un stimulant pour le moral

Les raids sur Zeebruges et Ostende ont indubitablement stimulé le moral de la Triple Entente. Grâce au culot des hommes qui y participèrent et à la manière dont l'information fut relayée ensuite dans la presse, les soldats dans les tranchées crurent à nouveau en la possibilité d'une victoire. Ce stimulant arriva à point nommé après la défaite dans la bataille de Passendale, et surtout après les frustrations et l'inquiétude causées par les offensives allemandes du printemps. En même temps, l'effet réel des raids fut initialement surestimé par les alliés, consciemment ou non. La gêne entraînée par les bateaux sabordés fut modérée : après quelques jours seulement, les bâtiments de guerre allemands purent à nouveau accéder à la mer. La baisse du nombre de navires torpillés était surtout imputable à l'épuisement des matières premières, à l'organisation de convois, à l'application de nouvelles techniques et aux mesures prises par Keyes contre les sous-marins. Quoi qu'il en soit, les raids sur Zeebruges et Ostende furent imités jusque pendant la Deuxième Guerre mondiale. Le 28 mars 1942, les Britanniques menèrent avec succès un raid sur Saint-Nazaire, détruisant le bassin de radoub du port le plus important de la côte Atlantique, le seul bassin de radoub suffisamment grand pour réparer des cuirassés. Les bâtiments de guerre allemands durent dès lors retourner en Allemagne pour les réparations.

Mémoriaux des raids sur Zeebruges et Ostende



■ À gauche: Le monument d'origine au coin de la De Maerelaan et de la digue à Zeebruges fut démantelé durant la Deuxième Guerre et emmené en Allemagne. Le monument actuel date de 1984. À droite: Les fragments de la jetée percutée par le Vindictive, sur l'Admiraal Keyesplein à Zeebruges (Provinciale Bibliotheek Tolhuis)

Aujourd'hui, différents monuments, tant en Angleterre qu'en Belgique, nous rappellent les opérations qui se sont déroulées en avril et en mai 1918. À Zeebruges, à l'angle de la digue et de la Baron de Maerelaan, on peut voir aujourd'hui encore un monument dédié à Saint George's Day. L'apparence du monument est restée inchangée depuis 1984. Un plan du raid est accompagné de plaques commémoratives pour les navires de blocage et le sous-marin. Sur l'Admiraal Keyesplein, également à Zeebruges, un monument a été réalisé à partir des fragments de la jetée percutée par le Vindictive lorsqu'il tentait de débarquer ses troupes.

Enfin, la proue du Vindictive et les mâts du Thetis et de l'Intrepid, qui se trouvaient depuis des années dans la Graaf de Smet de Naeyerlaan à Ostende, ont été récemment restaurés et sont désormais visibles à hauteur de la jetée est du port d'Ostende

Sources

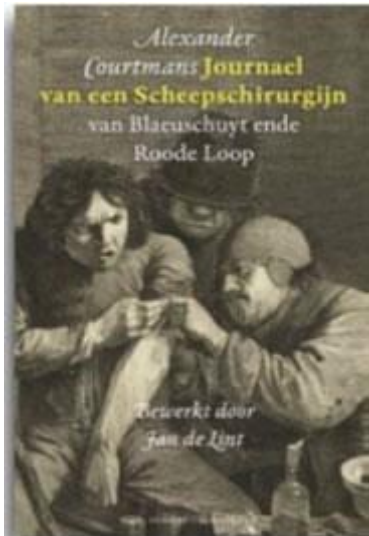
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De Grote Rade

Inséré 21/01/19 BOEKEN LIVRES BOOKS Enlevé 21/02/19

Journal van een Scheepschirurgijn 'van Blaeuschuyt en de Roode Loop'

Alexander Courtmans



De 16e eeuwse chirurgijn Courtmans vertelt aan de hand van zijn Journael over zijn reis rond de wereld op één van de schepen van Olivier van Noort, waarmee het een van de vroegste Nederlandse chirurgijnsverslagen is. Afgewisseld met dagboek fragmenten in oorspronkelijk 16e eeuws Nederlands getuigt hij zowel van zijn belevenissen als van zijn werkzaamheden. Het Journael is door de bewerker historisch gedocumenteerd en geannoteerd, maar leest als een roman.

In 1598 monstert de chirurgijn Alexander Courtmans op uitnodiging van Olivier van Noort aan op diens avontuurlijke expeditie naar de 'Specerijen Eilanden' via Straat Magelhaen en de Stille Oceaan. Blaeuschuyt (scheurbuik) en Roode Loop (dysenterie) eisen onderweg een zware tol en Alexander Courtmans staat voor de taak om met de medische kennis

van zijn tijd deze ziekten te behandelen. Als een van de eerste scheepschirurgijns legt hij op deze lange reis zijn belevenissen vast in een Journael. Hij getuigt daarin van de ontberingen, van de vijandelijkheden van Spanjaarden, Portugezen en anderen, van zijn verwondering over de exotische culturen op die reis, van zijn behandelingen en bij dit alles zelfs van zijn wankelend geloof. Zijn persoonlijke motivatie om de risico's van deze reis te trotseren wordt in de loop van zijn verslag duidelijk. Na terugkeer in het vaderland wordt de levensloop van Alexander Courtmans gevolgd tot het moment dat hij als chirurgijn in de legers van Frederik Hendrik zijn tenten opslaat tijdens het beleg van 's Hertogenbosch (1629). Alexander Courtmans - Journael van een Scheepschirurgijn - 160 blz. paperback met flappen, geïllustreerd - Prijs: €17,50 - ISBN: 97890 6100 729 6 Voor nadere inlichtingen : Uitgevers Maatschappij Ad. Donker B.V. - Kon. Emmaplein 1, 3016 AA Rotterdam

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BWM Convention and BW Treatment

BY CAPTAIN A. TUĞSAN İŞIAÇIK ÇOLAK, TURKISH OCEAN-GOING MASTERS' ASSOCIATION (TOGMA), TURKEY

1 Introduction

Across the globe marine and freshwater ecosystems are being invaded by non-native organisms. These invasions are referred to as 'bioinvasions'. Bioinvasions consist of the transport of plants, animals, bacteria, viruses and fungi to new environments where these newly introduced organisms have the potential to detrimentally affect ecosystems.

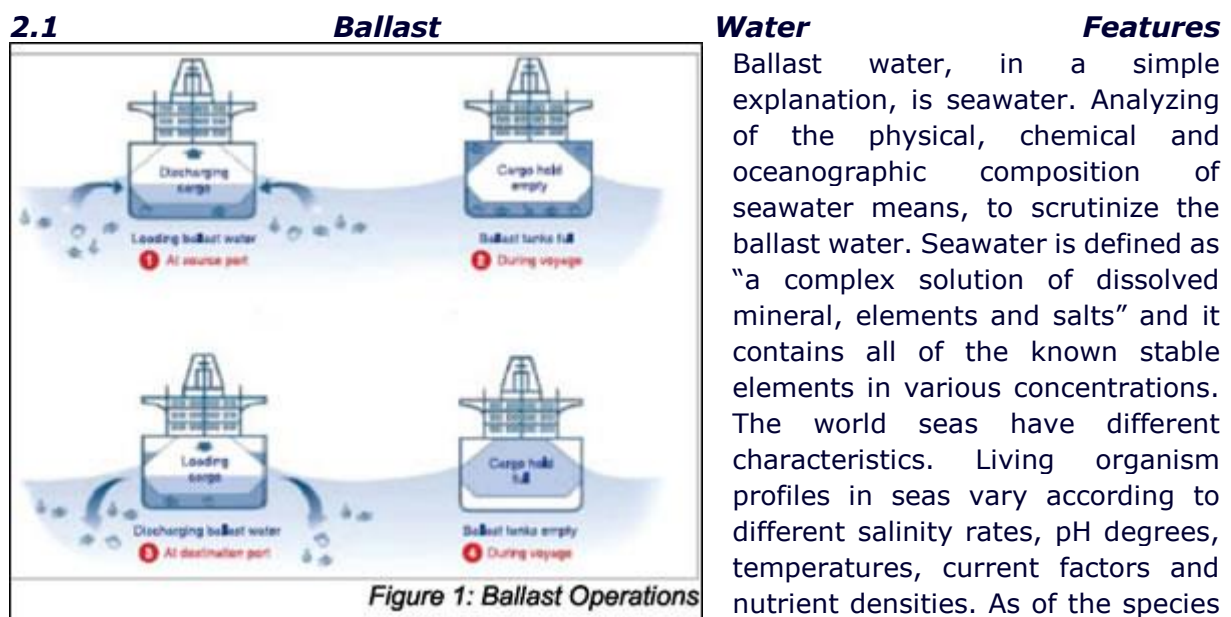
There are a number of ways in which organisms have successfully spread to new environments and this is possible due to easy transport routes, both natural and humanaided, throughout the oceans.

Most transport vectors are associated with human activity and those which are currently responsible for the most introductions are related to the shipping industry i.e. through hull fouling communities and the water in ballast tanks and sea chests.

Ballast water is ambient water which is loaded into ballast tanks and is required by vessels for stability and trim when the ship is empty of cargo to keep the propellers submerged when the ship is not fully loaded and to compensate for the altering weight of the vessel as cargo is loaded and unloaded at different ports. The uptake of ballast water generally occurs as cargo is being unloaded from the vessel, water is pumped from the immediate water surrounding the vessel into the ballast tanks through filters which remove larger, adult organisms but do not prevent the uptake of plankton. There is a vital need for adequate treatments to be developed to prevent this constant movement of organisms to new areas where they are establishing populations to the detriment of the local flora and fauna.

2 Ballast Water

When ships were first built years ago, they carried solid ballast, in form of rocks, sand or metal. However, since around 1880, ships have used water as ballast principally because it is more readily available, much easier to load on and off a ship, and is therefore more efficient and economical than solid ballast. When a ship is empty of cargo, it fills with ballast water. When it loads cargo, the ballast water is discharged.



have difficulty in surviving in brackish water environment, also they can adapt to a different form (resting stage) or not able to survive.

2.2 Why Ships takes Ballast?

The reasons of taking ballast water for the ships are to ensure safety of the voyage, by providing similar stability and strength values of laden condition, to enable efficient and effective operation of their propellers, to increase the draft and change the trim to regulate the stability, to maintain stress loads within acceptable limits, to ensure the structural

integrity, to ensure that the vessel stays upright, vessels have special tanks for the ballast. Locations and shapes of these tanks vary according to vessel types. In many vessels, double-bottom tanks, side tanks, fore-peak and aft-peak tanks, hooper tanks and wing tanks are used as the ballast tank. In some exceptional cases, vessels can also take in ballast water in their cargo spaces (holds or cargo tanks).

3. Effect of Ballast Water to the Marine Environment.

Ballast water serves as a vector for the transfer of species from one part of the world to another. Where this new area is outside of its natural geographic range, the species which has been transferred is commonly known as an alien species (alternative terms are non-native or non-indigenous). If the environmental conditions in this new geographic area are suitable, the alien species may then not only survive, but may establish and spread, in many cases causing, or with the potential to cause, harm to the local environment, economy, or human health. Such species are generally called invasive alien species.

According to the BWM Convention; Harmful Aquatic Organisms and Pathogens' means aquatic organisms or pathogens which, if introduced into the sea including estuaries, or into fresh water courses, may create hazards to the environment, human health, property or resources, impair biological diversity or interfere with other legitimate uses of such areas.

Invasive alien species are now generally recognized as one of the greatest threats to biodiversity globally. They also have serious economic, environmental and health impacts and, as a result, place major constraints on development. An example for Human health impacts; There is evidence that cholera epidemics can be directly associated with ballast water discharges. While *Vibrio cholerae* and other pathogens are normal constituents of coastal waters, they do not ordinarily occur in high enough concentrations to cause human health problems. However, with expanding world trade and an increasing number of ships moving among international ports, the transfer of microbes could well be the most insidious threat related to ballast water discharge. In addition to bacteria and viruses, ballast water can also transfer a range of species of microalgae, including toxic species that may form harmful algae blooms or 'red tides'. The public health impact of such outbreaks is well documented and includes paralytic shellfish poisoning, which can cause severe illness and even death in humans.

Worst Examples and Their Harmful Effect on Marine Environment some of the worst invaders recorded, such as:



- o North American comb jellyfish that helped to virtually wipe out anchovy and sprat stocks in the Black Sea in the late 1980s and that has now spread to and continues to expand in the Caspian Sea as well as in the North Sea and the Baltic Sea.

- o Red mysid shrimp, a native to fresh and brackish waters around the Black and Caspian Seas, now in the Baltic Sea, the Rhine River (Germany) and discovered in the North Sea spreading from the Netherlands in 1997 to Belgium, France, England, and Ireland. Within two years of its 2006 arrival in US Lakes from Europe,. Significant impacts on the ecosystem are feared due to its wide diet that includes zooplankton and algae



o Chinese mitten crab, now found in estuaries and rivers bordering the North Sea, Baltic Sea and the North American Atlantic and Pacific coasts, causing greatly altered habitats and erosion of river banks due to its extensive burrowing habits, as well as clogging of industrial water systems.

o Zebra mussel, first found in the Great Lakes in 1988. This mussel is native to the Caspian Sea region of Asia. Colonies of zebra mussels (as many as 1500 individuals per square meter) may accumulate and clog water-intake pipes and screens of drinking water facilities, industrial facilities, power generating plants, golf course irrigation pipes, cooling systems of boat engines, and boat hulls.



o Harmful Algal Blooms, harmful algae which can cause red tides, were transported to Australian waters from Southeast Asia. Some species can cause paralytic shellfish poisoning and harm local shellfish industries.

o Vessel Fouling, Community of organisms that attach or associate with submerged portions of structures. On vessels, highest density in "niche" areas: sea chests, around rudder, dry

dock strips.

4. Ballast Water Convention

Ballast Water Convention's purpose is specified by IMO as follows: "to prevent, minimize and ultimately eliminate the risk of introduction of Harmful Aquatic Organisms and Pathogens which use the ballast water as a hub.

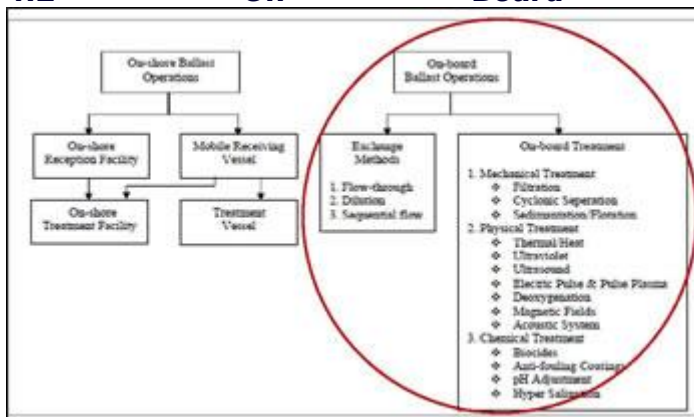
4.1 Methods Recommended in the Convention

Ballast capacity	Year of ship construction*			
	Before 2009	2009+	2009-2011	2012+
< 1,500 m ³	Ballast water exchange or treatment until 2016 Ballast water treatment only from 2016	Ballast water treatment only		
1,500 – 5,000 m ³	Ballast water exchange or treatment until 2014 Ballast water treatment only from 2014	Ballast water treatment only		
> 5,000 m ³	Ballast water exchange or treatment until 2016 Ballast water treatment only from 2016		Ballast water exchange or treatment until 2016 Ballast water treatment only from 2016	Ballast water treatment only

The Convention suggests two different methods, in order to minimise the problems caused by the transfer of ballast waters: the exchange method and treatment alternatives. Ships will be required to treat ballast water in accordance with the timetable, as shown in Table. According to this table, the first key milestone was in 2009, when ships

under construction during or after that date having less than 5,000 m³ ballast water capacity were required to have ballast water treatment installed to meet the D-2 Standard in the Convention. However, as the Convention is not yet in force internationally, these dates cannot currently be enforced.

4.2 On Board



Ballast Operations

After the adoption of International Ballast Water Convention, many scientific and technological researches were held and proposed management alternatives. The main headings of these alternatives are ballast water exchange, on-board treatment and onshore treatment. The diagram below provides information on the contents of Ballast Water Management options.

The first step of the ballast management is to take in as clean as possible ballast.

Not Ballasting;

o in areas that are known to contain harmful organisms or phytoplankton blooms, in areas with local outbreaks of infectious water-borne diseases, with poor tidal flushing, with high sediment loads, near sewage discharges, dredging operations in shallow water, where propellers may stir up the sediment, not ballasting at seasons when harmful plankton are abundant,

Also;

at night when many types of organisms - benthic, epibenthic and planktonic organisms - migrate closer to the surface,

o ballasting through intakes located high on the ship's hull when in shallow water, to avoid entraining bottom sediments or organisms living near the bottom

o loading fresh water as ballast when expecting to de-ballast in salt water; and salt water as ballast when expecting to deballast in fresh water.

Not disposing / deballasting;

o of ballast tank sediments,

o near aquaculture areas, seafood harvesting areas, marine sanctuaries or parks, coral reefs or other sensitive sites.

4.2.1 Ballast Exchange Method

The main method suggested by IMO in the Convention is the exchange method. Careful and attentive practice of this method is necessary, in order to maintain it as an alternative until 2016. By using exchange method, the species taken in from coastal environment thru ballast water and exchanged via exchanged method during the voyage, are no longer coastal species, therefore exchanged species due to the different ecosystem shall not be able to survive at the environment of the destination port. Negative weather/sea conditions cause the stability of the vessel and pressurizing ballast tanks damage the ship during the exchange operation. There are many restricting factors of the ballast water exchange operation, the most important effect is stability due to low GM, exceeding limits of BM and SF and free surface effect. Three different types of exchange methods are stated in the Convention: Sequential Method, Dilution Method, and Flow-through Method.

Sequential Method as "a process by which a ballast tank intended for the carriage of ballast water is first emptied and then refilled with replacement ballast water to achieve at least a 95 per cent volumetric exchange."

Dilution Method is "a process by which replacement ballast water is filled through the top of the ballast tank intended for the carriage of ballast water with simultaneous discharge from the bottom at the same flow rate and maintaining a constant level in the tank throughout the ballast exchange operation."

Flow-through Method as "a process by which replacement ballast water is pumped into a ballast tank intended for the carriage of ballast water, allowing water to flow through overflow or other arrangements." The flow-through method involves pumping open-ocean water into a full ballast tank. Ballast equal to approximately three times the tank capacity must be pumped through the tank to achieve 95% effectiveness in eliminating aquatic organisms.

4.2.2 Ballast Water Treatment Systems

Mechanical, physical and chemical types of process technology used in ballast water treatment. This section 'Ballast Water Treatment System' is citation from PhD Thesis, İnmeler C., Ballast Water Management In Tankers.

Mechanical Treatment

Filtration, cyclonic separation and sedimentation/flotation are among the alternatives of mechanical treatment.

o Filtration:
Inactivation Process: Ballast water can be filtered before it enters the tanks or while it is being discharged. The advantage to filtering as water is pumped into the tanks is that organisms that are filtered out may be retained in their native habitat. If ballast water is filtered while being discharged, proper disposal of organisms is required to eliminate accidental introductions. A back washing mechanism cleans the filters and collects organisms to prevent their accidental release.

o Cyclonic Separation:
Inactivation Process: The system basically vortexes the water, forcing the heavier particles to the outer portion of the pipe. Once this occurs, then the outer portion of the water can be separated out or the particles can be collected in some type of collection system.

Physical Treatment

Thermal (heat), ultraviolet, ultrasound, electric pulse & pulse plasma, deoxygenation, magnetic fields and acoustic systems are among the alternatives of physical treatment.

o Thermal (Heat) Treatment:
Inactivation Process: Heat kills aquatic organisms by denaturing cellular proteins and/or increasing metabolism beyond sustainable levels. Death by metabolism shutdown

generally occurs quicker and at lower temperatures for more complex organisms. Thermal treatment effectiveness is a function of species' tolerances, temperature, and exposure period. Most microorganisms are able to tolerate relatively high temperatures for short periods, and lower temperatures for longer periods.

o Ultraviolet (UV):
Inactivation Process: UV treatment triggers photochemical reaction of cellular nucleic acids. When a microorganism is exposed to UV radiation, the energy is absorbed by the organism's DNA. If the organism receives a sufficient number of UV photons in a short period, covalent bonds form between adjacent bases in the DNA. The formation of these bonds prevents the organism's DNA from being "unzipped" for replication, and the organism's cells are unable to reproduce.

o Ultrasound:
Inactivation Process: Acoustic systems use transducers to apply sound energy of specified amplitude and frequency to water to be treated. Ultrasonic systems use transducers to convert electrical energy into vibratory energy of a specific amplitude and frequency. When this energy is passed through liquid, microscopic gas bubbles quickly form, expand, and implode. In the area immediately surrounding the bubbles, there are extreme temperatures and pressures, which increase chemical reactivity, polymer degradation, and free-radical production. Exposure of aquatic microorganism to ultrasonic treatment results in cellular disruption and organism death.

Electric Pulse:

Inactivation Process: In pulsed electrical field technology short burst of energy are used to kill organisms in water. In pulsed electrical field technology, water is passed between two metal electrodes. The water is subjected to an electric pulse which produces short energy bursts at a very high power density and pressure. The energy generated, and transferred to the water, is strong enough to electrocute an organism. If used in a ballast water application, the transfer of energy would theoretically kill the non-indigenous species.

Deoxygenation (Oxygen Deprivation):

Inactivation Process: This treatment accomplishes the removal of ballast water organisms by extracting the dissolved oxygen from ballast water. One of the method is purging the oxygen from the ballast tanks with nitrogen through the use of chemical additives,

Magnetic Fields:

Inactivation Process: Strong magnetic forces interfere with organism pH levels, which in turn support the cell's organelles and proteins. Magnetic forces also interfere with the flow of ions in the cell membrane, resulting in death. A typical magnetic system consists of a magnet or electromagnet attached to the piping system.

Chemical Treatment

Biocides, anti-fouling coatings, pH adjustment and hyper salination are among the alternatives of chemical treatment.

Biocides:

Means of Application: Biocides could be applied in two ways:

- Concentrated solid or liquid chemicals could be added to ballast water in certain ratio. The amount of pre-mixed liquid biocide could be added via feeding lines to the main line with the main ballast pumps.
- It could be generated electrolytically from sea water.
- Oxidizing Biocides: Inactivation process: Oxidizing biocides act by destroying cell membranes which leads to cell death is hazardous for organisms. Oxidizing biocides include, but are not limited to chlorine bromine iodine and their multiple

compounds, chlorine dioxide $+-(ClO_2)$ and hypochlorites (e.g., NaOCl), hydrogen peroxide (H_2O_2), ozone (O_3) and Paraclean® peroxy acetic acid.

- **Non-oxidizing Biocides:**Inactivation process: Non-oxidizing biocides act by interfering with a necessary life function such as metabolism or reproduction (the physiological and metabolic processes of organisms). Non-oxidizing biocides include, but are not limited to, such compounds as Acrolein®, Seakleen®, Peraclean® Ocean, tributyltin, dissolved copper, dissolved silver, glutaraldehyde, and organic acids.
- **pH Adjustment:**Inactivation Process: Sudden changes in pH, and the addition of an acidic or alkaline compound to increase or decrease the pH of ballast water has been considered as a method of disinfecting ballast water. The corrosion rate of carbon steel is not influenced by pH over the range of 4.5 to 9.5 in distilled and tap water. Below pH 4.0, hydrogen evolution begins and corrosion increases dramatically.
- **Hyper Salination:**Inactivation Process: Hyper salination involves the addition of large quantities of sodium chloride (salt) to ballast water to create a super-saline environment. The sudden increase to extreme levels of salinity destroys cells through dehydration.

Conclusion

IMO Ballast Water Convention is essential to prevent further spread of invasive species and their potentially devastating impacts on ecology and economy in areas where they do not belong. Various systems were developed under mechanical, physical and chemical treatment categories that address to various vessel types, sizes and ballast capacities. Nowadays, compact treatment systems are developed which use the state-of-the-art technology, having relatively lower costs, with minimum human factor, owing to the experiments conducted both in laboratories and on-board.

Each of the ballast treatment alternatives eliminates different living organisms with different methods. While the living organisms that are affected by each system are different, the systems have many advantages and some drawbacks within themselves. In short, no system is perfect stand-alone. The most used combination systems and the comparison of the systems will be briefly explained with presentation

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Exmar Joins Ballast-Free LNG Carrier Project

Belgium's vessel owner and operator Exmar has become a part of the 30,000m³ ballast-free LNG carrier joint development project (JDP).

The partners in the JDP, namely Dalian Shipbuilding, GTT and Lloyd's Register, welcomed the new member and launched the second phase of the project on April 17 in Shanghai.

The first phase of the project performed by DSIC, GTT and Lloyd's Register developed a new design of LNG carrier, fully compliant with the International Maritime Organization's new ballast water management convention (BWMC), and using membrane containment systems.



It showed the potential for competitive advantages for the ship-owners, combining environmentally-friendly features with increased efficiency. It also indicated potentially lower construction and operational costs. The 30,000m³ B-FREE LNG carrier design received an Approval in Principle from Lloyd's Register in December 2017.

Phase II of the project aims to develop the design further, and to validate the initial results achieved during Phase I by

applying more detailed analysis and verification, including model testing.

"The ballast-free concept is a well-suited solution in the context of a shipping world with growing environmental requirements and concerns. By eliminating the need for ballast water, there is an absolute certainty that no invasive species will be transported on board of the vessel," **Pierre Dincq, Managing Director of Shipping at Exmar,** said.

Moreover, the ballast water treatment plant can be omitted, reducing the maintenance requirements and the energy consumption of the vessel which has a positive impact on the CO2 footprint of the vessel, Dincq continued.

Inséré 23/01/19 NIEUWS NOUVELLES Enlevé 23/02/19

Kanal İstanbul: Erdoğan's drive to build a new strait By Eva Grey

Turkey recently announced the route for Kanal İstanbul, a planned artificial channel between the Black Sea and the Sea of Marmara. While it promises to bring huge economic advantages to the country, environmentalists are putting up a fight, claiming it could cause an ecological disaster. In 2011, shortly before an election that would secure him his third consecutive term as prime minister, Recep Tayyip Erdoğan announced his vision to build a "crazy project": Kanal İstanbul (Channel Istanbul), an artificial waterway connecting the Black Sea to the Sea of Marmara. The canal would split the European side of the city in two, thus creating an artificial island, and run parallel to the Bosphorus Strait, one of the world's busiest waterways. Although little has been said over the past seven years, it wasn't until the start of this year that the hugely ambitious plan became a near certainty, when the exact route was announced. The 28-mile canal will run from the Durusu region on Istanbul's Black Sea coast to Lake Küçükçekmece on the Sea of Marmara. According to documents from Turkey's Environment Ministry seen by Reuters, the canal will be 25m deep and between 250m-1,000m wide, depending on where the docks are located.

Transportation, maritime affairs and communications minister Ahmet Arslan told pro-government Turkish publication Daily Sabah that project studies have already been completed and there are plans to break ground and start laying the foundations sometime this year.

With a projected cost of anywhere between \$10bn-\$20bn, Kanal İstanbul is expected to be the country's biggest infrastructure project, overshadowing other ambitious feats such as the Istanbul New Airport, the new Yavuz Sultan Selim Bridge over the Bosphorus and the Big Istanbul Tunnel Project, a connector between Asia and Europe at 110m below sea

level. "Opening a new channel parallel to the Bosphorus is my dream," Erdogan told an audience at the Turkey-Serbia Business Forum in 2011. If works begin as planned this year, the canal will be operational by 2023, when the Turkish Republic celebrates its 100th anniversary. The justification behind this hugely expensive project, which will permanently alter the geography and urban spread of one of the largest cities on Earth, is firstly based on trade.

Supporters hope that Kanal İstanbul will relieve shipping traffic from the already congested Bosphorus, increasing capacity for shipping to and from the Black Sea. Some 43,500 ships passed through the strait in 2015, and once open, Kanal İstanbul is designed to rival that capacity by accommodating 160 vessel transits per day.

"Kanal İstanbul will relieve shipping traffic from the already congested Bosphorus".

The added reasoning is that this will make passage safer, as oil tankers and cargo ships carrying dangerous substances will not be forced to squeeze through a congested strait, reducing the risk of collisions and subsequent environmental damage.

Interestingly, the new waterway will also be exempt from the Montreux Conventions Regarding the Use of Straits, a seven-decade long convention which ensures that ships enjoy free passage through Turkish straits. As such, the government could charge ships for passing through the new canal. But easier and safer passage isn't the only purpose: supporters hope it will also restructure Istanbul as a social and economic zone. Murat Kurum, general manager of Emlak Konut REIT (a Turkish real estate investment company that has 33 projects planned along the route) highlighted that the canal will boost real estate value in the area, as well as become a source of employment and revenue, both for the region but also the country. Even before the project was confirmed, housing prices in the neighbourhoods expected to be along the route reached the highest level in three years.

Despite its grandiose promises, some see Kanal İstanbul as a purely political vanity project, and even a potential environmental tragedy in the making. Writing in the science journal *Nature*, Professor Derin Orhon from Istanbul Technical University warned that the project could gravely affect the surrounding marine environment, which is already under severe threat of pollution. "Every day, more than two-thirds of the Istanbul's raw effluent is poured into the Marmara and the Bosphorus," Orhon wrote, "some 1,100 tonnes of organic matter, 130 tonnes of nitrogen and 20 tonnes of phosphorus, as well as a wide spectrum of other chemicals and hazardous materials. Erdoğan's canal could worsen the situation. "First, in opening a channel for the waters of the Black Sea to mix with the Marmara, it offers a new route for polluted water to head south. Second, there will be an indirect increase in the amount of wastewater generated in and around Istanbul, because work on a new canal will probably catalyse further development. At present, much of this extra waste will finish in the Marmara."

Istanbul-based group Northern Forest Defence also published warnings issued by two other scientists: Professor Cemal Saydam of Hacettepe University and Professor Ethem Gönenc of Istanbul Technical University, who claim the canal could cause the hydrologic balance to be reversed when the cold and fresh waters of the Black Sea mix with the warm and salty waters flowing from the Mediterranean Sea. "Every day, more than two-thirds of the Istanbul's raw effluent is poured into the Marmara and the Bosphorus." "That will be the beginning of an irreversible environmental disaster," the campaign group notes, as the canal will act like a tap draining water out of the Black Sea. "While the Black Sea slowly dries up, the warmth and the salinity of Marmara Sea and the Mediterranean will change. The Marmara Sea will become putrefying water mass irreversibly altered, with devastating

consequences for marine and urban life." In 2012, a petition initiated by Professor Saydam against the project gathered over 26,795 signatures at the time of writing. Turkey's Green Party also urged the Turkish Government to immediately stop the channel project, citing deforestation near Istanbul, as well as long-term ecological damage that could even affect neighbouring countries such as Greece. In December last year, the Chamber of Environmental Engineers publicly demanded that the ministry release their full environmental study. However, despite this pressure, as well as announcements that work on the canal will start within the year, a full environmental impact assessment has not yet been released. According to Turkish media, the finalised but unpublished report includes plans for green areas and areas of protection. Arslan stated that the ministry has already revised all environmental and climatic factors, including winds and deep-sea waves in the Black Sea and Marmara Sea entrances."Our aim is not to adversely affect the Marmara Sea with this project, but on the contrary, to positively affect and to prevent accidents, especially caused by freight transport," he said.

Source : ship-technology

Inséré 25/01/19 DOSSIER Enlevé 25/02/19

Methanol Is Ready for Use as Marine Fuel

In preparation for the International Maritime Organization's upcoming 2020 sulphur limit, the shipping industry started considering a number of solutions, including low sulphur fuel oil (LSFO), marine gas oil (MGO) and Exhaust Gas Treatment (scrubbers).

While some experts believe that the answer lies in a replacement for dirty fuels, others believe that scrubbers are the way to go, however, the industry expressed its concerns over the costs of these solutions in more than one occasion.

World Maritime News spoke to **Chris Chatterton, Chief Operating Officer, the Methanol Institute**, on the solutions offered to the shipping industry, with a focus on methanol as an option, and the costs which shipowners could face as of 2020.

Methanol is the option that has probably received the least coverage despite offering a pathway to a sustainable, 2020-compliant, low carbon future for the industry, achievable at manageable cost and with minimal changes to the operational profile of the majority of affected vessels, he explained.

When asked about the current stage of development of methanol as a replacement for dirty marine fuels, Chatterton said that methanol *"is ready to go as a marine fuel now, and could be playing a much bigger role post-2020."* There is a number of reasons for this, he explained, the first being that as the marine bunker market shifts from spot to the use of contract terms, methanol becomes ever more competitive against low sulphur fuel oil (LSFO) or gasoil.

As explained, there are very few technical challenges to adopting methanol as marine fuel on newbuilds or conversions and certainly fewer than with LNG.

"No changes were made inside the MAN 2-stroke and Wärtsilä 4-stroke methanol dual-fuel engines on the water today, just the addition of new injectors and fuel rail systems."
"For the fuel supply system, it would be usual to install double-walled piping and possibly the use of nitrogen as inert gas in the fuel storage tank itself as an additional safety

measure, as methanol is a liquid at ambient temperature and in the event of a leak would vent with gravity (in contrast, LNG would vent into the atmosphere as a gas)."

This also makes it simple to perform engine work or repairs to fuel delivery systems as methanol can be easily purged from fuel lines for completely 'dry' work with little 'clean up' as with a traditional fuel, he added. Methanol dual-fuel engines also feature sealing oil for the injection ports, which trap any potential leaks.

"It should also be considered that the cost of a methanol-fuelled vessel would be considerably less than a gas-fuelled ship, mainly due to methanol's drop-in fuel characteristics, versus cryogenic technology."

"In terms of converting an existing vessel, we estimate that the costs for methanol would be 75% less than that for LNG."

Additionally, in terms of its emissions performance, Chatterton said that methanol ticks all the boxes, with 2020-compliant SO_x, NO_x and PM emissions and providing what will ultimately be a carbon-free future for shipping, easily allowing it to meet the industry's ambitions in respect of the Paris Agreement.

"Methanol-powered ships are in operation now and the revision of the IGF Code by IMO will fully complete the regulatory picture within a few years. In the interim, classification society guidance is available today. There have been a number of projects and studies into methanol's viability and suitability as a marine fuel, which have concluded that there are no obstacles to its adoption by the industry alongside other clean conventional and alternatives."

Citing IHS Markit, he said that global methanol demand will increase from 49m metric tonnes in 2010 to 95m mt by 2021. Given methanol's lower energy content, today's global marine fuel market would be the equivalent of 650 million tonnes per annum of methanol. Speaking about the spread of interest in methanol as fuel, Chatterton said that the interest ranges from small pilot boats to tankers, ferries and potentially cruise ships, as it is ideally suited for application on short-sea shipping, coastal and inland vessels that spend much of their time in an emissions control area close to land or large centres of population.

Availability of Methanol

Chatterton: The availability of methanol is one of its strong points as a marine fuel. As a widely used petrochemical feedstock, it is present at hundreds of ports worldwide – and at nearly all the current centres for conventional marine bunkering. Methanol is the world's most widely shipped chemical commodity, with an estimated 26.7 million tonnes shipped in 2017, according to Clarksons Platou.

What needs to be developed is the bunkering infrastructure to support widespread distribution – though this is also true of LNG as fuel.

Options include bunkering from trucks (as with early LNG as marine fuel projects), or via dedicated vessels and it is perfectly feasible for existing bunker barges to be converted to handle methanol.

Onshore storage of methanol is simpler than LNG because no cryogenic facilities are required as methanol is a liquid at ambient temperature and there are some well understood and readily available methods of safely storing and handling methanol that present no exceptional safety risks.

Methanol vs. LNG

Chatterton: The shipping industry has certainly flirted with LNG as fuel and it has found it to be a viable solution for non-gas carriers. However, conversions and newbuildings are expensive, technically complex and operations are challenged in terms of supply

infrastructure. Critically, while LNG solves the SOx/NOx emissions slate, its CO2 and methane emissions profile means it cannot be a long term solution for the decarbonization of shipping. Further, LNG requires dedicated bunker supply chains that require enormous sums of public/private funding.

Methanol as marine fuel has few of these disadvantages. As a liquid fuel it is easy to store and handle despite having a lower flashpoint than conventional fuels and it is less harmful to the environment or marine life in the event of a spill.



Stena Germanica

Retrofits and newbuildings using methanol as marine fuel are simpler and cheaper than LNG and the experience gained on the ropax ferry Stena Germanica and tankers operated by Waterfront Shipping is that methanol is well-suited as a low emission, high performance marine fuel.

Regarding the topic of THE marine fuel of the future, Chatterton said that shipping is waking up to the fact that it is moving from a single-fuel industry to a multi-fuel model as it transitions from a carbon-intensive industry to one with a low carbon future.

"Methanol may not be the fuel of the masses by 2020, but it could be the marine fuel of choice for a broad category of vessels through the remainder of the century and beyond."

*Interview conducted by Erna Penjic, Editor, World Maritime News
Image Courtesy: Methanex/The Methanol Institute/Stena Line*

Inséré 27/01/19 NIEUWS NOUVELLES Enlevé 27/02/19

A European Road Map Of Ship Recycling

In 2011 the European Union through the European Commission concluded that the regulation of ship recycling activities through the European Regulation on Shipments of Waste (EC) No 1013/2006 was not effective as 91% of the ships that should be controlled by the Regulation during their study period had evaded its provisions (presumably the remaining 9% being mostly small ships and also government owned ships). Europe therefore decided to develop a new regulation specific to ship recycling, which, as explained below, was adopted at the end of 2013 and which will be fully effective by the end of 2018. In view of the above, the recent announcement that the Dutch Public Prosecution Service was bringing criminal charges against the Dutch shipping company Seatrade for violations in 2012 of the Regulation on Shipment of Wastes was unexpected to say the least.

The announcement on 15th March 2018 that the Rotterdam District Court found Seatrade guilty, will be of great concern to the owners of ships (of any flag) that visit European ports near the end of their life. As the regulation of ship recycling is currently going through a transition period in the European Union, the following notes should act as a road map on the applicable requirements now, and after the end of 2018. On the 30th December 2013 the European Union brought into force the "European Regulation on Ship Recycling (EU) No 1257/2013". The provisions of the Regulation did not take effect immediately, but instead the Regulation specifies a schedule of application, whereby the first version of the European List of approved yards would be published by the European Commission not later than December 31, 2016.

Thereafter, EU flagged ships will have to: have an Inventory of Hazardous Materials; be surveyed; be certificated; and be recycled in accordance with the new Regulation, from the earlier of the following two dates (termed as "the date of application"):

(a) six months after the European List of approved yards reaches a 2 combined capacity of 2.5 million LDT; or

(b) the end of December 2018. From the date of application European flagged ships will be excluded from the scope of the "European Regulation on Shipments of Waste (EC) No 1013/2006", whereas non-European flagged ships departing from European Union ports and destined for recycling will continue to be subject to the Waste Shipment Regulation, which forbids their export to developing countries (defined as non-OECD countries).

Furthermore, all ships visiting European Union ports, regardless of their flag, will be required from December 2020, to be provided with inventories of hazardous materials (IHMs). The European Commission, as the authority that implements (and interprets) European legislation, satisfied its obligation under the new Regulation to publish its List of approved yards by the end of 2016, although the first List included only yards located in European Union countries (18 yards in 10 EU countries, with maximum annual recycling capacity of 303,065 LDT). These yards however are unlikely destinations for ocean going commercial ships. At that time, the European Commission had delayed issuing the formal invitation for non-EU yards to apply for inclusion in the List of approved yards. Applications were received around the middle of 2016 from two yards in the U.S., four yards in China, seven yards in Turkey and nine yards in India, of a combined maximum annual capacity of around 2.5 million LDT. Due to further delays in the approval process, by the beginning of 2018 none of the non-EU applicant yards had been inspected or approved by the Commission. In view of the above it is a fair guess that the date of application of the Regulation will be the end of December 2018, and not earlier, as it is improbable that the European Commission will approve yards of 2.5 million LDT capacity by the middle of 2018.

Requirements before the date of application:

(1) A ship of any flag departing on a voyage to a recycling yard from a port of a EU Member

State is subject to the European Waste Shipments Regulation, which forbids its export to non-OECD countries. As Turkey is the only OECD country amongst the major recycling countries this means that, practically, a ship departing for recycling from a European Union port will have to be recycled in Turkey. Furthermore, the Waste Shipments Regulation prescribes the "prior informed consent" procedure that must be followed, and which involves paperwork between: "the exporter" (a representative of the owner of the ship); the relevant departments of the Ministries of Environment of the exporting and importing States; "the importer" (recycler); plus the authorities of any transit States (for example, of a third country whose port(s) the ship visits on its way to Turkey).

(2) A ship of any flag departing on a voyage to a recycling yard from a port that is not in the EU, or where the decision to send the ship for recycling is taken when the ship is in international waters, is not subject to the European Waste Shipments Regulation.

Requirements after the date of application:

(1) A ship flying an EU flag will be subject to the European Ship Recycling Regulation, which requires that it will be recycled only in a yard that appears in the European List of approved yards, as published by the European Commission. The port of departure of the last voyage of a EU-flag ship, or its location at the time the decision was made to recycle it, will have no relevance.

(2) A non-EU flag ship departing on a voyage to a recycling yard from a port of a EU Member State will continue to be subject to the European Waste Shipments Regulation, which forbids its export to non-OECD countries (see case (1) under "Requirements before the date of application").

(3) A non-EU flag ship departing on a voyage to a recycling yard from a port that is not in the EU, or where the decision to send the ship for recycling is taken when the ship is in international waters, is not going to be subject to European legislation.

Source: GMS, By Dr. Nikos Mikelis

Inséré 29/01/19 HISTORIEK HISTORIQUE Enlevé 29/02/19

'Canada's Titanic' finally getting its due

On May 29, 1914, the Canadian Pacific steamship, the Empress of Ireland, collided with a Norwegian freighter near Quebec, sinking in 14 minutes and killing 1,012 people.



Clinging to the side of a doomed ocean liner, Leonard Delamont wrapped his lifebelt around his mother, kissed her goodbye and jumped into the glacial waves of the St. Lawrence River. The young man, never to be seen again, was among 1,012 killed that foggy night when the Empress of Ireland was hit by a freighter near Rimouski and

plunged beneath the surface in just 14 minutes. Dubbed "Canada's Titanic," the sinking on

May 29, 1914, stands as one of the country's worst maritime disasters, though a surprising number of Canadians have never heard of it. Compared to the famous story of the **Titanic** luxury liner that sank two years earlier, the Empress of Ireland's tale has remained in the shadows.

100th

anniversary

approaches



But experts on the ship's history believe the Empress is finally getting its due as the 100th anniversary of the tragedy approaches. The vessel will be commemorated in the coming days with the release of Canada Post stamps, a pair of silver coins from the Royal Canadian Mint, the launch of an exhibit at the Canadian Museum of History, the unveiling of a monument and several memorials around the country. Descendants of those aboard the Empress, like Delamont's niece, hope the centenary will help further boost public awareness about the liner and its victims. "A lot of Canadians don't know about it and I guess I would be one of them if I didn't have a family connection," said June Ivany, who plans to attend Empress events this week in Rimouski, Que., near the wreck site. "It is part of Canadian history and so much is played up about the Titanic. Why not make people aware of our maritime disasters?" The deadly collision represents only part of the historical significance linked to the steamship, which played a key role in Canada's immigration boom during her years in service, from 1906 until the 1914 tragedy. Sailing for a new life in Canada Over those years, around 120,000 European immigrants sailed on the prestigious liner to a new life in Canada. The federal government has estimated about a million Canadians today — or about one in 35 — can trace an ancestor to this ship. Others believe the number is a more modest ratio of one in 60. But despite its importance the Empress has long been overshadowed by two higher-profile transatlantic sinkings of the same era that also claimed more than 1,000 lives: the Titanic and the Lusitania. The Titanic struck an iceberg in 1912, killing around 1,500 people, while a German U-boat torpedoed the Lusitania in 1915, killing nearly 1,200. The horror of the Empress disaster and the tales of survival were splashed on front pages around the world, but weeks later international attention had shifted to the outbreak of the First World War. As the years passed by, families affected by the Empress disaster — like Delamont's clan — avoided discussing the incident to spare themselves from the painful memories. "When I was growing up, you didn't talk about it," said Ivany, who also shared her family's story in a posting on a website

dedicated to the anniversary. All four of Delamont's relatives aboard the Empress, including his mother Seraphine, were among the fortunate 465 who survived. Ivany said aside from hearing about her uncle's sacrifice, she also learned about her aunt Elizabeth's experience amid the chaos that surrounded the sinking ship. "(She) had her hair ripped out by other people in the water," Ivany said of an experience that haunted Elizabeth for the rest of her life. "She would never even get in a bathtub and was terrified of water."

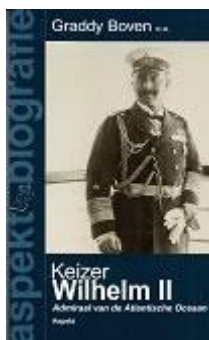
Changed the course of history

The sinking also changed the course of history for victims' families. Donna Parker says she wouldn't be alive if it weren't for the Empress disaster. Parker's grandfather, Will Clark, lost his first wife, Lavinia, and their nine-year-old daughter, Nellie. She said they had been travelling without him because he had stayed home to work. Her grandfather later remarried and had two children, eight grandchildren and many great-grandchildren. "I guess the thing that really affects me is that it's a terribly tragic story, and yet my family would not be here if it weren't for that," said Parker, an Ancaster, Ont., resident who also plans to participate in memorial activities in Rimouski. "It was our early history ... I just think those people shouldn't be forgotten."

Source : CBC

Inséré 29/01/19 BOEKEN LIVRES BOOKS Enlevé 29/02/19

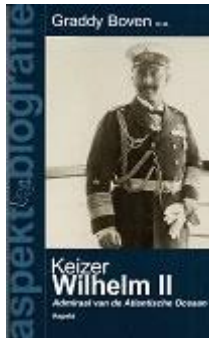
Keizer Wilhelm II -Admiraal van de Atlantische Oceaan



Boven, G. e.a.: paperback 138 blz, met foto's.

In 1888 wordt Wilhelm II de laatste keizer van Duitsland. Een energieke keizer vol ideeën over persoonlijke macht en privileges. Met de komst van Wilhelm II begint voor Duitsland een periode waarin de marine volledig tot bloei komt. In 2008 is het 110 jaar geleden dat een omvangrijke vlootwet door het Duitse parlement werd aangenomen. Het geeft Wilhelm II de financiële armslag om tijdens zijn bewind een daadkrachtige vloot op te bouwen, waardoor de confrontatie met de Engelse hegemonie op zee tot de mogelijkheden gaat behoren. De Duitse keizer wil nieuwe hoofdstukken aan de geschiedenis van de marine toevoegen. Een doel dat hij tot zijn aftreden in 1918 hardnekkig blijft nastreven. Wilhelm II is hoogstpersoonlijk bij de bouw van nieuwe oorlogsschepen betrokken, is een fervent wedstrijdzeiler, maakt maritieme kunstwerken, gaat per schip op vakantie en verblijft soms 200 dagen per jaar op zee. Tijdens de Eerste Wereldoorlog eindigt zijn maritieme ambitie in een nachtmerrie. De ongunstige afloop van de oorlog doet de keizerlijke marine ineens storten en Wilhelm II moet noodgedwongen naar Nederland uitwijken. Daar leeft hij tot 5 juni 1941 in ballingschap op kasteel Huis Doorn. Het boek "Wilhelm II. Admiraal van de Atlantische Oceaan" beschrijft in vier artikelen de verschillende aspecten van Wilhelms maritieme droom. Alles staat wat hem betreft in het teken van de oorlogvoering op zee, want volgens de Duitse Keizer ligt de toekomst van Duitsland op het water.

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van € 18,95 -

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Tackling cargo misdeclaration – a first line of defence against container fires

Stories describing danger at sea change with the times. An increasingly common narrative today is the danger posed by fire that originates with cargo. Cargo fires represent potentially catastrophic risks. The crew is in great danger when a fire breaks out on their ship and every unsuccessful attempt to quickly extinguish the fire increases the risk of serious harm to people, the environment and property. Tackling fires is an even greater challenge on larger container ships, which carry large quantities of cargo, some of it hazardous. In this Gard Insight we will look at the increasing likelihood and severity of container fires originating from the cargo itself. In Gard's experience, most container fires are associated with cargo misdeclaration, which therefore becomes a first line of defence against the risk of fire. However, just as with tackling the fire itself, tackling misdeclaration is a significant industry challenge.



Hazardous cargo

To understand the risk of container fires we need to consider two things – the likelihood of harm and the severity of that harm. Since, as we will see, most container fires involve hazardous cargoes, it is worth considering the quantity of dangerous goods transported by container. Thousands of products are listed in the IMDG Code, which governs the carriage of dangerous goods in packaged form, many of which are containerised. According to an International Cargo Handling Coordination Association (ICHCA) submission to the IMO in July 2017 the United Nations Conference on Trade and Development (UNCTAD) calculated there were approximately 180 million TEU movements in 2016. In their submission ICHCA assumed 60% equates to actual Container Transport Units, 50% of which are laden, and of which 10% contain declared dangerous goods. So ICHCA approximates that around 5.4 million containers annually are packed with dangerous goods. What is more difficult to estimate is the amount of dangerous cargo which is not declared or is misdeclared.

Container fires are increasingly likely

Serious container fires are not new and Gard's Guidance on Freight Containers lists numerous historical cases going back to 1996. However, one data subscription source suggests that the number has been increasing more rapidly in the last decade, which in part reflects the increasing number of containers transported.

Number of significant container fires (originating in cargo) 2007-17

However, even this data appears to exclude a number of significant cases that are known to insurers. For example, Gard is aware of around 10 significant container fires in 2015, four more than the number in the graph. There are also many cases not in the public eye and Gard has learned that one organization, collecting data on behalf of certain container lines, recorded over 20 container fires in 2017. Fortunately, it appears most of these fires were quickly contained by the crew. Extrapolating that figure for all container lines suggests that fires may be occurring on a weekly basis.

Increased severity of container fires

The highest severity of harm from any fire is loss of life and we know from the flag state investigation into one very public container cargo fire in 2012 that several crew members

died and others were injured when an explosion occurred in the early stages of fire-fighting. Crew fatality and injury have occurred already this year in another very public case. In a review of recent significant container fire cases where Gard had an involvement, one crewmember suffered fatal injuries due to a secondary explosion involving calcium hypochlorite.

Container fires also have an environmental impact, not least from all the waste generated from burnt and wet material. The extreme heat generated during many hold fires often means that salvors resort to flooding the cargo spaces with water to contain and extinguish the fire. The 2012 case mentioned above involved disposal of some 8,000 m³ of scrap, 350 m³ of hazardous waste and 30,000 cubic metres of contaminated fire-fighting water. Disposing of waste is also becoming increasingly costly. In a recent Gard case the disposal in Europe of some 130 containers and 5,000 cubic metres of fire-fighting water cost nearly USD 10 million.

Added to the cost of the damage to the vessel, loss of earnings, cargo damage, salvage and General Average expenditure, it is not difficult to see why the 2012 case mentioned above is the subject of ongoing litigation involving hundreds of millions of dollars and countless law firms. That vessel was carrying less than 5,000 TEU. We now have over 21,000 TEU capacity ships and a similar case today would escalate costs and losses towards USD 1 billion.

Gard insured the charterers in the majority of recent cases, and vessel sharing and slot charter arrangements are an important feature of the liner trade in the context of fires, as will be explained further below. It is worth mentioning that, if cargo in a charterer's box is proven to have caused the fire they face the prospect of unlimited liability for the owners' claim for vessel damage and related losses. Whenever an incident occurs all the lines are keen to establish whether their box was the ignition source and they will all know that the high cost of these incidents often cannot be passed onto a shipper having no assets or assets which cannot be reached.



The predominant cause – cargo misdeclaration

Gard has been involved in 13 container cargo fire cases of some significance in the four years 2014-2017, most of which as insurers for charterers. A "dirty dozen" of those are associated with cargo being misdeclared. Six cases involved calcium hypochlorite variously misdeclared as "organic surface"; "calcium chloride"; "disinfectant" and "whitening agent". Although a very common chemical product used for water purification, calcium hypochlorite can be very hazardous because it naturally decomposes and emits heat during decomposition. If that process is accelerated by poor packaging or stuffing that does not

allow heat to escape, or from external heat sources, the rate of decomposition increases and if this becomes violent an explosion can occur. Recognizing the hazards of calcium hypochlorite the International Group of P&I Clubs and the shipping line members of CINS (Cargo Incident Notification System) jointly issue guidelines that can essentially be considered "IMDG Code plus precautions". This contrasts with the attitude of some shippers. An internet search reveals one saying that "No shipping company accepts calcium hypochlorite in dry container, because they believe this is dangerous chemicals for dry container. For the above reason, to ship it in dry container, we must cover the name on the B/L, we show another name like: calcium hydroxide, calcium Chloride, etc. on the B/L. in this way, we can ship it in dry container". Even if this is not a genuine statement from an actual shipper it is perhaps symptomatic.

In one Gard calcium hypochlorite case, unaffected containers booked for a different shipper and container line to those for the container that caused the fire, were identified as suspect from the manifest. Upon inspection they too were found to contain misdeclared calcium hypochlorite. This shows that multiple misdeclarations may exist on larger container vessels, increasing the likelihood of just one causing a fire. Other misdeclarations leading to fires in Gard cases involved charcoal (one was declared as "tablets for water pipes"), lithium ion batteries (declared as "mobile phone accessories"), and paints and aerosols. In most Gard's cases the containers were loaded in Asia, fires were predominantly hold fires and all vessels were fortunately relatively close to assistance that became necessary from salvors/shore services.

The challenges ahead

With more than a quarter of incidents reported to CINS by its liner members involving misdeclaration, the scale of the challenge faced by the shipping industry is as colossal as today's mega container ships. Moreover, there is industry recognition that SOLAS amendments for fire-fighting arrangements have not kept pace with increases in ship size. The risk of fire due to misdeclaration of dangerous cargo is therefore compounded by the difficulty of fighting fires on larger vessels. Additional Class Notations for fire-fighting have only addressed deck fires and many organisations, including IUMI, have called into question the adequacy of fixed CO₂ and water-based firefighting systems in containership holds. Such concerns are not surprising given the presence of air pockets, extreme heat and significant dangers to crew who may not know what is actually in boxes in the vicinity of the fire.

Banning the carriage of hazardous products, such as calcium hypochlorite, is probably not a long term solution. There is simply too high a demand for the product – the IG/CINS guidelines refer to an estimated global production of 400,000 tonnes a year. Outright bans may inadvertently "encourage" misdeclaration because of fewer carriers and higher costs. The sheer volume of bookings now being handled by fewer larger carriers, who naturally want to make the booking process quicker and easier for customers, means that IT tools are vital to help combat misdeclaration. Some carriers have developed sophisticated software that scan bookings and one carrier recently reported a staggering 1,250 potential hits a day. The reality, however, is that all lines need to have similar high standards, as they are sharing space and rogue shippers will always find the weakest link. The illustration below shows this. When Line A, using sophisticated software, rejects a booking of calcium hypochlorite, misdeclared as "water tablets" and Line B, using spot checks, accepts the booking, through space sharing agreements the container ends upon Line A's ship despite the initial rejection.

Tackling misdeclaration at an industry level

Shipping companies who invest in sophisticated software to tackle misdeclaration, as well as enhanced fire-fighting equipment and well drilled crews will tilt the law of averages on their side in the event of a fire. However, as the old proverb says “fire is never a gentle master” and until and unless shippers are deterred from misdeclaration we will continue to see serious harm to people, the environment and property. One reason shippers are able to ship misdeclared cargo today is a lack of policing by the authorities. The Tianjin explosion in 2015 was blamed on illegally stored hazardous materials. More than 165 people were killed and 49 reportedly jailed – the government had good reason to be tough. But being reactive is one thing and prosecuting one rogue shipper of one misdeclared container will inevitably raise cost concerns. Shipping lines fear sharing information on rogue shippers as it may expose them to anti-competition legislation. The same may make it difficult for lines to collaborate on addressing the cost differential for shipping hazardous cargo compared to benign cargo.

In terms of proactive measures, how many states are undertaking inspection programmes on dangerous goods as required by SOLAS? A 2017 IMO submission by the ICHCA calculated, based on reports that member states had submitted to the IMO, that inspections represented less than four out of every 100,000 containers moved and we only talk here about inspections on declared dangerous goods. Ships are often the subject of numerous concentrated inspection campaigns – can the same be said of shippers who manufacture and/or export hazardous cargo? What role should terminals play to try and prevent that cargo from being shipped if misdeclared? When serious fires do occur, do we always see a flag state investigation report? There are more questions than answers.

Conclusion

There are 451 ultra-large containerships over 10,000 TEU operating today, with another 129 on order for delivery into 2020. A global consultancy firm recently predicted a 50,000 TEU ship by 2067 and global thirst for everyday products is relentless. OECD figures have estimated one billion TEU in transit by 2030, with Asia leading the increase in volume. Today over 400 million lithium ion batteries and over 15 billion aerosols are said to be produced annually. All these staggering numbers suggest that the future container fire risk may be worse than it is today. Tackling cargo misdeclaration may well be a first line of defence. However, the industry needs to unite to plug the gaps that exist in that line today. All stakeholders have a role to play. On the one hand ships and crews deserve tougher policing of shippers by states. On the other, the desire to avoid carrying unsafe cargo should always be greater than the desire to carry, which makes the checks and balances at the booking stage important. Perhaps Blockchain technology will have a future role to play in product verification, but until then we are bound to see many more misdeclarations – and probably therefore container fires.

Source: Gard

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

Euronav freight rates slide but beat market expectations

By Alan Charlish

Belgian crude oil shipper Euronav's freight rates in the fourth quarter hit their lowest level since 2012, hurt by excess available tonnage, the company said on Thursday. However, rates were still higher than many analysts had expected, pushing Euronav's shares up 1.4 percent by 0847 GMT. The world tanker fleet expanded by 4.8 percent in 2017 as a large wave of new deliveries offset scrapping, while an agreement in November between OPEC and non-OPEC oil producers to extend output cuts until the end of 2018 has added to pressures on tanker companies. "The typical seasonal rate pattern for the fourth quarter was not observed," Euronav Chief Executive Paddy Rodgers said in a statement. The fourth quarter is typically the strongest for tanker companies because of seasonal oil demand. Euronav said the increasing number of new vessels, crude export reductions and a spike in production outages meant that a recovery in rates early in the quarter did not continue. Fourth-quarter core profit fell 30 percent to \$87.6 million and average daily spot rates for its very large crude carriers (VLCCs) fell 22 percent year on year to \$25,889, it said. The company said that so far in the first quarter its VLCC fleet had earned about \$22,252 per day. Clarksons Platou Securities analyst Frode Morkedal said the rates so far in the first quarter were better than expected. "These are much better than ship broker reports have indicated ... you have to remember that the cash break-even is roughly \$20,000 per day," Morkedal said. Euronav also said that the acquisition of U.S. rival Gener8 Maritime announced in December is proceeding as planned.

source: Reuters (Reporting by Alan Charlish; Editing by David Goodman)

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

Last chance saloon as Philippines awaits EMSA audit results

For the Philippines crewing industry it is a time of waiting after the European Maritime Safety Agency (EMSA) wrapped up its second audit this year of the country's maritime training institutions for compliance with STCW.

The audit lasted from 7 – 24 October and Philippine government and crewing industry officials now face an anxious wait for a draft report due to be sent to Manila in mid-November.



In a process that has now dragged on since 2006, the October audit does really seem to be the last chance saloon for Philippines to get its act together, before a long threatened ban on seafarers.

Not surprisingly Philippines government officials have been expressing confidence in public that it will pass the audit. Philippine Ambassador to Belgium and the European Union Victoria Bataclan expressed confidence last week that the country would pass the audit.

It should be noted similar statements were made at the time of April audit, which in retrospect did not go as well as officials had hoped.

There is actually some precedent for the European Union banning Philippines transportation related activity on safety and competency grounds. It is, however, in the aviation sector. In mid-2010 all Philippines airlines were banned from flying to the EU on the grounds of "serious safety deficiencies" joining a blacklist of 27 countries. The ban was only partially lifted in July allowing Philippines Airlines to once again fly to Europe, which it is set to do so from next month.

While it does show that Europe is willing act where it believes safety is truly compromised cynics would also note that at the time ban was instituted there were no Philippines airlines were actually flying to Europe so there was no real impact beyond a requirement by European travel agents to warn passengers of the blacklisting if the booked an onwards connection outside Europe on a Philippines carrier.

The situation if the Philippines fails the EMSA audit would be rather different as it would have very real impact particularly in terms of officers. Even if there was a grace period for owners and managers to make other arrangements.

A ban would be a very major step, but if the Philippines does not make the grade, there would seem to be limited options in terms of what EMSA can do while remaining credible given the number of chances it has already given the country's maritime training industry.

Posted 29 October 2013

Yet another EMSA audit deadline looms over Filipino seafarers

The saga of the Philippines crewing industry and the European Maritime Safety Agency (EMSA) as to whether the country's maritime training is compliant with the Standards of Training, Certification, Training and Watchkeeping (STCW) Convention has now dragged on for an unbelievable 12 years.

The latest audit deadline is on 31 October this year and yet again the threat that Filipino officers could be barred from serving on European-flagged ships hangs over the world's largest provider of crew for ships.

Given just how many audits the Philippines has failed, or at least not passed to the satisfaction of the European authorities since 2010, when the threats of a ban started to be a real concern, one has to wonder whether it is not just a case of EMSA crying wolf. Indeed back in October 2013 we wrote a story headlined: **Last chance saloon as Philippines awaits EMSA audit results.**

The political nature of the post as head of Maritime Industry Authority (Marina) does not help with a large number of administrators serving in the role since EMSA started asking serious questions.

The latest deadline follows an audit by EMSA in March last year, the results of which were given to the Philippines Maritime Industrial Authority (Marina) in January this year with a range of areas related to the implementation of STCW training identified.



Marina was given a 30 April date to submit a corrective action plan (CAP) with an audit on 31 October this year. However, at the beginning of this year the then Marina administrator Marcial Amaro III was sacked, apparently for travelling overseas too much. The new administrator, military general, Rey Leonardo Guerrero only came into office in April.

To his credit the new administrator has stated: "We must work doubly hard to hurdle this challenge. Failure is not an option. We urge all

agencies and educational institutions involved in this issue to do their part in addressing the observations of the EMSA audit."

However, the administration, which lacks experience, has little time in which to prepare, test and implement new maritime training modules. The industry, clearly concerned that the Philippines does pass the audit has reached out to offer its help.

Executives in the Philippines seem mixed in how concerned they are over the latest EMSA audit deadline. Indeed past evidence does seem to imply that something will be worked out. But is an uncertainty, lasting over a decade, that has done little to improve the image of the Filipino seafaring industry or the perceived quality of its training.

Inséré 04/02/19 DOSSIER Enlevé 04/03/19

Report on the investigation of the groundings of Ocean Prefect Umm Al

Qaywayn, United Arab Emirates on 10 and 11 June 2017



1 SYNOPSIS

On 10 June 2017, the UK registered bulk carrier Ocean Prefect grounded when approaching Ahmed Bin Rashid Port, in Umm Al Qaywayn, United Arab Emirates. The vessel was not damaged and refloated 12 hours later with tug assistance. It then anchored in safe water. On 11 June, the vessel again touched the sea bottom when entering the port, but was able to continue to its berth. However, on this occasion, three of Ocean Prefect's ballast tanks were breached, which required the vessel to dry dock in Dubai for repair. Two harbour pilots were on board during the groundings. There was no pollution and no injuries.

The investigation identified that:

- The pilots had very limited local knowledge and had only previously completed two pilotage acts in the port.
- The effect of a tidal set was influential in both groundings.
- The available tidal stream data for the port was insufficient to plan the safe passage of deep draught vessels using the port's narrow approach channel.
- The positions of the navigation marks used to indicate the limits of the port's approach channel were potentially misleading.
- The port in Umm Al Qaywayn lacked resource and marine expertise.

1.2 NARRATIVE

1.2.1 Entry into Umm Al Qaywayn on 10 June 2017

The UK registered Supramax1 bulk carrier Ocean Prefect had arrived in the Arabian Gulf from Richards Bay, South Africa, loaded with 50649t of coal. The vessel had discharged 15000t of coal at Mina Saqr between 7 and 9 June 2017 before proceeding to Umm Al Qaywayn to discharge the remainder of its cargo.

By 1154 on 10 June 2017, Ocean Prefect had weighed anchor off Umm Al Qaywayn 2, UAE (Figure 1) and was heading towards the pilot embarkation position in preparation for entering Ahmed Bin Rashid Port. The master had the conn and was accompanied on the bridge by the third officer and a helmsman. The wind was south-south-east at 10 knots (kts) and the visibility was good. The vessel was carrying 35649t of coal, and its draught was 9.21m forward and 9.27m aft. The predicted high water in Umm Al Qaywayn was at 1322 with a height of 1.4m.

Meanwhile, the Malta registered bulk carrier San Nicolas, which had sailed from Umm Al Qaywayn, cleared the port's approach channel. Two harbour pilots (pilot and berthing pilot)³ then disembarked from San Nicolas onto the tug Halibut Ann 4. At 1224, the pilots transferred from the tug onto Ocean Prefect 1nm north-north-west of No.1 buoy and No.2 buoys, which marked the approach channel's seaward limit.

Ocean Prefect's second officer escorted the pilots to the vessel's bridge, where they were met by the master. Over the next 12 minutes, the master and the pilots discussed the passage plan into Umm Al Qaywayn in English and covered, among other things, the berthing arrangements, the wind and the use of tugs to turn the vessel and berth port side to. They also discussed the tidal stream. The pilots had detected a slight tidal set during San Nicolas's departure but anticipated that it would be slack by the time Ocean Prefect entered. The pilots had also confirmed their assessment of the tidal stream with Halibut Ann's skipper. During the master and pilots' exchange, the master developed a positive impression of the pilots, who appeared confident and competent. Meanwhile, the second officer took over as the officer of the watch and the third officer left the bridge. None of the master, the second officer or the helmsman had previously visited Umm Al Qaywayn.

At 1236, the master handed the conn to the pilot. The pilot was standing by the centreline gyro repeater at the bridge front (Figure 2) while the berthing pilot was at the chart table completing paperwork. As Ocean Prefect continued towards the channel entrance, the master moved between the bridge front and the radar displays (Figure 3), which were set on the 1.5nm and 3nm range scales. The second officer operated the engine telegraph as required, but he also monitored the radars and periodically plotted the vessel's position on the paper chart on the chart table. The helmsman remained at the steering stand.



Figure 2: View from the bridge over the centreline gyro repeater

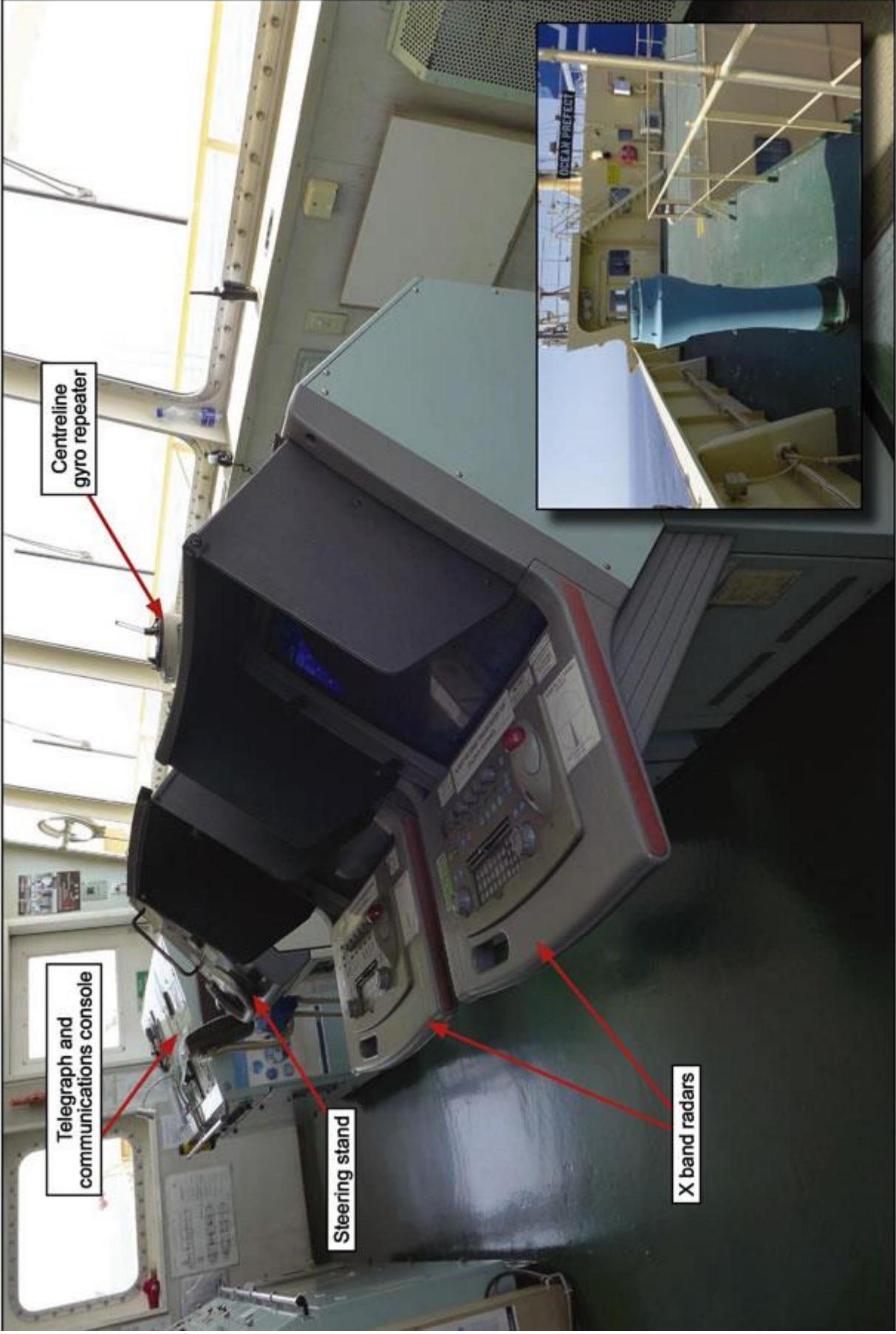


Figure 3: Bridge consoles and port bridge wing

At 1254, Ocean Prefect passed between No.1 and No.2 buoys (Figure 4) and the pilot steadied the vessel on a heading of 167°. The engine telegraph was at 'slow ahead' and the vessel was making good 4.2kts. At 1255:42, the echo sounder alarm activated. The depth displayed on the echo sounder, which was set to show 'depth below the keel', was 1.8m.

At 1256:10, with the master's agreement, the pilot reduced the engine speed to 'dead slow ahead'. He also adjusted the vessel's heading to 165°. A few seconds later, the master informed the pilot that the ship was "drifting to starboard". At 1257 the pilot advised that he may have to reduce speed further. He was conscious of the vessel's speed in relation to its ability to slow down as it approached the berth. The pilot asked if there was any error on the gyro, to which the master replied "no, maybe point five". The master and pilot then discussed the ship's apparent set to starboard and, at 1257:26, the pilot ordered a heading of 163°.

Ocean Prefect's master and the pilot were discussing the timing of slack water when, at 1257:54, the echo sounder alarm again activated. The pilot asked for the course over the ground and the second officer replied "174°". The pilot then ordered a heading of 157° quickly followed by 150°. During the vessel's turn to port, the pilot ordered the helmsman to steady at 155°.

At 1300, Ocean Prefect was heading towards No.3 and No.4 lateral posts. The pilot asked for Ocean Prefect's speed and the second officer replied that it was 4.1kts.

In response, the pilot ordered 'slow ahead'. One minute later, the pilot asked for the course over the ground. The second officer replied "165° [pause] 167°". The pilot then ordered 'slow ahead' but was told by the second officer that the vessel was already at slow ahead. At 1301:43 the pilot ordered 'half ahead'.

At 1302:30, the pilot asked for Ocean Prefect's speed and was informed by the second officer that it was 1.1 kts. The master added that the vessel was probably aground. The pilot immediately ordered a heading of 150° followed by hard-a-port and 'full ahead'.

1.2.2 Actions while aground

Ocean Prefect's speed reduced to zero and, at 1304, the pilot ordered the vessel's engine to 'stop' and the rudder to 'midships'. Two minutes later, the master instructed the chief officer via hand-held radio to sound the ballast tanks and to check the depth of water around the vessel. The chief officer soon informed the master that there was no water ingress and that the vessel was aground in way of No.4 starboard ballast tank. In addition, the chief engineer confirmed that the bunker tanks had not been breached.

The master informed Ocean Prefect's designated person (DP) of the grounding by satellite telephone. With the DP's agreement, the master saved the information on the vessel's simplified voyage data recorder (S-VDR)⁶ and then switched the recorder off to ensure that the saved data was not overwritten.

Over the next 4 hours, the pilot attempted to re-float the vessel with the assistance of Halibut Ann and the harbour tugs Grouper Ann and Mullet Ann 7 , which had sailed from Umm Al Qaywayn at the pilot's request. The attempts were unsuccessful.

In consultation with the DP, pilots and the ship's port agent, Ocean Prefect's master arranged for the vessel to be re-floated on the next high water, which was predicted to be at 0039 the following morning. In preparation, the pilot arranged for an additional tug, Pacific Vortex8, to assist.

By 0030 on 11 June 2017, Grouper Ann and Mullet Ann had been secured on Ocean Prefect's port side and Pacific Vortex its port quarter. The bulk carrier re-floated 45 minutes later and anchored 1nm north of No.1 buoy. While at anchor, the vessel's draught was reduced to 9.15m forward and 9.10m aft by discharging ballast water. The two pilots remained on board to take Ocean Prefect into Umm Al Qaywayn at high water later that day.

1.2.3 Entry into Umm Al Qaywayn on 11 June 2017

At about 1200 on 11 June 2017, Ocean Prefect's master, second officer, helmsman and the two pilots assembled on the bridge. The master and the pilots discussed the proposed entry and berthing plan and agreed to keep the vessel to the east side of the channel in anticipation of experiencing tidal conditions similar to the previous day. The wind was again south-south-easterly at 10kts with good visibility. The high water was predicted to be at 1354.

officer operated the engine telegraph and monitored the vessel's position using radar parallel indices. The helmsman remained at the steering stand. At 1338:38, Ocean Prefect passed between No.3 and No.4 lateral posts on a heading of 163° at 4.8kts. Seconds later, there was an exchange across the bridge between the pilot and the berthing pilot about an alteration of heading to starboard. During the exchange, the pilots gave different starboard helm orders, which prompted the helmsman to seek clarification from the master. The master told the helmsman to follow only his orders. Seconds later, at about 1341, shuddering and heavy vibration was felt on board Ocean Prefect and the vessel's speed reduced for a few seconds to less than 3kts. On the pilot's advice, the master ordered the telegraph to 'half ahead' and then 'full ahead' and steered the vessel towards the centre of the channel. At the same time, the chief officer, who was on the port side of the main deck adjacent to the accommodation, investigated an unusual loud noise and found air rushing from the ballast tank vent 'number 1 port aft' (Figure 6).

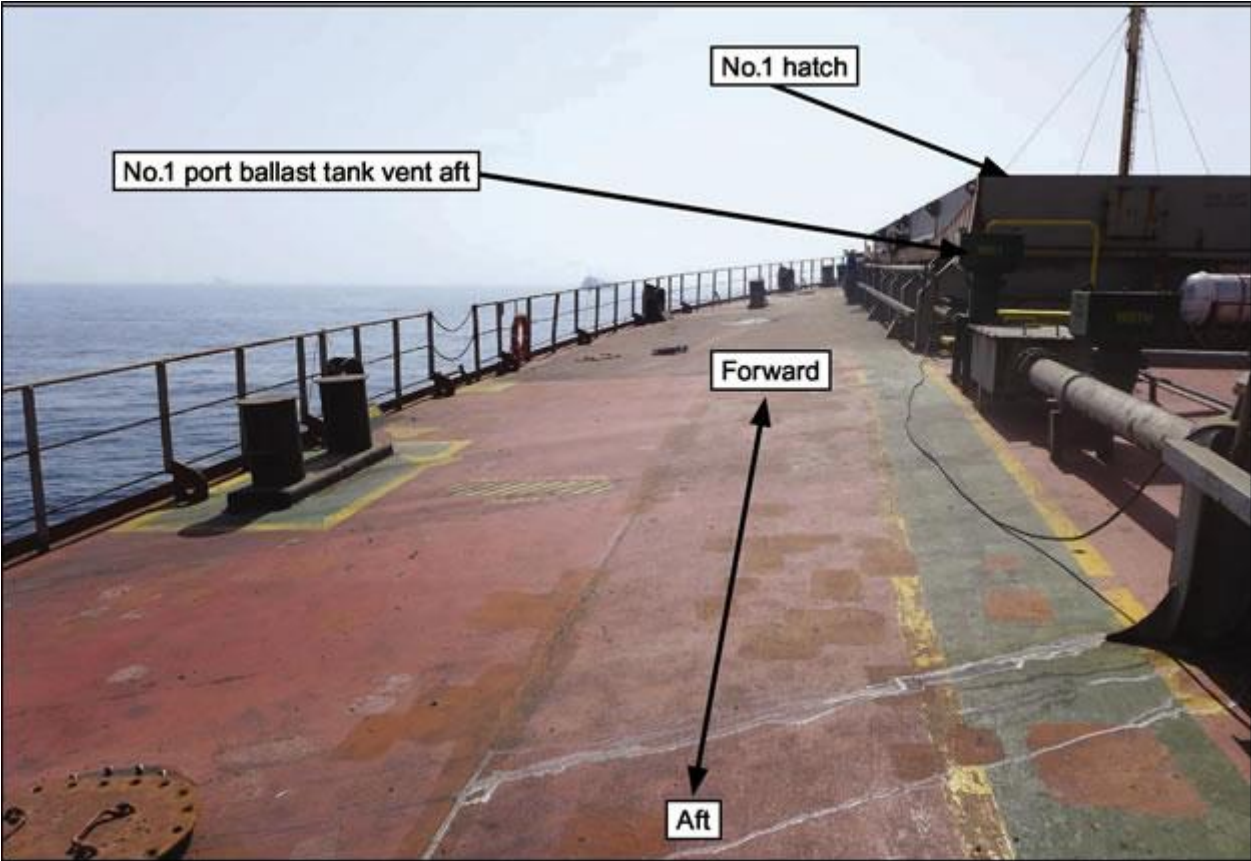


Figure 6: Ocean Prefect's main deck, port side

Ocean Prefect continued towards its berth and the pilot requested the assistance of Grouper Ann and Halibut Ann. The chief officer sounded the forward tanks and identified that No 1, 2 and 3 port ballast tanks were flooding. The vessel had also developed a 3° list to port. By 1500, Ocean Prefect was secured alongside its berth, starboard side to. Cargo discharge commenced 2 hours later. The master's note of protest that was issued on 12 June 2017 included. At about 1342 hrs, when the vessel was within the channel and about 0.18' South of Buoy No. 4, with engines on Slow ahead (speed about 4.2 kts) hit some hard object (under water) on her port side.

1.2.4 Damage and repairs

Ocean Prefect's cargo discharge in Umm Al Qaywayn was completed on 16 June 2017. The vessel then sailed and anchored off Dubai, UAE. On 18 June, a dive inspection identified a series of splits, deep indentations and buckling of the shell plating between frames 184 and 109 on the port side. The largest split was 9100mm in length and 200mm wide (Figures 7 and 8). Inspection of the starboard side identified only abrasion damage to paintwork. With Lloyd's Register's approval, Ocean Prefect proceeded to dry dock in Dubai for repair.



Figure 7: Split in shell plating between frames 169 and 178

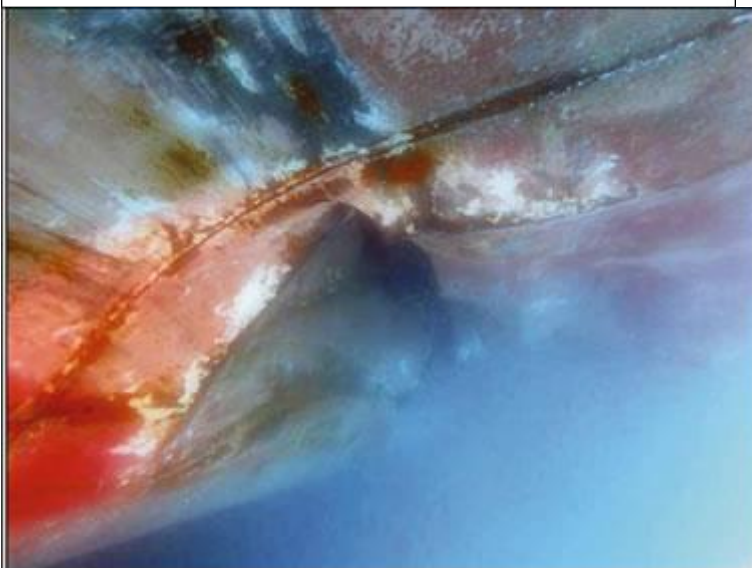


Figure 8: Shell plating deformation between frames 183 and 184

1.3 BRIDGE TEAM

1.3.1 Crew

Ocean Prefect's master was 51 years of age, a Bangladesh national who started his career at sea as a cadet in 1988. He obtained an STCW10 II/2 'Master Unlimited' certificate of competency (CoC) in 1997 and had served as master since 2008. The master joined V. Ships Asia Group Private Limited (V.Ships) in 2015 for which he had completed two

contracts, both on board Ocean Prefect. He last joined the vessel on 19 March 2017 for a third contract. The duration of each of the master's contracts was approximately 4 months. The second officer was 28 years of age and was an Indian national who had been at sea for 10 years. He held an STCW II/1 'Officer in Charge of a Navigational Watch' CoC and had worked for V. Ships since 2013. This was the second officer's second contract on board Ocean Prefect and he had last joined the vessel in February 2017.

The helmsman was 29 years of age and an Indian national who had been at sea for 9 years. He held an STCW II/4 'Rating Forming Part of a Navigational Watch' CoC and had joined Ocean Prefect as an able seaman in March 2017 for a 9-month contract. This was the helmsman's third contract with V. Ships.

1.3.2 Pilots

The pilot was 65 years of age and an Indian national. He had held an STCW II/2 'Master Unlimited' CoC and had worked for 20 years as a senior pilot at Port Rashid, UAE on ships up to very large crude carrier size (over 250,000 deadweight).

The berthing pilot was 49 years of age and an Indian national. He had served at sea since 1990 on a variety of vessels and had gained his STCW II/2 'Master Unlimited' CoC in 1998. He had worked as a pilot in Bahrain between 2012 and 2014 and as a pilot/dockmaster for Dubai Drydock between 2014 and 2016. Since then, the berthing pilot had worked as a port captain for Amasco, a marine services company based in the UAE, managing its fleet of workboats in Dubai.

1.4 VESSEL

1.4.1 General

Ocean Prefect was managed by V. Ships and was engaged on worldwide charters.

The vessel had sailed from Richards Bay, South Africa, on 25 May 2017 on a voyage charter to NORDEN Shipping (Singapore) Private Limited with 50649t of coal bound for port(s) in the UAE or Persian Gulf. Between 7 and 9 June 2017, the vessel discharged 15000t of coal at Mina Saqr, Ras Al Khaimah, UAE, and then anchored off Umm Al Qaywayn. Ocean Prefect had 22 crew comprising Indian, Bangladeshi and Sri Lankan nationals. The vessel's safe manning certificate required a minimum crew of 16. Due to Ocean Prefect's size and manoeuvrability, pilots and tugs were invariably engaged at every port the vessel visited.

1.4.2 Safety management

Ocean Prefect's Safety Management Certificate was issued by the UK Maritime and Coastguard Agency (MCA) in August 2015, following a renewal audit. The audit identified three non-conformities, none of which were related to the vessel's navigation. The audit report included:

From the areas sampled it appeared that the vessel management system (VMS) on this vessel is working adequately, well implemented and generally within the requirements of the ISM Code¹¹.

An internal ISM audit conducted on 15 March 2017 made five observations, of which only 'Improper bridge record keeping' was connected with the vessel's navigation.

Ocean Prefect's safety management system (SMS) was computer-based and accessible to all its crew. It included:

*Passage under pilotage -
Despite the duties and obligations of a Pilot, his presence on board does not relieve the Officer of the Watch from his duties and obligations for safety of the ship. He should cooperate closely with the Pilot and maintain an accurate check on the vessel's position and*

movements. If he is in any doubt as to the Pilot's actions or intentions, he must seek clarification from the Pilot and if doubt still exists, he is to notify the Master immediately and take whatever action is necessary before the Master arrives. Monitoring the pilot's activities - In the event of the vessel deviating from her intended track while under pilotage, or in the event of the Master / Officer of the Watch having doubts as to the vessel's position or intended track, the Master / Officer of the Watch must immediately alert the Pilot of the situation, and request clarification of his intentions. If the Master / Officer of the Watch does not receive what he considers to be a satisfactory response from the Pilot, he must immediately take over the direct control of the vessel until he is satisfied that the vessel is back on her intended track or until the vessel is in a safe position.

1.4.3

Manoeuvrability

Ocean Prefect was 189m in length with a breadth of 32.2m. The vessel was equipped with a slow-speed MAN B&W 6S50MC-C main engine producing 7686kW, which was controlled from the bridge by a slide telegraph. At 'dead slow ahead' when loaded, the vessel's speed through the water was approximately 3.7kts. At 'stop', the vessel required a minimum speed through the water of 4kts to maintain steerage.

Ocean Prefect was fitted with a semi-spade rudder operated by a single hydraulic motor that was controlled from a main steering stand on the bridge centreline. The time taken to move the rudder from hard-over (36.5°) to hard-over was 20.8 seconds. The vessel did not have a bow thruster.

1.5 PASSAGE PLAN

Ocean Prefect's passage plan from Mina Saqr to Umm Al Qaywayn was prepared by the second officer using the format prescribed in the vessel's onboard procedures. For entry into Umm Al Qaywayn, the intended tracks were drawn down the centre of the approach channel on Admiralty chart 3405 (Inset B), which was up to date for correction. The planned passage speed between No.2 and No.6 buoys was 6kts with a minimum under-keel clearance of 0.93m.

Publications referenced in the passage plan included the Admiralty Tide Tables, Admiralty Sailing Directions NP-63 (Persian Gulf Pilot), which stated that pilotage was 'compulsory', and The Guide to Port Entry 12. The Guide to Port Entry included details of the approach channel's dimensions and depth, and stated that pilotage was 'available'.

The United Kingdom Hydrographic Office (UKHO) tidal prediction software 'Total Tide' was also carried on board, which provided the predicted times and heights of high and low water in Umm Al Qaywayn. It did not provide any tidal stream data for the port's approaches.

The master had checked the passage plan and was aware of the narrow channel, the 2kt easterly flood tidal stream indicated on the Admiralty chart and the intended under-keel clearance. He had arranged pilotage through the local agent assuming it was compulsory for such a narrow channel and the requirement for tugs to swing the vessel in the turning basin prior to berthing. The local agent confirmed to the master that the maximum draught for the channel was 9.5m in all tidal states.

For the entry on 11 June 2017, the second officer planned radar parallel indices to assist the monitoring of Ocean Prefect's position in the approach channel. The indices were parallel to the vessel's intended track along the dredged channel at intervals of 0.1nm, and were based on the eastern edge of the Umm Al Qaywayn peninsula.

1.6 UMM AL QAYWAYN

1.6.1 Overview

Umm Al Qaywayn is about 30 miles north-east of Dubai and is one of the seven sovereign emirates forming the United Arab Emirates. Its port, Ahmed Bin Rashid Port and Free Zone was wholly owned by the Government of Umm Al Qaywayn and operated by The Ahmed Bin Rashid Port and Free Zone Authority. The port, customs facility and the free zone were managed separately.

The port's general manager had overall responsibility for its operations and had been in post for 30 years. He did not hold any marine-related qualifications. The port did not operate any tugs or other vessels and it outsourced the repair, maintenance and cleaning of its navigational marks and buoys. VHF channels 16 and 10 were monitored during office hours.

The port employed approximately 70 workers (mainly stevedores and line-handlers) who handled a container feeder vessel engaged on a regular service. The handling of bulk cargoes was usually outsourced. In 2016, the port handled 19 vessels carrying a total of 570000t of bulk cargoes, mainly comprising coal and aggregates. During the first 9 months of 2017, it handled 15 bulk carriers (450000t of bulk cargo).

Vessels' arrivals and departures were arranged by the local agents, and bulk carriers were permitted to move in the port only during daylight.

1.6.2 Chart and approach channel

The approach channel to Umm Al Qaywayn was shown on inset B of Admiralty chart 3405 at a scale of 1:30000 (Figures 1, 4 and 5). The chart was the largest scale available for the area and was last published on 26 September 2013. The chart's source data diagram shows that the information regarding the dredged channel was based on commercial plans received by the UKHO between 1979 and 2009. The UKHO had not received confirmation that the dredging had been completed or any of the results of any later surveys. During the investigation, the port authority indicated that the channel was last surveyed in 2016 but it did not release the survey results to the MAIB.

The approach channel as shown on Admiralty chart 3405 was 100m wide, dredged to a depth of 10m and was marked by No.1 and No.2 lateral buoys at its seaward end. The distance between the buoys was 225m. To the south of No.1 and No.2 buoys, the channel was marked by lateral posts positioned outside the dredged area. For example, No.4 and No.6 posts were 50m and 30m to the east of the channel respectively. The distance between the entrance buoys and No.3 and No.4 posts was 1290m, and the distance between No.3 and No.5 posts was 955m. The channel's axis from seaward to No.6 post was 167°; the axis from No.6 post to the turning area was 180°.

In addition to Admiralty chart 3405, Sailing Directions, and the Guide to Port Entry, information on Ahmed Bin Rashid Port was published by the port's authority in a leaflet that was focused on the details of the facilities and berths available. It also stated that pilotage was 'available'. The leaflet was not made available to ships prior to their arrival.

1.6.3 Tidal stream

The information available regarding tidal streams in the approaches to Umm Al Qaywayn was limited to the tidal arrow shown on Admiralty chart 3045 that indicated an easterly flood stream at a rate of 2kts. The symbol was first included on to a new edition of the largest scale chart of the area in 1978 (Admiralty chart 3714) and was based on a navigation warning 8/78 issued by the Middle East Navigational Aids Service (MENAS) concerning dredging works in the channel. The navigation warning included:

Shipping is warned that cross-currents recorded from west to east round head of groyne on flood tide exceed 2kts.

This information was also included in Sailing Directions, which stated:

The ingoing tidal stream sets across the fairway close N of the groyne, at times in excess of 2 kn; vessels using the channel should do so with caution.

1.6.4 Pilotage

The Ahmed Bin Rashid Port and Free Zone Authority did not employ pilots. It required bulk carriers to have tugs available, but stated that pilotage was only recommended. However, the Authority's viewpoint was that bulk carriers would not enter the port without a pilot, who could be arranged via local agents. Until 5 June 2017, when San Nicolas arrived in Umm Al Qaywayn, the pilotage in the port had been undertaken over the previous 25 years by one pilot, whose company, Ektra Shipping, also operated four tugs in the port. The pilot used the tugs to assist vessels manoeuvring in the turning area.

Ocean Prefect's pilots had been arranged by Union Shipping, the most frequently used ships' agent in Umm Al Qaywayn. The agent had received complaints from ship managers regarding the cost of the Ektra pilot and, in early 2017, it met with the berthing pilot and the port's general manager. During the meeting, the berthing pilot was given permission to offer pilotage services on behalf of Amasco. Later, the pilot and the berthing pilot conducted a 1-day familiarisation of the port's approaches in a tug. Among other things, the pilots checked the depths in the dredged channel and monitored the tidal stream. The port authority did not provide the pilots with any survey data and the pilots were under the impression that the lateral posts along the dredged channel marked its outer limits. Prior to Ocean Prefect, the only acts of pilotage completed by the pilots in Umm Al Qaywayn had been on board San Nicolas.

1.6.5 Previous incidents

No records of previous marine accidents in Ahmed Bin Rashid Port were available. However, anecdotal evidence from several sources indicated that up to six vessels had previously grounded outside the dredged channel north of No.3 and No.4 lateral posts. Reportedly, none of the vessels concerned were damaged and all were re-floated successfully.

1.7 PILOTAGE IN THE UNITED ARAB EMIRATES

The UAE Federal Law No.26 of 1981, also known as the UAE Maritime Code, is the law for the regulation and governance of shipping practices in the UAE. Concerning pilotage, sections 303 to 314 of the law included, inter alia; the regulation of compulsory pilotage, losses and liability and responsibilities. The law did not contain provisions regarding pilot competency or authorisation.

1.8 MASTER/PILOT GUIDANCE

The International Maritime Organization (IMO) Resolution A96 0 – Annex 2, Section 2 – Duties of master, bridge officers and pilot includes:

2.1 The pilot's presence on board does not relieve the master or officer in charge of the navigational watch from their duties and obligations for the safety of the ship. It is important that, upon boarding the ship and before pilotage commences, the pilot, master and other bridge personnel are aware of their respective roles in the safe passage of the ship.

2.2 The master, bridge officers and pilot share a responsibility for good communications and understanding of each other's role for the safe conduct of the vessels in pilotage waters.

2.3 Masters and bridge officers have a duty to support the pilot and to ensure that his/her

actions are monitored at all times. Guidance on best practice concerning the master/pilot relationship has also been issued by several industry bodies, including the International Chamber of Shipping (ICS). The ICS Bridge Procedures Guide includes: 5.5. ..The pilot should effectively communicate expert local knowledge, information and advice to the Bridge Team in English or a defined working language that is understood by the Master, Pilot and Bridge Team. Pilots should in turn be supported by all appropriate shipboard personnel in the execution of safe navigation.

SECTION 2 - ANALYSIS

2.1 AIM

The purpose of the analysis is to determine the contributory causes and circumstances of the accident as a basis for making recommendations to prevent similar accidents occurring in the future.

2.2 GROUNDING 10 JUNE

Ocean Prefect was set to the west of the dredged channel at the entrance to Umm Al Qaywayn by the tidal stream. On passing between No.1 and No.2 buoys at 1254, the pilot steadied the vessel on a heading of 167° , the channel's axis, but it was immediately set to the west. At 1258, AIS data shows that although the vessel was heading 164° , it was making good a course of 175° and was about 50m to the west of the dredged channel (Figure 4). To have such an effect, the tidal stream must have been setting to the west at a rate of up to 1kt.

That the pilot initially steadied Ocean Prefect on the channel axis of 167° indicates that he had not anticipated a tidal set. His later heading adjustments to 165° at 1256:10 and to 163° at 1257:26, which were only very minor alterations, and his enquiry regarding a gyro error, also indicate that he had not fully appreciated the cause or the extent of the set experienced. The pilot's perspective was influenced by an expectation that the tidal stream would be slack, as the entry was within 30 minutes of the predicted time of high water and he had detected only a slight set during the outbound passage on board San Nicolas. Consequently, his focus was on being able to stop the vessel in readiness for berthing, which is shown by the reduction from 'slow ahead' to 'dead slow ahead' at 1256. It was not until 1258, following discussion with Ocean Prefect's master about the set and being informed by the second officer that the course over the ground was 174° , that the pilot took more positive action. However, although he adjusted the vessel's heading to 155° followed by an increase in engine speed to 'slow ahead', Ocean Prefect remained between 50m and 75m to the west of the dredged channel. This does not appear to have been registered by the pilot, who was navigating solely by eye, or by the master, possibly because Ocean Prefect's bow was now heading between No.3 and No.4 lateral posts (Figure 9).

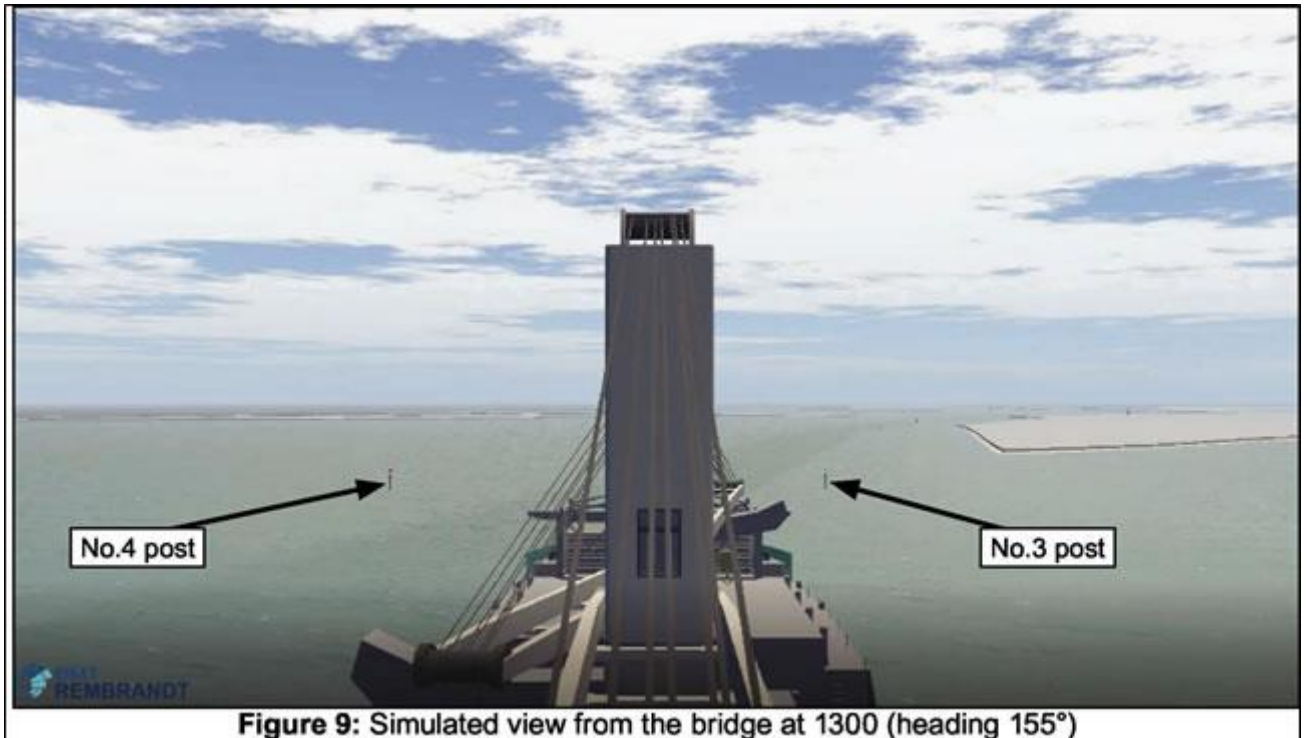


Figure 9: Simulated view from the bridge at 1300 (heading 155°)

2.3 GROUNDING 11 JUNE

Figure 5 shows that Ocean Prefect's track after passing the lateral buoys until No.3 and No.4 buoys was largely as intended. The differences between the vessel's heading and its course over the ground indicate that a westerly tidal set at a rate of up to 1kt was again experienced. However, the tidal stream had been anticipated and the headings steered countered the tidal set and Ocean Prefect remained within the channel.

However, the tidal set diminished soon after Ocean Prefect passed No.4 post at 1339. This was not anticipated or noticed by the master, or the pilots, and the bulk carrier's heading remained at least 1° to the east of the channel's axis of 167° until the vessel encroached onto the eastern limit of the dredged channel and grounded at about 1342. In view of the vessel's position, it is almost certain that it struck into the side of the dredged channel, but this cannot be confirmed without reference to up to date survey data of the area.

2.4 THE MASTER'S PERSPECTIVE

2.4.1 Passage plan

Neither the master nor the second officer had previously visited Umm Al Qaywayn and had to rely solely on the onboard charts and publications to plan the passage into the port. At first glance, the entry via the dredged channel was straightforward as the channel was marked and required only one significant course alteration.

However, the channel was only 100m wide and 10m deep, and for larger vessels such as Ocean Prefect, with a beam of over 32m and a draught over 9m, there was little margin for error. Consequently, the master's arrangement of having a pilot to assist with the entry, although a usual practice, was a necessary precaution on this occasion. Given the navigational constraints, the need for tug assistance to berth and the limited information available, it would have been potentially unsafe to attempt entry without one.

2.4.2 10 June

After the pilots boarded Ocean Prefect on 10 June, the master and pilot exchange appears to have been clear and comprehensive and completed well before the vessel entered the dredged channel. That the pilots came across to the master as both confident and competent during the exchange, could only have increased his level of trust in them. Such trust might have been less forthcoming had the master known that the pilots had completed their first pilotage act on board San Nicolas and Ocean Prefect's entry was their second.

Nonetheless, it is evident from the master's interventions regarding the vessel's set to the west soon after it had passed between No.1 and No.2 buoys, and the second officer's provision of radar information, that Ocean Prefect's bridge team did not allow the pilots to act in isolation. The master monitored the vessel's movement closely and continued to challenge the pilot about the set until the vessel's heading was altered to 155°. In this respect, the master's action accorded with the IMO and ICS guidance (paragraph 1.8). That he did not intervene and take the conn before the vessel grounded, which would have been an appropriate action in accordance with the vessel's SMS (paragraph 1.4.2), was because the pilot's actions to steer the vessel back into the dredged channel appeared to have been sufficient (Figure 9).

2.4.3 11 June

Ocean Prefect's master's trust and confidence in the pilots would have been shaken following the grounding on 10 June and a more cautious approach to the second attempt at entry was warranted. Therefore, from the master's perspective, keeping the vessel on the eastern limit of the channel on 11 June would have seemed an appropriate action to take. The conditions were identical, and it was logical to assume that a similar tidal set would again be an influence.

2.5 LOCAL KNOWLEDGE

A fundamental contribution that pilots are expected to make to vessel safety is their detailed knowledge of a port's environment and operations. In this case, the embarked pilots, although experienced elsewhere, were not fully familiar with Umm Al Qaywayn and its approaches. They had not been given access to recent survey data, their survey of the dredged channel and the tidal streams was very limited and their only previous acts of pilotage in Umm Al Qaywayn had been on board San Nicolas, immediately before embarking on board Ocean Prefect. In addition to their lack of familiarity with the variability of the tidal stream, that more positive action was not taken on 10 June to steer the vessel into the dredged channel, indicates that the pilots also did not appreciate the extent of the shoal waters to the north of No.3 and No.4 lateral posts or have any mechanisms, such as a clearing range to ensure the vessel kept clear of them.

2.6 TIDAL STREAM DATA

Other than the predicted times of high and low water, tidal information for Umm Al Qaywayn was limited to the tidal stream arrow shown on Admiralty chart 3405 and the reference to a westerly flood stream in the Sailing Directions. Although the information regarding the direction and rate of the maximum flood might have been correct, the absence of comprehensive tidal stream data in the area increases the difficulty in planning and executing a passage into and from Umm Al Qaywayn.

With an axis of 167°/347° between the lateral buoys and No.3 and No.4 posts, the dredged channel runs almost perpendicular to the prevailing tidal stream. Therefore, the tidal stream's effect on transiting vessels is potentially significant. Although this is mitigated to some degree by only allowing the movement of larger vessels around high water, when

the tidal stream can usually be expected to be slack, the circumstances of both of Ocean Prefect’s groundings indicate that this is not always the case. The grounding on 11 June also indicates that the rates and directions of the tidal stream vary at different points along the channel.

The importance of accurate tidal stream data in the approaches to Umm Al Qaywayn is increased by the narrowness and depth of the dredged channel, the length and breadth of larger vessels and their speed restrictions due to squat. As the channel is only 100m wide, the extent to which a vessel can safely deviate from the base axis of 167°/347° is determined by its length and its position relative to the channel’s centre. During Ocean Prefect’s entry on 10 June, at a speed of 4kts, the vessel would have had to steer approximately 152° to counter the 1kt tidal stream and make good a course of 167°. As a result, the vessel’s extremities would have been perilously close the channel’s limits (Figure 10). Consequently, for large, deep draught vessels, slack or near slack water is a prerequisite of safe passage.

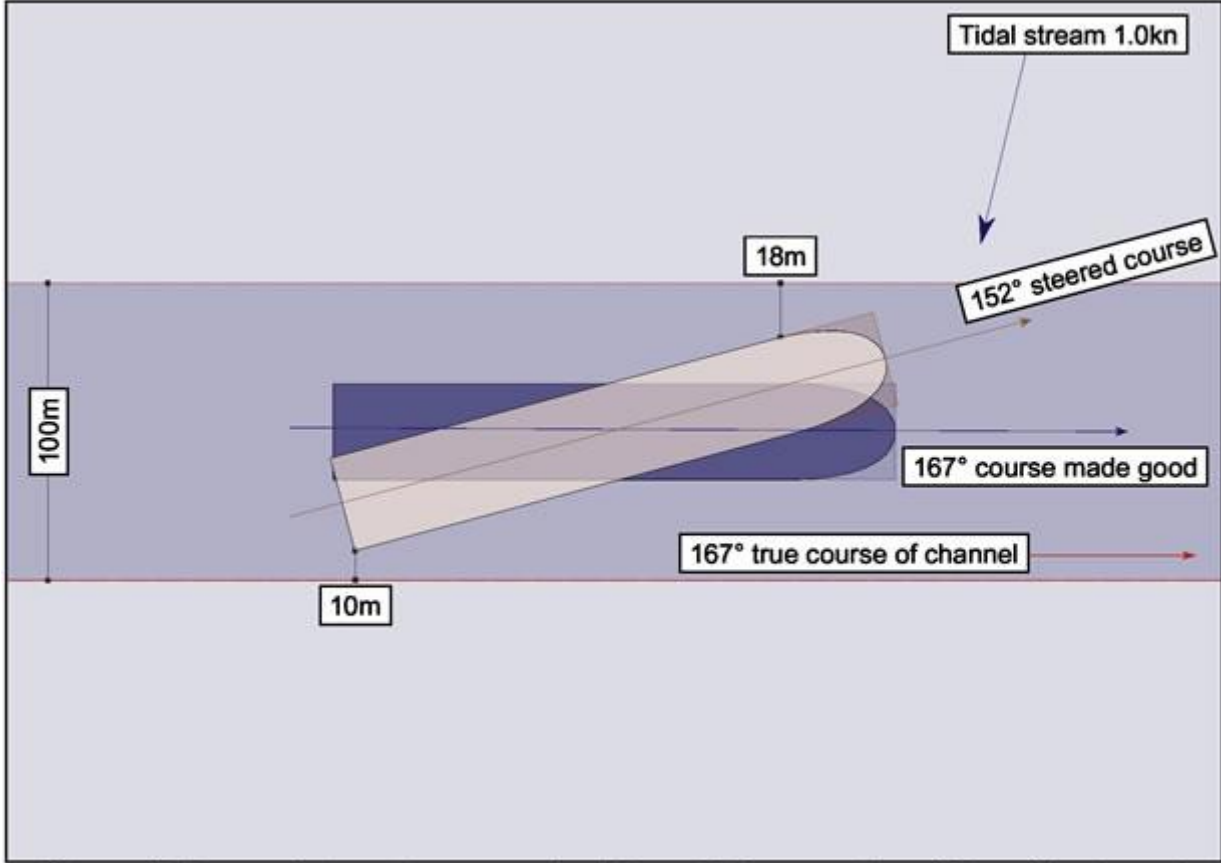


Figure 10: Bow and stern clearances of a 189m x 32.3m vessel in a 100m wide channel

2.7 NAVIGATION MARKS

The use of lateral posts to mark much of Umm Al Qaywayn’s approach channel is usual in areas not suited to buoyage. In this case, the distances between the lateral marks (1290m from the gate buoys and No.3 and No.4 posts, and 955m from No.3 post to No.5 posts) were sufficiently short for the marks to provide a visual indication of a vessel’s position throughout a transit. However, that the posts were sited up to 50m outside the channel, which is not clear from Admiralty chart 3405 due to its scale, was potentially misleading. On 11 June 2017, it is highly likely that when Ocean Prefect passed No.4 post, the master was under the impression that the vessel was not yet on the eastern limit of the safe water.

2.8 PORT RESPONSIBILITIES

Ahmed Bin Rashid Port is a small port, and its lack of resource and the absence of marine expertise had resulted in the port's management taking little interest in the safe passage of visiting vessels. This was particularly evidenced by its approach to pilotage, for which it did not accept any responsibility. Consequently, the Amasco pilots, who had very limited local knowledge, were permitted to operate in the port to appease local agents by facilitating competition and bringing down pilotage costs for shipowners. The port also did not even provide the Amasco pilots with up to date survey data.

In many parts of the world, port authorities are expected to provide visiting vessels with the information necessary to ensure their safe passage within their ports. In this case, a lack of comprehensive tidal stream and up to date survey data restricted the ability of Ocean Prefect's master and second officer to plan the vessel's passage along the dredged channel. The tidal stream set the vessel across the dredged channel in a manner that could not be anticipated from the available information and the positions of the lateral posts in relation to the channel's limits were potentially misleading.

In view of these factors, and that the use of a local pilot is essential for the safe passage of larger vessels such as Ocean Prefect, a more structured approach to pilot authorisation and the provision of tidal stream data and accurate visual references in the dredged channel, such as port entry marks, warrants consideration.

SECTION 3 - CONCLUSIONS

3.1 SAFETY ISSUES DIRECTLY CONTRIBUTING TO THE ACCIDENT THAT HAVE BEEN ADDRESSED OR RESULTED IN RECOMMENDATIONS

1. The tidal stream in the approaches to Umm Al Qaywayn immediately before high water set to the west at a rate of up to 1kt. It was not slack as anticipated by Ocean Prefect's master and pilots. [2.2, 2.3 and 2.6]
2. On 10 June, neither the pilots nor the master recognised that the action taken to counter the tidal stream and steer the vessel into the dredged channel before it encountered shoal water was insufficient. [2.2]
3. On 11 June, in view of the tidal set experienced the previous day, it was logical to keep Ocean Prefect towards the eastern side of the dredged channel. [2.3 and 2.4.3]
4. The tidal stream experienced along the dredged entrance channel into Umm Al Qaywayn was variable. [2.3 and 2.6]
5. Pilotage was not compulsory in Umm Al Qaywayn but information on the port and its approaches was limited. [2.4.1]
6. The embarked pilots, although experienced elsewhere, were not fully familiar with Umm Al Qaywayn and its approaches, and had completed only two previous pilotage acts in the port. [2.5]
7. The tidal data available for Umm Al Qaywayn was limited to the predicted times and heights of high and low water and the direction and maximum rate of the flood stream close offshore. [2.6]
8. The narrowness of the dredged channel and the potential for squat limited the action that could be taken on board larger vessels to counter the effects of a tidal set and to remain within the dredged channel. [2.6]

9. The lateral posts marking the dredged channel were sited up to 50m outside the channel, which was not clear from Admiralty chart 3405 due to its scale, and was potentially misleading. [2.7]
10. Ahmed Bin Rashid Port lacked resource and marine expertise and took no responsibility for pilotage. Ocean Prefect's pilots were permitted to operate in the port to provide competition and reduce pilotage costs for shipowners. [2.8]

SECTION 4 - ACTION TAKEN

4.1 MAIB ACTIONS

4.1.1 MAIB

The MAIB has: On 7 December 2017, presented the safety issues identified in Ocean Prefect's groundings to the Director of Maritime Transport Affairs of the UAE Federal Transport Authority (FTA).

4.1.2 Actions taken by other organisations

The Government of Umm Al Qaywayn has: In November 2017, awarded a concession to the Hong Kong based port operators, Hutchison Ports, to operate the container and bulk terminal facility at Ahmed Bin Rashid Port in Umm Al Qaywayn (UAQ).

The Port Authority has:

Agreed with the UAE Transport Authority that:

- Pilotage for vessels calling at the container and bulk terminal facility will be arranged only through the port authority.
- The port authority will provide navigational information to visiting vessels.
- Leading lights will be established in the approach channel.
- Vessel movements will be controlled and a port control facility will be established.
- A hydrographic survey of the port and its approaches will be conducted.
- Navigational aids will be upgraded.

V. Ships (Asia) Private Limited has:

Issued a safety bulletin detailing the circumstances of Ocean Prefect's groundings in Umm Al Qaywayn, which included the following lessons:

- The master / Bridge Team must be aware that the Pilot orders are for consideration and where appropriate, they should challenge the Pilot as required to ensure the safety of the vessel. The bridge team must remain alert to the vessel's passage during pilotage and not be lulled into a false sense of security that the pilot's actions are failsafe.
- Chart data for harbour approaches and for critical areas of navigation have to be taken as accurate. However, consideration should be given to local port conditions where silting or other natural phenomenon's are known to exist which affects the accuracy of the chart data. Extra caution is to be exercised when transiting such areas and this is where the advice of the pilot must be sought.
- When calling at the port of Umm Al Qaywayn, Master pilot exchange should discuss this issue. [sic]

Inséré 06/02/19 BOEKEN LIVRES BOOKS Enlevé 06/03/19

“Terug naar de Oost”

BOEKBESPREKING door : Frank NEYTS

Als nummer 115 in de reeks 'Werken van de Linschoten-Vereeniging' verscheen recent bij Walburg Pers het boek "Terug naar de Oost. De reis van VOC-chirurgijn Gijsbert Heeck, 1654-1656". Bezorgd en ingeleid door Berend Jan Terwiel en Peter Kirsch. Drie keer maakt Gijsbert Heeck uit Bunschoten als scheepschirurgijn in dienst van de Vereenigde Oostindische Compagnie een reis naar de Oost. Na twee reizen in 1636 en 1641 vestigt hij zich als chirurgijn in zijn geboorteplaats. Zware tegenslagen in zijn persoonlijk leven doen hem besluiten zich weer aan te melden bij de VOC. In 1654 monstert hij aan op het schip 'Verenigde Provinciën' voor de kamer Zeeland. Joost, zijn negenjarige oudste zoon uit zijn eerste huwelijk, mag met hem mee. Het verslag dat Gijsbert Heeck bijhield van zijn belevenissen tijdens deze reis is bewaard gebleven. Niet alleen bevat het verslag de oudste beschrijving van de Kaap-kolonie, die enkele jaren tevoren door Jan van Riebeeck was gesticht. Ook Heecks observaties in Batavia zijn interessant, omdat hij de stad vergelijkt met de situatie die hij tien jaar eerder aantrof. Maar vooral Heecks verblijf in Siam maakt zijn reisverslag – ook voor hedendaagse Thaise historici – tot een belangrijke historische bron. Heeck maakt gebruik van zijn goede contacten in Batavia om overgeplaatst te worden op een schip dat naar Paliacatte, op de Coromandelkust zeilde. Daar maakte hij, soms samen met zijn zoon, excursies in het binnenland. De observaties die hij over dit deel van India optekende worden hier voor het eerst gepubliceerd. Na enkele omzwervingen keert Heeck in 1656 terug op Batavia. Op 25 juli, vlak voor zijn aankomst, stopt zijn verhaal abrupt: zijn papier is op en hij kondigt aan zijn verhaal later te vervolgen. Het manuscript van zijn derde reis belandde begin 20ste eeuw in het Nationaal Archief in Den Haag. Het vervolg is helaas nooit gevonden. "Terug naar de Oost" (ISBN 9 789462 491540) telt 405 pagina's, werd als hardback uitgegeven. Het boek kost 51,41 euro. Aankopen kan via de boekhandel of rechtstreeks bij Uitgeversmaatschappij Walburg Pers, Postbus 4159, 7200BD Zutphen. Tel. +32(0)575.510522, Fax +31(0)575.542289. . 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

Inséré 06/02/19 NIEUWS NOUVELLES Enlevé 06/03/19

Faulty Ruling in Western Sahara Bulker Arrest

BY HASSANIA CHERKAOUI

In April 2017, a cargo of phosphates was loaded on the bulker **CHERRY BLOSSOM** at El Aaiun, Western Sahara. The cargo was part of a regular series of phosphate shipments sold freight-on-board by Moroccan firm OCP SA to New Zealand-based Ballance Agri-Nutrients Ltd. On May 1, 2017, the vessel was arrested in Port Elizabeth, South Africa, where she had called for bunkers, at the request of The Polisario Front, a national liberation movement in Western Sahara. The Polisario Front claimed ownership of the phosphates on board on the grounds that this cargo was a part of the national resources of Western Sahara and belongs to its people. On June 15, a court in Port Elizabeth decided to detain the vessel and send the case to the High Court. On February 23, 2018, the High Court made a surprising decision to order the sale of the cargo. By this judgment, the ownership of the cargo was vested in The Polisario Front. However, no purchaser came forward. In order to gain the release of the vessel, the shipowner decided to lodge an application

seeking the judicial sale of the cargo. The shipowner acquired it and returned it to OCP SA for one dollar. This court procedure was an intrusion in a political process being carried out under the auspices of the United Nations Security Council on the question of the sovereignty of Western Sahara. The political points invoked by the decision cannot be legally defensible, as the case involves only commercial transactions between parties in contracts.

Unsubstantiated claim of The Polisario Front

The claim in question constitutes a 'maritime claim' as defined in Section 1(1) of the South African Admiralty Jurisdiction Regulation Act of 1983. The Polisario Front's claim over the cargo is among the list of 'maritime claims'. The claim of The Polisario Front supposes that it has a claim against the owner of the cargo. The owner was not OCP SA, but the New Zealand freight-on-board buyer to whose ownership the cargo was transferred upon the completion of loading.

The action of The Polisario Front was considered admissible by the South African Court. However, the Court should have investigated the conditions of the sale of the cargo that followed the International Commercial Terms (Incoterms). In addition, the cargo was seized on board the ship and remained on board. According to the usual maritime procedure, the cargo should have been unloaded from the ship to shore or to a bonded warehouse to allow the ship to be released. The court decided not to offload the cargo and used the ship as a floating warehouse against the shipowner's interest. Through the court's decision, The Polisario Front did not effectively seize the cargo, but rather the ship. This seizure was not justified because the ship had committed no offense.

Issues with the court's decision

The law applicable to the present case is the Sea Transport Document Act, 2000 of the Republic of South Africa. According to Section 2 of this Act, it is applied "to any proceedings instituted in the Republic in any court or before any arbitration tribunal after the commencement of this Act in respect of any sea transport document [a bill of lading]." The bill of lading establishes the existence of the contract of carriage by sea and its conditions. It represents the goods, and the detention of the bill of lading is equivalent to the possession of the cargo. The beneficiary of the bill of lading is, according to Section 3 (2) of the Act, the person who is "in possession of the original sea transport document, or possession of that document is held on that person's behalf, and that person is a) the person to whom the document was issued; b) the consignee named in the document; or c) a person to whom the document has been transferred." It should be noted that this title is not a title of property. Indeed, it transfers only the rights of claim. But the bill of lading is endorsed with great security, which gives it an evidential value. According to Section 5 of the Sea Transport Documents Act of 2000, "any right or obligation under the bill of lading has full force and effect." Thus The Polisario Front was never the seller, the buyer or a holder in due course of the cargo. The High Court's ruling was neither correct nor in accordance with international standards for maritime claims.

Source :MAREX

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Get a history, become criminal: de visserspiraten van Walraversijde

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INLEIDING

Vissers - en bij uitbreiding iedereen die niet tot de toplaag van de bevolking (adel, tophandelaars, ...) behoorde - komen zelden in de historische geschreven bronnen voor. Deze bronnen zullen voornamelijk de aandacht vestigen op de belangrijkste personen van de samenleving. Echter, vanaf het moment dat iemand een crimineel feit pleegde of iets deed dat afweek van de normale gang van zaken, rapporteren de historische bronnen ook onder die toplaag van de bevolking. Zo niet anders voor de visserspiraten van Walraversijde.

ZEEVISSERS IN HET MIDDELEEUWSE VLAANDEREN

Waar landbouwdorpen in het middeleeuwse Vlaanderen (bv. Middelkerke, Slype, ...) bij uitbreiding het volledige Noordzeegebied bij wijze van spreken uit een kerk en vijf boerderijen bestonden, leefden zeevissers in grote gemeenschappen. Walraversijde, één van de grotere visagglomeraties langs onze kust, had vermoedelijk zo'n 500 à 800 inwoners. De vissers waren net zoals vandaag de dag vaak lang weg van huis. Aan de top van de hiërarchie in de 12de eeuw, 13de eeuw stonden de kapiteins: zij waren de eigenaars van de schepen tot aan de 15de eeuw. De middeleeuwse zeevissers waren ook gekend omwille van hun kennis van de zee en de zeeroutes. Het waren kennisdragers en ze werden ook geregeld geconsulteerd omwille van die kennis. Ze waren daarenboven berucht voor hun gewelddadigheid en de kaapvaart. Vissers werden ook altijd geassocieerd met marginaliteit. De "landmensen" of de landbouwersbevolking achter de duinen vreesde hen. De vissers trotseerden steeds de gevaren van de zee en toch kwamen ze keer op keer terug: "de visschers die wonen up te yden (= de haventjes) van der zee die ghaen bi daghe ende bi nachte due de vorseide dunen upt vloedeninc te hare scepen om te vaerne ter zee". Er heerste een soort wantrouwen t.o.v. de middeleeuwse zeevissers. Vis was nochtans een heel belangrijk bestanddeel van de middeleeuwse voedselcultuur. Vis kwam heel geregeld aan tafel en kon ook een heel valabel feestmaal opleveren. Fig. 1 toont een vismarkt uit de 14de eeuw waar grote vissen in pepersaus, zoute paling en gebakken snoek in mosterdsaus werden geserveerd als hoofdmaaltijd.



Fig. 1 Een vismarkt (Italië, 14de eeuw).

Er waren meer dan 30 vissershavens en aanlegplaatsen aan de middeleeuwse Vlaamse kust (12de - 14de eeuw) gaande van Witzant (het huidige Wissant in Frankrijk) tot en met Biervliet:

Witzant, Dijkland, Zandgat, Hildernesse, Kales, Peternesse, Coulogne, Marck, Ooie, Sint-Folkwin, Loon, Mardyck, Sinte, Duinkerke, Hyte, Tetegem, Yde van Zuydcoote, Ghyvelde, Koksyde, Nieuwe Yde, Nieuwpoort, Lombardsyde, Walraversyde, Oostende, Blutsyde, Yde van Wenduine, Scarphout/Blankenberge, Wayn, Heist, Muide, Slepeldamme, Koksyde bij Sluis, Waterdunen, Hugevliet, Lapscheure, Biervliet,...

DE RELATIE OVERHEID - ZEEVISSERIJ

De zeevisserij heeft altijd op één of andere manier in contact gestaan met de overheid. De visserij was een manier om in je brood of levensonderhoud te voorzien en de vissers stonden aan de marge van de samenleving. Maar de zeevisserij was niet zo maar een overlevingsstrategie als dusdanig. Ze leek al van in de volle middeleeuwen ook voor een stuk gestimuleerd te zijn door de overheid. In de 10de eeuw was de jacht op zeezoogdieren een vorstelijk recht (fig. 2). De graaf van Vlaanderen nam niet zelf de harpoen ter hand maar deelde dat recht uit. In 1121 schonk de graaf een "pinam de cetam" (een walvisstaart) aan de abdijs van Sint-Winoksbergen.

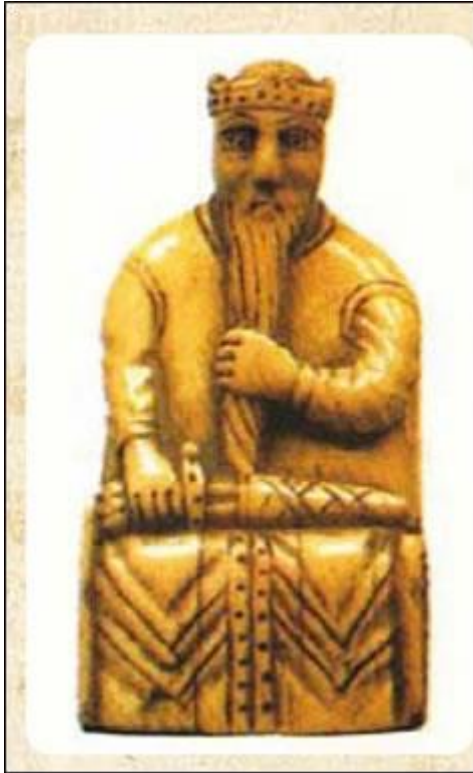


Fig. 2 Schaakstuk uit walrusivoer.

De abdij noteerde dit in haar documenten, dus ze vond dit zeer waardevol. Ook in 1396 zien we dat een bruinvis en drie zeehonden als geschenk worden aangeboden aan de bisschop van Luik. Zeezoogdieren hadden met andere woorden een bepaalde status.

Ook paling was een vissoort die niet zomaar gevangen mocht worden. De palingvisserijen werden door de graaf van Vlaanderen uitgedeeld aan de adel als een soort recht. De adel ging uiteraard zelf niet vissen maar opnieuw controleerde de overheid - via de adel - de visvangst op paling. Zo moesten vissers in Wisbech (Groot-Brittannië) bv. een rente van 33.000 palingen aan de vorst betalen. Ook bij ons werden in 10de - 11de eeuw "palincsetes" ingericht waar goederen werden uitgedeeld aan de adel. Men viste dus in opdracht van de adel en de graaf van Vlaanderen. De vroegste vismarkten ontstonden dan ook niet voor niets naast de grafelijke burchten. De vismarkt van Brugge werd bv. ingericht aan de achterkant van de Burg van

Brugge en ook de vismarkt van Gent ligt op het terrein van de grafelijke burcht aan het Sint-Veerleplein bij het Gravensteen. Er was dus een directe relatie tot het machtscentrum van de graaf.

OVERHEIDSINMENGING TE WALRAVERSIJDE

Walraversijde was, zoals hierboven reeds vermeld, veel meer dan een boerendorp (fig. 3,) en ook hier was er een verbinding met de macht. Het lijkt erop dat Walraversijde ontstaan is in het grafelijk domein dat op die plek lag. Alle gekleurde stukken land in fig. 3 (rechts) zijn het oude domein van de graaf van Vlaanderen. Het bruine stuk is dat gebleven tot aan de Franse overheersing, het blauwe stuk werd eind 10de eeuw door de graaf geschonken aan de abdij van Sint-Pieters van Gent. Het waren de mensen die in de grafelijke domeinen woonden die begonnen met de visserij en in die domeinen ontstonden dan ook vissershaventjes en -dorpen. Nieuwpoort en Oostende waren eveneens grafelijke stichtingen en volledig in eigendom van de graaf.



Fig. 3 Reconstructie in 1463 (links, © Past Forward) en grondplan van het grafelijk domein (rechts) van Walraversijde.

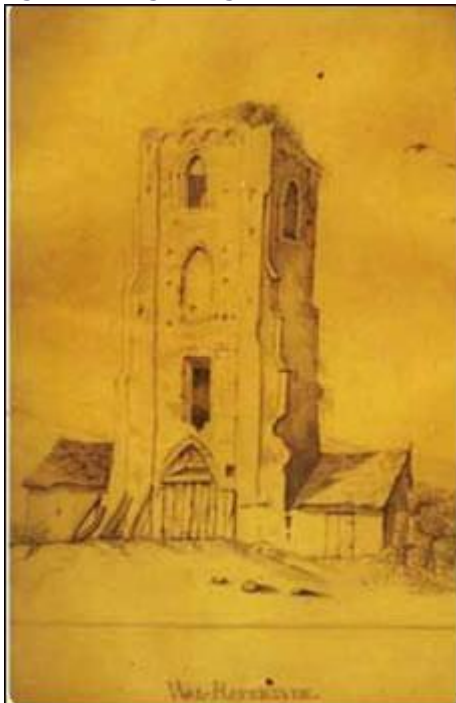
Walraversijde werd eveneens gekoppeld aan het idee van marginaliteit namelijk dat "de lieden van Walraversijde scamel lieden zyn, daerof den meesten daeghelicx ter zee varen moeten ende dandere huere ambochten doene, waerby zy hueren nootdorst winnen moeten om by te levne" (1479). Maar er is meer. De overheidsinmenging die al van in de volle middeleeuwen bestond, beperkte zich niet alleen tot het stimuleren of controleren van de visserij op één of andere manier. De overheid ging ook in rechtstreekse dialoog met de vissers. Vissers werden bv. geconsulteerd door de schepenen van de Brugse Vrije die op 23 september 1449 naar Walraversijde waren getrokken "omme aldaer advys te nemene metten stiermans (= stuurlieden) ende ouderlinghen hoe men best de grote scepen ter Sluus int Zwin bringhen zal zonder breken ende wat voorzienichede men hebben zal vanden "quaden zoute daer de visschers haren harynck ende visch mede zouten". Men vroeg dus enerzijds aan de vissers hoe men best het Zwin kon bevaren zonder schade op te lopen. Anderzijds was men geïnteresseerd in de kwaliteitseisen die moeten worden gesteld aan zout om vis op een goede manier te kunnen pekelen. De vissers bezaten m.a.w. niet alleen de kennis van het terrein (de zee, het milieu) maar ook de nodige technische competenties en de overheid maakte hier gebruik van.

Kaapvaart en piraterij

Walraversijde moet een belangrijke vissersgemeenschap geweest zijn en een pikant detail is dat er duidelijk contacten waren met de hogere politieke autoriteiten. Op het einde van de 14de eeuw (1385 – 1387) na een hele reeks interne conflicten in Vlaanderen en aan de vooravond van de Bourgondische overheersing en steunde Vlaanderen/Bourgondië de Honderdjarige Oorlog van Frankrijk met Engeland. Er werden – voor het eerst in de bronnen - zogenaamde "admiraals van de zee" aangesteld. Ze hadden geen eigen vloot, maar onderhandelden met de vissers en namen vissersboten aan om deel uit te maken van de vloot. Dat ging deels om konvooiering of het beschermen van de bestaande vissersvloeten door gewapende boten. Maar daarnaast betrof het ook oorlogvoering. Men heeft zelfs een poging ondernomen (die weliswaar is mislukt) om met een vloot Engeland binnen te vallen. Ten slotte had het ook te maken met kaapvaart meer bepaald het doelgericht en moedwillig aanvallen van Engelse schepen in opdracht van de hertog/ graaf om de zo de Engelse economie schade aan te brengen. Deze drie zaken zijn niet echt te onderscheiden, ze komen op hetzelfde neer. Daarbij komt ook nog de piraterij wanneer schepen werden overvallen zonder hertogelijke goedkeuring.

De vissers van Raversijde, Oostende, Heist, Nieuwpoort, enz. bedreven dus konvooiering, oorlogvoering en kaapvaart in opdracht van de hertog maar tegen de belangen van de grote handelssteden zoals Brugge, Gent, Ieper. Deze steden verzetten zich tegen de politiek van de hertog. We vinden dit terug in de rekeningen van de schepenen van Brugge en de schepenen van het Brugse Vrije: "Willem van Messem ende Jan van Boeyegheem ts maendaechs den 13sten dach in november te Brucghe met den ghedeputerden vanden steden ter parlamente daer de maren camen dat die van Biervliet, Hughevliete, Blankenberghe, Oostende, Wilravenshide ende vander Nieuwerpoort elc bi wilen hadden ter zee gheweist ende der coopliden van Ingheland ende ooc Hollanders ende Oosterlinghen goet ghenomen ter zee ende te land ghebrocht daer zijt onderlingh ghedeelt haddenu up dwelke de voorseide ghedeputerde van den steden raet ende avys hadden dit nemmer gheschien zoude ende drougen over een te zendene an onsen gheduchten heere vanden welken elc vanden ghedeputerden vanden steden namen haer verhalen". Brugge is m.a.w. ongerust, ze hebben als handelaars immers goede contacten nodig met Engeland, Holland en de Oosterlingen (de handelaars van de Hanzen). Brugge zag zijn economisch verkeer verstoord door de politieke kaapvaart en richtte daarom een brief aan de hertog om hier iets aan te veranderen. De schepenen richtten zich ook specifiek tot Heist en Walraversijde. Deze twee plaatsen komen vaak terug in de bronnen, wat doet

vermoeden de vissers daar zowat de grootste schurken op de zee moeten zijn geweest. "Jan Zuerinck ende Jan de Baenst swondaeghs den laetsten dach in april te Heys, te Wilravenshyde, omme de zeelieden te verbiedene van sghemeens lands weghe dat zij gheene rebelhede doen zouden up Inghelsche iof up andre varende bider zee up de vrientscepe vander lande". Ook op 23 april 1404 gaan de raadsheren en schepenen van Brugge "te Blankenberghe, t'Oostende, Wilravenshyde, Lombardien, Nieupoort, Dunkerke ende te Greveninghe omme te sprekenne met ... den sciplieden (= de schippers), hemlieden te zecghene van t'ghemeens lands weghe dat niemant uut varen zoude ter zee noch laten varen omme roven of om yement scade te doene, iof het ne ware bi bevelle van onsen gheduchten heere ende zinen lande van Vlaendren". Ze vroegen dus aan de vissers zelf alsjeblijf doe het niet tenzij je heel expliciet de opdracht krijgt van de hertog. Vissers gingen met andere woorden iets te snel over tot kaapvaart/piraterij buiten het officieel toegestane en men wou zelfs een schadevergoeding vragen om de Engelse vissers en handelaars te vergoeden: "ende dat men bi alle weghe van groten vervolghen doen zoude an den coninc van England, omme restitucie van scaden die d' Inghelsche den Vlamingen grotelike gedreghen hebben ter zee".



In 1420 zien we dat er in Duinkerke (toen ook een kleine handelsstad binnen Vlaanderen en Bourgondië) een aantal vissers gearresteerd werden omdat zij een aantal schepen beroofd hebben: "Jan van Boneem ende Jan vander Rive, tsondages den 27e in april te Duunkerke omme ghetelivererd te hebbene een scip ende andere goed toebehorende Clais fs; Jans Heinricx ende zijnen veinoten, vrylaten wonende in Wilravensyde, daer ghearresterd ten verzoucke van Willem Joos ende zijnen medepleghers, poorters te Duunkerke, omme zekere sculdlike zaken van coopmanscepen, van vrechte ende anders al ombewetticht ende onverbonden al aer, twelke was in bereghent". En in 1428: "Jan van Boneem de jonghe smaendaechs 29 in maerte bi laste van den wet ghetrocken te Coxide, 't Slepeldamme, te Heys, te Wendunen ende te Wilravensyde ande visschers aldaer omme hemlieden te kennen te ghevene vander wet weghe dat zij zonder begriyp haer beste doen mochten up de rovers die voor t land van Vlaenderen roofsen de

cooplieden ende visschers ter zee varende ende kerende".

Fig. 4 De vervallen toren van de kapel van Walravensijde, anoniem, midden 19de eeuw.

De kapel: negotiëren tussen macht en marge

De vissers-piraten van Raversijde die iets te gemakkelijk schepen kaapten, waren duidelijk een fenomeen in de late 14de eeuw – vroege 15de eeuw. Het aandringen op kaapvaart was echter niet de enige overheidsinmenging in dit vissersdorp. De kapel van Walravensijde (fig. 4) was een plaats voor de samenkomst van macht en marge.

De vissersbevolking was niet alleen gewelddadig, ze waren ook heel gelovig. Een kapel van die omvang was een vrij duur gebouw en een machtssymbool maar er was kapitaal voor nodig. Ondertussen is gekend wie de kapel heeft mee gefinancierd: Willem van Halewyn: raadsheer van de Hertog van Bourgondië (vergelijkbaar met ministers van de dag van vandaag, de absolute politieke top) en Baljuw van Brugge (controlefiguur van de hertog binnen de stad Brugge)

- De ridders van Schoore en hun verwanten, de familie Reyphins: riddergeslachten uit het Brugse Vrije (de lagere adel, niettemin de adel). Pittig detail hierbij is dat de dochter van de familie Reyphins trouwt met de zoon van Jacob Heijns, kapitein van Walraversyde. Zo zien we zelfs een familiale link tussen de brede entourage van de hertog en de klasse van de kapiteins.
- De familie van Varsenaere: dit waren waarschijnlijk zoutzieders en ze behoorden tot de eerste weerden of reders die vanaf de 15de eeuw schepen in bezit hadden maar zelf niet meer in zee gingen. Al deze figuren stonden duidelijk in contact met het hof van de Hertog. De schepenen van de Brugse Vrije en Brugge mochten dan wel proberen om de kaapvaart/piraterij van de vissers aan banden te leggen om zo hun handelsbelangen veilig te stellen, tegelijkertijd was dit waarschijnlijk vrij zinloos. De vissers luisterden op geen enkele manier naar deze gedeputeerden omdat zij rechtstreeks onder het bevel stonden van de hertog via personen zoals Willem van Halewyn. De topmacht zat rechtstreeks in het vissersdorp via de kapel.

Evolutie naar vissers in loondienst en dienst van de "staat"

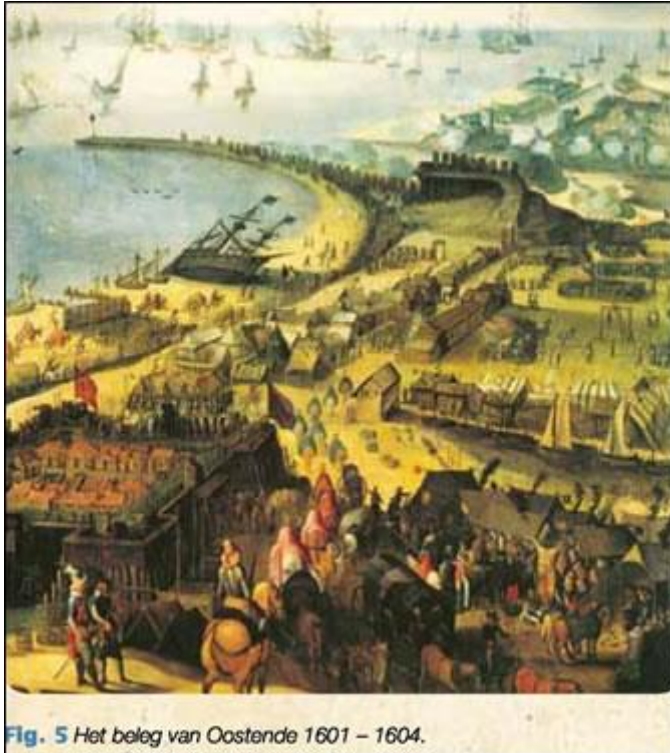
Ook in de rest van de 15de eeuw - wanneer het ongecontroleerde verdween - traden vissers soms op als militaire vloot voor de hertog indien zij daarom gevraagd worden, bv. in 1458:

"Mer Diederic van Halewijn, Jan van Boneem ende Gayse Bone sondaechs 4e in december gheordeneert ende ghelast te treckene t'Oosthende omme metgaders bden ghedeputerden vander Sluus, vanden Nieupoort ende van anderen plaetsen upden zeekand ghelegghen te hoorne de rekeninghe vanden costen ghedaen ter cause vanden vredscepen gheordeneert ter bewaernesse vanden visschers van Vlaenderen" en in 1471: " Ende te Wilravensyde omme te wetene ende vernemene vanden stiermans van daer daghelycx ter zee varende hoe vele scepen ende mannen van orloghen zij zouden moghe leveren ende utereeden omme ter zee te wederstane de vyanden van onsen gheduchten Heeren ende Prince. Mijnen heere van Moerkerke ende Floreins Cruesinck van dat zij tsondaechs den eersten dach in hoymaent 71 ghezonden waren ter Sluus omme te vernemene hoe vele ende watmen zoude moghen vercopen of verhueren tscip dat de stiermannen van Wilravenshede ter zee ghevoert hadden ter bewaernessen vanden frontieren ende visschers vanden lande."

Het einde van Walraversijde?

De kosten van oorlogsvoering moeten zeer hoog zijn geweest. De inmenging van de overheid in de zeevisserij kan op deze manier ook nefaste gevolgen hebben gehad voor de vissers en de vissersgemeenschap. Eind 15de eeuw moet Raversijde op eigen kosten een oorlogsschip voor de hertog uitrusten en dat kostte ongeveer 2000 pond. Ter vergelijking: het jaarloon van een landarbeider was 60 pond. Die kosten zijn waarschijnlijk op een bepaald moment te hoog geworden. Samen met de onrust eind 15de eeuw zien we dat eind 15de – begin 16de eeuw een deel van het dorp verlaten wordt. Het Raversijde van de 16de eeuw was niet meer het Raversijde van de 14de en de 15de eeuw en dit eindigde met het Beleg van Oostende waarmee de vissers definitief werden verdreven uit het dorp.

BESLUIT



Er was in de 15de eeuw een duidelijke relatie tussen de politiek en de piraterij. De piraterij en kaapvaart gebeurden door vissers als bijberoep. De macht stuurde en controleerde de visserij en er was waarschijnlijk ook een indirecte relatie tot de commercialisering van de vissersvloeden: de elite van adel en weerden kregen de vissersvloeden in handen en controleerden ze.

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BWTS design/installation methodology

Although entering into force in September, 2017, the timeline for BWTS installations allows for another two years, a date most likely in the latter half of 2019.

Large number of retrofits are expected to be carried out from that period onwards. Therefore, an accurate and efficient method of design and installation is crucial in order to clear the regulations in time, ClassNK said.

This is more or less a straightforward decision when it comes to newbuildings, but retrofitting can be a long and expensive process if due care is not taken.

The first step in retrofitting BWTS begins with a preliminary investigation of the different systems available. The choice of BWTS must be a system already approved by the major authorities. It must also suit the vessel's operations, which means that owners will have to look into their current ballasting operations.

Based on this, owners can calculate the associated costs, such as price of equipment, running costs, and after service, once the type of BWTS has been decided upon.

Next is the design outline. Detailed meetings between the owner and designer are essential in order to ensure the design/ installation plan is appropriate. After that, a rough equipment layout can be drawn up, together with a piping system plan. The required energy to power the system must also be calculated, before determining the ballast capabilities of the vessel, ClassNK stressed.

After the planning is complete, it is time to carry out an on board visit and undertake 3D scanning in the designated area. A 3D laser scanner takes point data from roughly 50-200

locations of the designated area, taking just two minutes for each scan. At this stage, the BWTS layout and distribution pipe routing are also decided, as well as confirming the electrical routing and plan for retrofitting electrics.

The next phase is creating a 3D model using the 3D CAD data taken from on board the vessel. Most conventional software takes seven to 10 days to create 3D models, however the ClassNK PEERLESS solution can build a model in one to two days. Using this system, the software package converts the information gathered into cloud point data to create highly accurate 3D models.

Final stage

With the 3D model now ready, the final stage of the detailed design plan can begin. This includes the finalisation of the BWTS layout, system diagram, as well as determining any required ancillary construction, and the order, time, and cost of entire construction process. After the technical aspects of the BWTS plan have received approval from a classification society, it is on to the manufacturing process.

The piping system must be manufactured before any equipment can be fitted on board. This is a precise process that requires a high degree of accuracy. Pipes must fit perfectly within the plan, which is why it is imperative to create a highly detailed and accurate 3D model.

Installation can only begin once piping and electrics system components have been completed, and an engineer is dispatched to help carry out the conversion of the main electrical panel and valve remote control system.

Sticking strictly to the design plan, the installation can be carried out rapidly and accurately. Failure to do so could result in delays and a longer construction time. The results of the time spent planning the design and installation process are the overall lower costs thanks to the short construction period and minimum downtime of the vessel.

While there are many steps in carrying out a detailed and accurate BWTS design/ installation process, the software ultimately results in a quicker and cost effective retrofit of BWTS.

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Portuguese Tonnage Tax and Seafarer Scheme Get Nod from EU

The European Commission has approved a Portuguese tonnage tax scheme which, together with a scheme to support seafarers, aims to encourage ship registration in Europe and preserve employment in the sector.



Under the new tonnage tax scheme, maritime transport companies will pay taxes on the basis of the net tonnage, i.e. the size of the shipping fleet, operated in maritime transport activities instead of their taxable profits. In particular, tonnage taxation will be applied to a shipping company's core revenues from maritime transport activities, such as cargo and passenger transport, certain ancillary revenues that are closely connected to

shipping activities (which are capped at a maximum of 50 pct of a ship's operating revenues), and revenues from towage and dredging subject to certain conditions.

In addition, for certain more environmentally-friendly ships, companies can achieve an additional reduction of 10 pct to 20 pct of the tax base.

If a shipping company wants to benefit from the scheme, a significant part of its fleet must fly the flag of a European Economic Area (EEA) state. The requirement is expected to encourage shipping companies to register their ships in the EEA and prevent any discrimination between shipping companies and registries of different EEA states.

The move seeks to curb the risk of companies flagging out and relocating to low-tax countries outside of the EU.

"The Portuguese measures that we approved today (April 6) will help the EU shipping industry to remain competitive on the global market, while protecting know-how and jobs in the maritime transport sector," **Commissioner Margrethe Vestager**, in charge of competition policy, said.

The new Portuguese seafarer scheme exempts seafarers employed on vessels that are eligible under the tonnage tax scheme from paying personal income tax. It also allows them to pay reduced rates of contribution for social insurance.

Both the tonnage tax and seafarer schemes will remain in force for ten years.

Inséré 12/02/19 DOSSIER Enlevé 12/03/19

Flag states failing to meet casualty reporting rules

OVER half of all casualty reports arising from serious shipping incidents in the last four years are yet to be published, an investigation by Lloyd's List can reveal. Investigation reports are a key tool to gain understanding of the root cause for the accidents and ultimately create a safer industry. But an analysis of all very serious incidents between January 2014 and March 2018 shows 58% of flag state investigation reports that should have been submitted to the International Maritime Organization have not yet been filed to the public database. While flag states are required to file investigations into 'very serious' incidents, defined as those resulting in loss of life, total loss of vessel, or major damage to the environment, there are no time stipulations on when those reports should be published. The length of time it takes to investigate and compile a report can vary depending on the complexity of the investigation. Industry experts interviewed by Lloyd's List as part of this

investigation suggest that the anticipated length of an investigation could vary from around three months for straightforward incidents, such as suicide or minor collisions —that don't result in a loss of life or pollution —to well over a year for longer, more complex situations. The reporting issue is highly complex and mired in bureaucratic blockers and administrative pitfalls. There are many reasons why the reports may be missing, ranging from potential system errors to indefinite delays in seeking approval from all parties concerned. It does not mean that an investigation has not taken place, nor does it mean that a report has not been compiled — it just means that the reports do not appear on the IMO's public free-to-download database.

Many reports, however, are simply never completed.

For 355 incidents involving 73 flag and reporting administrations, 221 reports have not been filed, an analysis using the IMO's Global Integrated Shipping Information System (GISIS) database shows. All that exists is a summary line that explains the nature of the incident. Industry officials close to the issue have stressed that the quicker an investigation is made public, the more likely it is to have a positive impact on improving safety measures and prevent future casualties.

"The longer you wait, the greater the likelihood that the event will be forgotten or overtaken by some other incident," said one well-placed safety official who spoke to Lloyd's List on the condition of anonymity. "If we get them a year later then things will likely have moved on." Over the four-year period analysed by Lloyd's List as part of this investigation, official statistics record that 1,354 people lost their lives in very serious incidents.

The IMO code

The IMO agreed in 2008 to strengthen reporting requirements by adopting what it calls the Casualty Investigation Code (MSC 255/24).

The code, which came into force in 2010, stipulated that flag states shall submit the final version of a marine safety investigation report to the IMO under Solas, the 1974 Safety of Life at Sea Convention. However, there is no specific time frame mentioned for when these reports should be submitted. The IMO only stipulates that they should be completed "as quickly as practicable". The IMO also calls for the reports to be made public at the time of submission, though flag states may choose to withdraw them from public view at a later stage, said an IMO spokesperson. As a United Nations body, the IMO has no power of enforcement over its 174-member states. It can, however, remind flag states of their duties.

Flag states have the "remit and responsibility" to submit the reports, said the IMO spokesperson. "The IMO is limited in what it can do." The European Union has gone a step further. It requires that reports on maritime accidents be submitted within a year as part of a directive (2009/18/EC) agreed in 2009 and implemented in 2011. EU statistics show that for 125 incidents involving vessels registered with 16 European flag states, including the UK, 23 reports are missing. That means 18% of required reports have not been submitted, according to the IMO database. Of the 204 incidents that involved vessels registered with the top 10 flag states by size, representing the bulk of the global merchant fleet, 105 reports have not yet appeared. Six of those incidents occurred this year, and it can be argued that not enough time has elapsed for a complete investigation to take place in those cases. But one only has to look at the Sanchi incident to see what is possible when it comes to the reporting of accidents. China led the investigation into the tanker collision in early January that left 32 crew members presumed dead. In conjunction with Iran, Hong Kong and Panama, Beijing took just four months to produce a detailed 191-page report, which was published in early May. That said, China has yet to file 12 reports out of 15

incidents that took place during the analysis period. An email sent to the casualty investigation division of China's Maritime Safety Administration requesting comment was not immediately answered.

China is not alone.

Of the 27 incidents involving vessels registered with the Marshall Islands, the second-largest flag state by size, 24 reports have not yet been submitted, the analysis shows. One of these involves the loss of the converted ore carrier *Stellar Daisy*, which sank in high seas off Uruguay in March 2017. Only two seafarers were rescued of the 24 crew on board. But 15 months later, a report by the Marshall Islands is still pending. A representative for the registry said a "meticulous evidence-gathering" process for the report was complete, pending public release. He added that of 30 incidents that took place since 2014, according to its data, it has submitted four reports, with another four awaiting final internal review, and five that had a "substantial interested other state" as the lead investigator. The rest were in the information-gathering/report-writing phase, he said. Another outstanding report is that of the sinking of the South Korean ferry *Sewol* in April 2014 with 330 students on board. The tragedy forced the prime minister to resign. A representative for South Korea told Lloyd's List that the investigation was "progressing" and that a report should be available by the end of this year. He did not comment further. Of the 12 incidents involving South Korea-flagged vessels, 10 reports have yet to be submitted.

Why do registries fail to submit reports?

There are numerous reasons given why reports have not been submitted or have been delayed. Running an investigation costs time and money and the difference between national and private registries is access to funds, manpower and resources. Expertise in carrying out in-depth analysis of maritime incidents may also be lacking. The risk of litigation is also a big factor in the slow or non-reporting of accident investigation reports. Unlike aviation, maritime accidents do not have a cap on payouts, so insurance companies and lawyers have a vested interest in not publicising any report that may lead to blame being apportioned, sources told Lloyd's List. Intercargo, the association of dry cargo shipowners, has called for "prompt" submissions following accidents. It says the point of submitting reports is not to apportion blame, but to learn lessons to avoid future tragedies. And while the safety regime has improved over the years, more needs to be done. "There is no room for complacency," it said in a statement, adding that its goal was to see no lives or ships lost. Its analysis showed that of 53 incidents involving bulk carriers from 2008 to 2017 in which 204 seafarers lost their lives, 29 reports had not been filed by flag states. It submitted its bulk casualty report, which also highlighted the main causes of bulker incidents, to the IMO for consideration by member states. At a recent IMO Maritime Safety Committee meeting, there was a strong recommendation that member states release reports to the public for the benefit of seafarer training and education. There will be another meeting in September to discuss the matter further.

The situation as it stands

Lloyd's List approached leading flag states for comment. Of 48 incidents involving Panama-flagged vessels, 20 reports have not been submitted. Repeated calls and emails to the Panama Maritime Authority, the number one flag state by tonnage, went unanswered. Indonesia has not submitted a single report for the 26 incidents that involved its vessels over the past four years. An official from the ministry of maritime affairs said he would look into the matter.

Casualty Reporting

For 17 incidents involving Russia-flagged vessels, 14 reports have not been submitted. A representative for the Russian Federation said he would look into the matter. Of 11 incidents involving Turkey-flagged vessels, 10 reports have not been submitted. A request for comment from Turkey was also pending at the time of publishing. For Bahamas, seven reports were pending for 13 incidents. An official at the Bahamas Maritime Authority said the investigations were ongoing and would be published once complete. The reports, taking on average one year, were also published on its website. For Hong Kong's 48 incidents, 24 reports have yet to be submitted. A spokeswoman for Hong Kong's marine department said it would submit a summary report to the IMO within six months at the first stage of an investigation.

"The whole process will normally take about one year or more, depending on the information collected, the number of parties involved, the complexity of the case and the progress of investigation," she said.

Singapore's Transport Safety Investigation Bureau said it worked closely with its stakeholders to complete investigations in a "timely" manner. It had one report pending from eight incidents over the past four years.

Of the 12 incidents involving the Liberian flag, the third-largest by size, 10 reports are pending, the data analysis shows. Scott Bergeron, chief executive at the Liberian Registry, said that before reports could be uploaded to GISIS, they must go through a series of internal approvals by the government.

It has nine reports pending final approval and three still in the process of being finalized. "While it is our desire and intention to submit the report within one year of the date of incident, this is not always possible due to a wide array of reasons," he said, citing availability of witnesses or evidence, a lack of co-operation from P&I appointed lawyers or witnesses, the complexity of root cause determination, and possible misuse of reports in civil or criminal litigation.

Process

Currently, flag states upload a report directly into the GISIS system. That can create issues and the IMO will not necessarily know if any problems arise. It is up to flag states to report any issues with the system. The process of trawling through the data is convoluted and the search results can be inconsistent, according to a source. It is not possible for the public to know when an update has been made or new report filed. The Marshall Islands said it submitted four reports when the analysis showed only three reports had been filed. The UK and Malta issued all reports required over the past four years, according to the analysis. However, the UK tally mostly concerns fishing vessels, which are easier to investigate. Of 39 incidents that the UK's Marine Accident Investigation Branch looked into, 27 involved fishing vessels, or tugs, the data shows. A spokesman for the agency said it took on average one year to complete reports for accidents within its waters or for UK-flagged vessel incidents elsewhere.

Four reports submitted by Malta show up as not being filed even though they were confirmed submitted by the head of the marine safety investigation unit Kevin Ghirxi. After another search, it transpired that the reports were submitted through the European Marine Casualty Information Platform of the European Maritime Safety Agency and validated by the IMO. They appear in an annex. The IMO said it would investigate the issue as the "default public release" in this instance might have been switched off.

System improvements

The IMO and EU EMCIP system is currently being reviewed. The IMO is also developing new taxonomy. The IMO has an analysis team that monitors the database and a correspondence group that makes recommendations to the Implementation of IMO Instruments sub-committee, which meets every year. It does not look at the quality of the reports. Brice Martin-Castex, the IMO's head of implementation of instruments support in the department for member state audit, said he could not comment on the analysis without a "thorough review". "The IMO secretariat is notified by the system and the reports manually assigned to individual casualty analysts," said Mr Martin-Castex. Partly in response to calls to improve the reporting system, the IMO has a mandatory auditing system that will monitor compliance. "Member states and the secretariat monitor the status of compliance with reporting requirements, in particular, with regard to their obligation to submit marine safety investigation reports" using a GISIS facility called the "dashboard," Mr Martin-Castex said. That information was also made available to the audit team, which provided "further incentive" to fulfil reporting requirements, he added. The audit scheme was made mandatory in 2016 and allowed for the IMO to look into how well IMO member states were fulfilling their obligations and to make recommendations to the member state in the form of a "corrective action plan", he said.

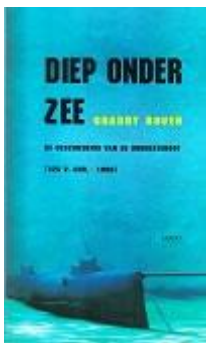
Conclusion

Encouraging best practice is perhaps what is needed in the absence of penalties. "Investigation reports are a key tool to gain understanding of the root cause for the accidents and ultimately create a safer industry. We call on all flag states to submit casualty investigation reports to the IMO as soon as possible in line with IMO's guidelines," said Angus Frew, chief executive of BIMCO, the largest shipping association in the world. Despite all the issues highlighted in this article and the steps taken to address some of the failings in this complex tale, one thing is clear: 58% of reports that should have been filed as per the IMO regulation on very serious casualties have not appeared on the public database. And that means no lessons can be learnt from reports that do not exist. And all the while, lives are being lost at sea.

Source : lloydslist

Inséré 14/02/19 BOEKEN LIVRES BOOKS Enlevé 14/03/19

Diep onder zee



De geschiedenis van de onderzeeboot

Inséré 14/02/19 NIEUWS NOUVELLES Enlevé 14/03/19

SERTICA live on the first pilot vessel at EURONAV

Sertica is a dynamic and flexible solution for maintenance, performance, HSQE and procurement. It provides tailored modules to handle input data on-board vessels and synchronisation with the company office. It displays the data in user-friendly dashboards presenting graphs and trends to act upon. The software is complemented with on-going consultancy from experts who know and understand your business.

EURONAV has successfully converted the first vessel to SERTICA. Coming up next, is the entire EURONAV fleet consisting of more than 50 vessels. The roll-out is expected to be completed in four months EURONAV has offices in both Antwerp and Athens. The tanker vessels are managed from the Athens office whereas the FSO and VPLUS vessels are managed from Antwerp. It is therefore essential that SERTICA can be operated from both offices without any problems. Rudi Vander Eyken, Group IT Manager at EURONAV says, "It is our ambition to be in greater control of our processes by creating an overview of the entire fleet in SERTICA. We follow an ambitious project plan and on top of this, we have just added six additional vessels acquired recently. However, converting to SERTICA on the first vessel has been very efficient, so I am confident that SERTICA is live on all vessels in 4 months as planned." As EURONAV is expanding and adding vessels on a regular basis, they need to control internal processes centrally. To align their processes, the tanker company is using the newly developed Master Data Management module. This module allows EURONAV to administrate data on jobs, spare parts, documentation and components. Rasmus Hansen, Head of Projects at Logimatic says, "Administrating procurement of spare parts centrally, makes it possible for EURONAV to use one central item list for all vessels. With the full package of SERTICA fleet management system, EURONAV ensures easy reporting and efficient communication between the office and vessels." Maria Roussou, Technical Superintendent at EURONAV tells, "Today, the seafarers must comply with regulations, follow specific processes and deliver reports. To do this, they need a simple tool for reporting and for gathering all this data. Luckily, SERTICA is a user-friendly system, so the seafarers spend limited time on reporting and more time on performing their tasks."

SERTICA is used across the maintenance, procurement and safety department, which creates a positive synergy at EURONAV. Compared to the previous system, many new features have been added, which means that the users need training to operate SERTICA optimally. Maria Roussou says, "One thing is the training of the system, another is deciding internal processes and workflows. Sometimes the system needs to adjust to our processes and other times it may be more efficient if we adjust our procedures to the system." Hans Chr. Jensen, Head of Sales at Logimatic continues, "The fact that EURONAV is willing to change internal processes and listen to our ideas is extremely positive. This gives us the opportunity to share our 30 years of experience and make SERTICA an even more valuable tool. We experience EURONAV as a truly innovative and professional partner with an open mind and respect for deadlines – two key characteristics to successfully implement SERTICA."

Source: EURONAV

Inséré 15/02/19 NIEUWS NOUVELLES Enlevé 15/03/19

Why has Shipping got it so wrong?

The arrival of spring brought fresh bloom on the trees and flowers on the plants but there is no spring in the step of the shipping industry as it moves into another slow summer. The recent spring gatherings in New York and Stamford CT produced the false view that the dry cargo markets were booming when in fact they were barely breaking even. All of this while shipping continues to carry more than 90% of physical world trade and will do so for the foreseeable future.

Shipping is the world's largest service industry with hundreds of shipowners competing on a global basis to be paid to transport billions of dollars' worth of cargoes across the oceans and waterways around the world. The huge rise in demand for shipping services in the last decade, led by the Chinese industrial boom commencing in 2004, caused a significant surge in freight rates for dry-bulk and containerized cargoes. This attracted a large number of new owners and investors from the various private equity and hedge funds in the USA and Europe.

It is clear that the objectives of many investors in the publicly quoted companies were to chase short-term gains in ship values while cutting costs in all directions. However most of the Funds that have invested in the last 10 years have shown little or no return except for some day trading on shipping rumors. The investment surge focused on building new ships to meet the perceived increased demand, with a view that the ship values would increase enabling them to be sold for a profit as soon as they were delivered.

This philosophy ignored the fact that ship values are driven by the revenues earned from carrying cargoes, the quality of the ship management and the capacity of the shipyards to build new ships, and deliver them in a short timeframe. The Chinese boom lasted less than 5 years but the new ship orders continued to deliver into the 2nd decade and resulted in a 50% growth in the capacity of the world fleets of dry-bulk and container ships. The tanker fleets were also over-built as investors switched their attention away from the loss-making dry markets and also climbed into the OSV markets. The result is a grossly overtonnaged industry with depressed freight rates and reduced ship values. Many quoted companies face insolvency as the unavoidable costs of Classification surveys loom and the balance sheet values of the ships are overstated.

Many of the new investors rely on statistical projections of ship values rather than a factual analysis of the freight markets and ignore the fact that charterers will not fix longterm charters with owners that are likely to sell the ships at any time. Funds have rarely done well when investing in service industries that use expensive assets that are high maintenance and inherently depreciating. Most of these facts are known to traditional shipowners who have faced similar excesses in the past 30 years, but none of such a serious size. These owners, who value close relationships with cargo owners, form the hard core of shipping that focuses on operating their ships efficiently on period charters that generate modest profits after bank financing and depreciation but provide a longterm revenue stream. A well maintained ship properly managed can earn as much as a new ship as there has been little change in the ship's fundamental technology. The ships must be properly certified and the costs of these statutory surveys must be budgeted for. New regulations covering air pollution and ballast water treatment will slowly be introduced but are costly. Given the substantially private nature of ship ownership it is not surprising that the majority of charter fixtures go unreported and the so-called Indexes, such as the BDI are a worthless gauge of market activity.

Only the publicly quoted companies publish some details of charters and the prices of ships bought or sold, The result of the short-term approach to ship values is that a majority of ships now trade in the spot markets, do not achieve even 300 days annually of paid activity and have to pay for their own fuel. Recently we have seen a surge in newbuilding orders in both wet and dry bulk and more surprisingly in large container ships. By funding the construction of large numbers of ships of all types without securing their employment is a huge mistake as we have already seen. The enormous losses in the German equity and debt markets will be repeated elsewhere and probably in the Chinese and Korean Exim banks as they work to support their shipbuilders. The outlook for crude oil demand is stable with no growth in production and low prices. But the introduction of new fleets of Iranian and Saudi Vlccs and the decline of US imports suggest a weak future for ships not fixed on period charters. The container markets are grossly overtonnaged and mostly a one-way traffic with few backhaul cargoes and new US policy on trade agreements will likely reduce US imports. Overall we can expect shipping to return to making marginal profits from the services it provides and the operational longevity it can obtain from using well maintained and well managed ships.

Source: Article by Paul Slater, First International Corp.

Inséré 16/02/19 DOSSIER Enlevé 16/03/19

Embracing digitalisation for maritime security

At Singapore Maritime Week at which a seminar audience was asked to vote on the question 'Is digitalisation for real or just hype?' - 81.4% agreed that it is a very real and prevalent part of the world today.*

Shipowners and operators recognise the crucial need to embrace new technologies in order to drive operational efficiencies and thrive in the current competitive landscape - failure to do so may put them at an "existential" risk, according to Columbia Marlow's Mark O'Neil. However, at the same time, there is scepticism.

This may go some way to explaining why, despite the growing awareness of the potential value of digitalisation, shipping has been widely seen as slow to the adoption of new technologies as compared to other industries.

A recent smart shipping survey found that, while most maritime industry executives see digitalisation and 'big data' as a transformative force, only 8.7% currently see it as a major part of their operations.

Several potential factors, such as the lack of in-house resources or budget, could play a part. More often than not, shipowners and operators find 'big data' and digitalisation to be vague and have no tangible examples to see how this can impact their day-to-day operations in shipping, and tackle real issues with clear results.

This needs to change.

At StratumFive, we combine software, innovative technology and knowledge with the experience that comes from decades of seamanship to enable 'big data' and predictive analysis to be optimised for any company of any size. Our seafaring heritage coupled with our in-depth insight into the mindset of mariners provides us with an unrivalled understanding of the day-to-day challenges that the industry

faces. Building on this foundation, we equip owners and operators with the confidence to make better and informed decisions through predictive analysis and machine learning to ensure an efficient and safe voyage, while minimising the risk to ships and crew from adverse situations, such as weather or piracy.

Heatmap

One such example is an interactive heatmap, which highlights the relative risks of piracy in different areas. This map is based on machine learning; a process that examines the relationships between factors, and works out which are the most important. After determining which cause and effect relationships are the strongest, we can then build an accurate predictive model. Aside from taking into account key factors, such as wind speed, direction, wave height, and swell direction, the day of the week also plays a vital part.

As illogical as it sounds, the piracy risk level can differ on a given day of the week. Maritime piracy has a profound impact on global trade and security. In Somalia, for example, Fridays are days of prayer.

Pirates can be generally categorised into two groups - the less experienced, 'part time' pirates and hardened 'professional' pirates. While the former group will tend to observe their holy day of prayer, the latter will venture out to sea regardless. Hence, should a pirate attack occur on a Friday, it is more likely to result in a hijacking. With this information in hand, a Master can decide when or where to accelerate through potentially risky areas, or change routes – stopping attacks before they happen.

Voyage monitoring

This example shows how data-driven statistics, powered by machine learning, allow owners and operators to uncover trends that are not immediately obvious. This analysis and research will be further incorporated within OTIS (Online Tracking and Information System), our current voyage monitoring offering to the market, which provides key navigational intelligence. Currently servicing over 11,000 vessels, we provide highly accurate location data, with up to thousands of locations transmitted every day per vessel, achieved by combining multiple data sources.

The true potential of 'big data' and machine learning lies in predictive models, such as the example above. As the next phase in our development journey, we are leveraging the use of data we already have (and new datasets as they become available) to use machine learning techniques to build predictive models based on analytics and data from past voyages. The more datasets that are added, the more detailed and accurate its predictions will become. All this while ensuring that the platform is easy to use and access, flexible and searchable.

'Big data' is not the panacea to all of shipping's ills. However, as more examples such as this are brought into the market, the industry will realise where its true value comes through – in augmenting good seamanship and the wealth of expertise within the industry with the ability to challenge conventional wisdom and make connections between seemingly unrelated factors.

*This article was written by Ross Martin, COO, StratumFive.

Inséré 18/02/19 HISTORIEK HISTORIQUE Enlevé 18/03/19

Un Breton à la découverte de l'Australie. Aleno de Saint-Aloüarn, le conquérant

Au XVIIIe siècle, les grandes nations européennes lancent de nombreuses expéditions maritimes d'envergure, à caractère commercial, scientifique ou politique, dans le but d'explorer le reste du monde encore inconnu, et d'annexer de nouvelles terres susceptibles d'être colonisées. Des marins d'exception, jeunes pour la plupart, ont ainsi sillonné les océans. Certains sont connus, pour avoir baptisé les contrées découvertes de leur nom ou de celui de leurs proches. D'autres, plus modestes, comme Aleno de Saint-Aloüarn, sont injustement tombés dans l'oubli. Pourtant, en 1772, ce Bretona pris possession pour le roi de France d'une portion de territoire située à l'extrême Ouest du continent australien. Si les archives en font foi, les preuves -matérielles de cette présence française n'ont été découvertes que tout récemment par une équipe de chercheurs aventuriers, dirigée par Philippe Godard.

Vendredi 16 janvier 1998, cinq heures et demie du matin. L'aube pointe sur le tarmac du petit aéroport de Geraldton, principal port langoustier de l'Ouest australien, à 400 kilomètres au Nord de Perth. Mes cinq compagnons d'aventure — tous des locaux — et moi-même achevons de remplir le Piper Navajo affrété pour nous emmener sur l'île de Dirk Hartog, à 450 kilomètres plus au Nord. Toiles de tente, matelas pneumatiques, sièges pliants, réchaud et même un grand drapeau australien qu'un des membres de notre équipe, peu superstitieux, a pris l'initiative d'emporter, tout est pointé et repointé méthodiquement.

L'avion met le cap sur la station balnéaire de Kalbarri, à l'embouchure de la rivière Murchison, avant de longer à faible altitude les sinistres Zuytdorp Cliffs. C'est au pied de ces falaises que le navire éponyme de la VOC — Vereenigde Oostindische Compagnie (Compagnie des Indes orientales néerlandaises) — vint se fracasser en 1712, abandonnant dans cette partie aride et désolée du continent ceux de ses deux cents membres d'équipage et passagers qui parvinrent à prendre pied à terre — ce que l'on sait grâce aux vestiges retrouvés — mais dont on n'eut plus jamais de nouvelles.

Le but de notre voyage est de retrouver deux écus en argent et une bouteille renfermant un parchemin, enterrés par le navigateur breton Saint-Aloüarn en 1772, lors de la cérémonie d'annexion de la partie Ouest du continent australien au nom du roi de France, Louis XV. Calé au fond de l'habitacle, je serre contre moi un précieux dossier personnel relatif à cette expédition, dont je suis l'initiateur et l'historien. Dedans, des cartes marines, des photos aériennes prises lors d'un précédent survol, des photocopies de documents d'archives et quantité de notes et d'observations glanées depuis dix ans.

Au bout d'un peu plus d'une heure de vol, le bimoteur se pose sur une piste de terre battue. Une étrange odeur minérale flotte dans l'air. Quasiment aucun relief. Autour de nous, c'est la désolation : une manche à air en lambeaux, la carcasse rouillée d'un tracteur d'un autre âge, un sol sablonneux d'un brun rougeâtre, comme brûlé par l'implacable soleil des tropiques, une végétation rase aux couleurs ternes et, partout à l'horizon, des étendues de sable que la chaleur ambiante fait trembloter. L'île de Dirk Hartog est actuellement concédée à bail, pour une durée de cent ans, à la famille Wardle, à titre de pâture. Un puissant véhicule à double traction aux allures de blindé léger nous attend. En temps ordinaire, le maître des lieux l'utilise pour conduire les rares clients de son guest-house vers des lieux réputés fantastiques pour la pêche au gros. Transborder l'impressionnant barda prend une bonne demi-heure, au terme de laquelle l'étrange autocar de marque

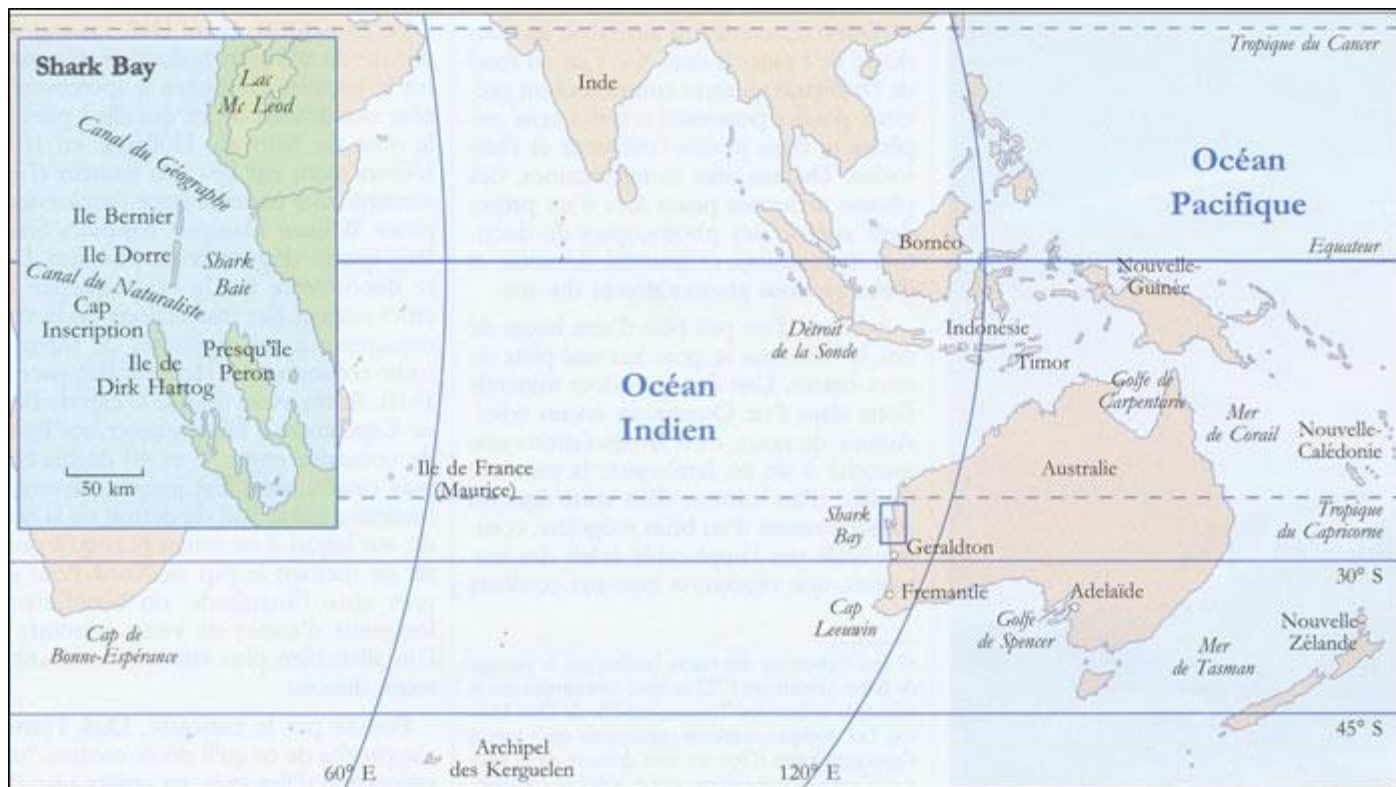
Oka, seul véhicule de l'île, va nous conduire jusqu'à la ferme, à cinq minutes de la piste d'atterrissage. Deux grandes éoliennes émergent d'un bouquet de tamaris ; le guest-house et quelques communs délimitent une vaste cour poussiéreuse. A l'écart, des hangars en tôle ondulée abritent du matériel agricole et les postes de tonte, car la raison d'être de ce minuscule foyer humain, c'est l'élevage du mouton.

Puis le car s'ébranle à nouveau, cap au Nord, pour avaler les 70 kilomètres de piste, parfois à peine tracée, qui nous séparent de la baie des Tortues. C'est à cet emplacement que j'ai décidé de concentrer nos recherches, à 4 kilomètres du cap Inscription, le point le plus occidental et le plus chargé d'histoire d'Australie.

D'un découvreur à l'autre

Le 25 octobre 1616, Dirk Hartog, capitaine du vaisseau hollandais Eendracht, fut le premier Européen à apercevoir la côte occidentale de ce qui allait prendre le nom de Nouvelle-Hollande en 1644. L'événement eut lieu à la hauteur d'une véritable mer intérieure que l'explorateur-pirate William Dampier baptisera Shark Bay, quatre-vingt-trois ans plus tard. Cette découverte fut la conséquence du strict respect des instructions de la VOC, enjoignant à ses capitaines de suivre la route reconnue par Hendrik Brouwer en 1610. Après avoir doublé le cap de Bonne-Espérance, il fallait gagner une latitude comprise entre 35 et 40 degrés Sud, puis cingler plein Est jusqu'à parvenir à l'estime dans le Sud du détroit de la Sonde, sur lequel il ne restait plus qu'à pointer en mettant le cap au Nord. Pour gagner ainsi l'Insulinde, on bénéficiait à longueur d'année de vents portants et l'on allait bien plus vite qu'en suivant la route directe.

Poussé par la curiosité, Dirk Hartog s'approcha de ce qu'il décrit comme "une succession d'îles avec, en arrière-plan des terres qui barrent tout l'horizon". Ayant fini par trouver un bon mouillage à la pointe Nord de la principale de ces îles, qui s'étire en longueur et protège l'immense baie de la houle, il dépêcha quelques hommes à terre, qui ne trouveront pas trace d'habitants, ni le moindre indice de richesses minérales. Pour marquer leur brève visite, ils laisseront au faîte d'une falaise un plat d'étain martelé assujéti au sommet d'un piquet fiché dans une crevasse, après y avoir gravé la date de l'escale, le nom du capitaine, ainsi que ceux des principaux dignitaires présents sur l'Eendracht.



Quatre-vingt-un ans plus tard, un autre Néerlandais, Willem de Vlaming, est chargé par la VOC d'effectuer une reconnaissance approfondie de cette côte occidentale de la Nouvelle-Hollande. A la tête de trois navires, dans des conditions souvent difficiles, de Vlaming explore la rivière des Cygnes — qui arrose aujourd'hui la ville de Perth — et parcourt l'île des Rats (future Rottnest), avant de mouiller à son tour à Dirk Hartog, en janvier 1697. Lors de cette escale, il dresse la première carte — très approximative — de cette partie du continent australien, et retrouve le plat de son compatriote, auquel il substitue le sien propre.

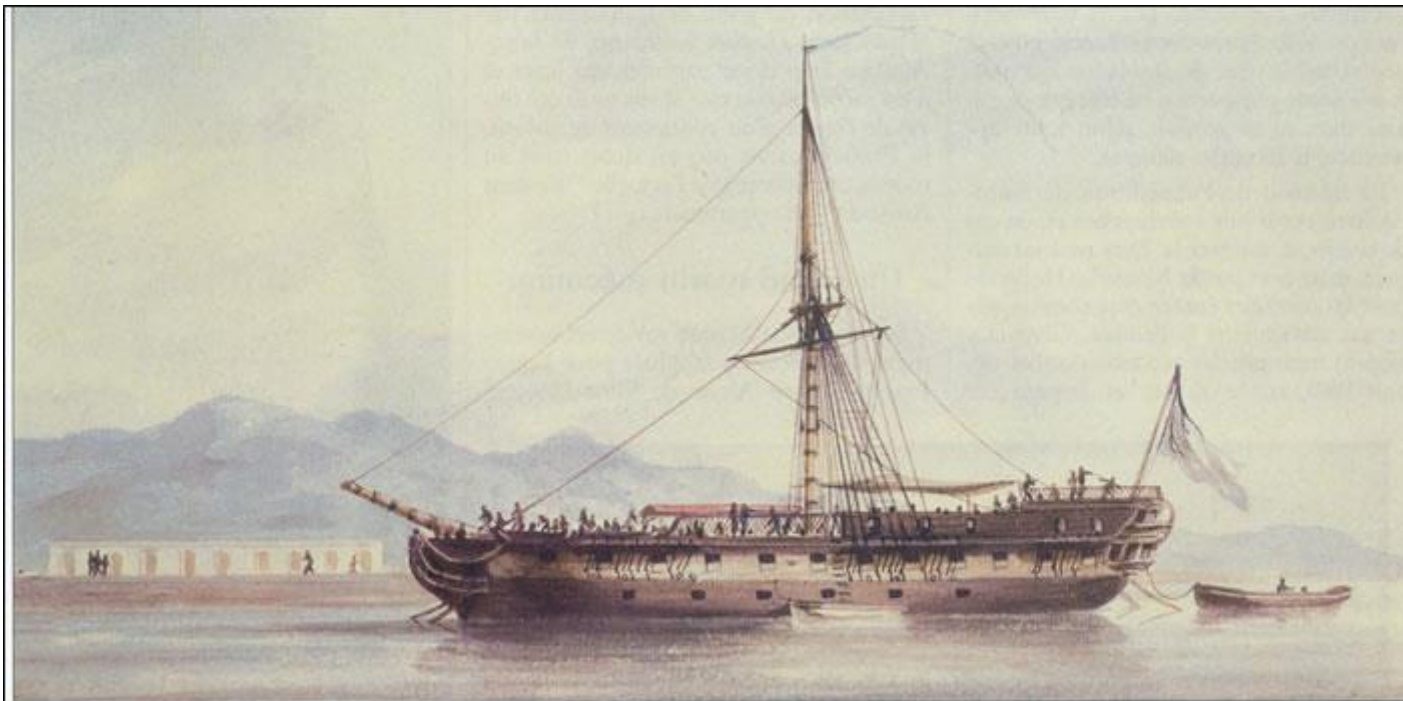
Deux ans et demi plus tard, William Dampier aborde à son tour l'île de Dirk Hartog, mais sur sa côte orientale. Le hasard ne guidera pas ses pas jusqu'au promontoire où se dressait la plaque de Vlaming. Celle-ci ne sera retrouvée qu'en 1801 par l'équipage du navire français le *Naturaliste*, commandé par le baron Jacques Hamelin, qui navigue de conserve avec le *Géographe* de Nicolas Baudin. Hamelin invitera les découvreurs de la plaque à la rapporter là où ils l'avaient trouvée, tant sa signification historique lui paraissait importante. Louis de Freycinet, alors enseigne à bord du *Naturaliste*, ne partageait sans doute pas ce point de vue, car il récupérera l'objet lors d'un voyage ultérieur, en septembre 1818, alors qu'il commandait l'*Uranie*. Offerte à l'Australie par la France après la Seconde Guerre mondiale, cette précieuse relique est aujourd'hui visible au musée maritime de Fremantle. Mais plus d'un quart de siècle avant l'expédition de Baudin et Hamelin, un autre équipage français avait fait relâche à Shark Bay. Il s'agissait de celui du *Gros Ventre*, un navire commandé par le lieutenant de vaisseau Louis Aleno de Saint-Aloüarn, compagnon de route du célèbre Kerguelen, qui commandait la *Fortune*.

Résolution et obstination

Partis de l'île de France (île Maurice) au début de l'année 1772 et faisant route au Sud dans l'espoir de découvrir la Terra australis incognita qui hantait les rêves des géographes de l'époque, la *Fortune* et le *Gros Ventre* arrivaient quelques jours plus tard en vue d'une succession de terres très élevées et couvertes de glace. Prompt à confondre désir et réalité,

Kerguelen prenait ce territoire pour l'avancée du continent mythique, qu'il baptisait la France-Australe... alors qu'il s'agissait de l'archipel qui porte aujourd'hui son nom, de la taille approximative de la Corse. Assoiffé de gloire, notre nouveau Christophe Colomb prenait prétexte de conditions atmosphériques exécrables et de la perte de contact visuel avec le Gros Ventre pour rebrousser chemin et s'en aller claironner, dans un premier temps à Port-Louis de l'île de France, puis à Versailles, la nouvelle de sa "merveilleuse" découverte "qui paraît former la masse centrale du continent antarctique".

De son côté, Saint-Aloüarn réussissait à débarquer quelques hommes — conduits par l'enseigne du Boisguelleheuc — sur le nouvel archipel, pour en prendre possession. Puis il poursuivait sa route vers l'Est, les deux capitaines étant convenus, en cas de séparation, de se retrouver sûr le 40e parallèle, et si besoin était jusqu'au cap Leeuwin (dont la position exacte était connue depuis 1622). Mais Kerguelen — et pour cause — n'était pas au rendez-vous. Avec un équipage décimé par le scorbut et amoindri par des semaines de navigation difficile, Saint-Aloüarn, lui-même dans un état d'extrême faiblesse, décidait alors de gagner Timor en longeant la côte Ouest du continent, pour le cas où la Fortune l'y attendrait.



Commandée par Saint-Aloüarn au cours de l'expédition de 1772 sur les côtes de Nouvelle-Hollande, la flûte *Gros Ventre* est représentée ici désarmée au Port-Louis (île de France). Extraite de l'album de Willaumez, cette œuvre de Frédéric Roux (1805-1870) est conservée au musée national de la Marine de Paris.

C'est ainsi que, le 30 mars 1772, le Gros Ventre pénétrait dans le mouillage historique de Dirk Hartog. Une escouade, conduite par l'enseigne Mengaud de la Hage, se rendait alors à terre, comme l'atteste le livre de bord du navire : "Monsieur de Mingo (sic), de retour à la côte, a pris possession de la terre au Nord-Ouest un quart Nord du vaisseau en arborant pavillon. La prise de possession étant faite dans les formes usitées en pareil cas — mise dans une bouteille — fut enterrée au pied d'un petit arbrisseau auprès de laquelle (sic) on a mis deux écus de six francs." Sans doute victime d'une erreur de transcription de l'écrivain du bord, la direction mentionnée indique celle du large !

D'aucuns ont fait valoir, bien à tort, que cette prise de possession était sans valeur ni signification aucune, dans la mesure où James Cook avait planté l'Union Jack à l'autre extrémité du continent deux ans plus tôt, et dans celle où Saint-Aloüarn n'était pas le premier Européen à



Commandant l'*Uranie*, Louis de Freycinet a eu l'occasion de rencontrer des "sauvages" sur la presqu'île de Peron proche de l'île de Dirk Hartog lors de son escale en 1818 dans la baie des Chiens-Marins. Gravure extraite du *Voyage autour du monde... Atlas historique*, conservé à la Bibliothèque nationale.

relâcher à Shark Bay, ni même à fouler le sol de l'île de Dirk Hartog. Mais Cook n'avait pas organisé la rituelle cérémonie, s'étant contenté de hisser le pavillon et de graver la date de son passage sur un tronc d'arbre. Or les conventions internationales de l'époque stipulaient que toute terre nouvellement découverte devait faire l'objet d'une cérémonie d'annexion sanctionnée par un procès-verbal laissé in situ dans une ou plusieurs bouteilles, l'annexion ne devenant effective que si elle était suivie de la colonisation du pays.

En l'occurrence, en 1772, la colonie pénale de la Nouvelle-Galles-du-Sud n'avait pas encore été fondée puisque la "première flotte" du commodore Phillip ne devait mouiller l'ancre que le 18 janvier 1788 à Botany Bay, où elle débarquait sept cent soixante-seize convicts encadrés par deux cent douze militaires avec femmes et enfants. Sans compter que — le doute étant encore d'actualité à la veille des expéditions de Nicolas Baudin et de Matthew Flinders —, nombreux étaient encore les géographes pensant que la Nouvelle-Hollande pouvait être constituée de deux masses continentales séparées par un détroit s'étendant depuis l'extrémité méridionale du golfe de Carpentarie jusqu'à la profonde échancrure que constitue le golfe de Spencer.

la disparition de son capitaine de vaisseau de père et de son oncle, lors de la désastreuse Journée des Cardinaux (au large de l'estuaire de la Loire).

Début 1761, Saint-Aloüarn épouse Marie-Jeanne-Corentine Droualen, une "agréable bossue de Pont-l'Abbé". Trois fils et une fille naîtront de leur union. Promu lieutenant de vaisseau en 1764, il s'acquitte avec succès de différentes missions dans la mer des Antilles, jusqu'à ce qu'en 1769 son destin croise une première fois celui d'Yves de Kerguelen-Trémarec à qui il est adjoint sur l'Aberwrach. Il servira un an à bord de cette goélette chargée d'hydrographier les côtes de France. Il partage ses périodes de récupération entre l'hôtel particulier familial de la rue Saint-Mathieu, à Quimper, et le château de La Villeneuve, situé dans la paroisse de Plomeur et hérité d'une tante. Mais le sort s'acharne : sa femme meurt en 1769 et il se retrouve seul en charge de leurs quatre enfants dont l'aîné n'a pas dix ans.

En 1771, le duc de Boynes, ministre de la Marine, désigne Saint-Aloüarn pour transporter des plants d'épices de l'île de France à Cayenne. Le 1^{er} mai, en compagnie de deux cent trente-deux hommes, il embarque à Lorient sur le Berryer, un gros navire de charge en partance pour l'île de France, commandé par Kerguelen. Ce dernier vient d'obtenir l'assentiment du roi pour partir à la découverte du mystérieux "sixième continent", dont le monde scientifique de l'époque considère l'existence comme probable... pour des raisons d'équilibre de la planète !

Au terme d'un voyage éprouvant, Kerguelen parvient à Port-Louis et présente ses lettres patentes au chevalier des Roches, gouverneur de la colonie, qu'assiste l'intendant général Pierre Poivre. Dès lors, les choses sont rondement menées. L'expédition en Guyane des plants de muscadiers et de girofliers est provisoirement différée, la conquête d'un nouveau monde revêtant assurément une tout autre importance. Mauvais marcheur, le Berryer est abandonné au profit de la Fortune et du Gros Ventre, une gabare et une flûte en disponibilité à Port-Louis, la première étant commandée par Kerguelen et la seconde par Saint-Aloüarn. Toutefois, la saison n'étant guère propice à un départ immédiat vers les basses latitudes, Kerguelen entreprend d'abord de s'acquitter du second volet de sa mission : reconnaître la "nouvelle route des Indes" dont le chevalier Grenier de Giron vient de préconiser l'emprunt, sous l'excellent prétexte qu'elle raccourcirait de 800 lieues la distance de l'île de France à la côte de Coromandel et au golfe du Bengale.



Saint-Aloüarn devra cependant renoncer à ce voyage ; durement éprouvé par la traversée sur le Berger, celui-ci doit rester à l'île de France et laisser le commandement du Gros Ventre à son cousin Charles du Boisgüehenneuc. Cette expédition préliminaire s'étale sur trois mois et se déroule dans les meilleures conditions. Enfin, le 16 janvier 1772, avec un Saint-Aloüarn tant bien que mal remis sur pied, les deux navires entreprennent leur grand saut dans l'inconnu, cap au plein Sud. On connaît la suite...

Un mérite enfin reconnu

Miné par une suite d'épreuves physiques et de maux sur lesquels on manque de précisions, Saint-Aloüarn, qui venait à peine de fêter ses trente-cinq ans, rendit l'âme à l'île de France, quelques jours après le retour du Gros Ventre. Ensuite, l'échec du second voyage de Kerguelen (1773) et sa disgrâce allaient jeter le discrédit sur toutes

les entreprises de découverte, considérées comme ruineuses pour les finances du pays. Un

roi au prestige déclinant, de cruels revers au Canada, un nouveau gouverneur de l'île de France, le chevalier de Ternay, prônant l'abandon des rêves expansionnistes au profit d'une mise en valeur des acquis territoriaux de l'océan Indien, il n'en faudra pas davantage pour que les belles cérémonies d'annexion de la Nouvelle-France et de l'Australie occidentale sombrent dans l'oubli.

Fort heureusement, les Kerguelen échappèrent à cette négligence. Mais quand la France prit conscience des droits que lui avait conférés l'heureuse initiative de ce jeune commandant plein de fougue et de talent qu'était Saint-Aloüarn, il était bien trop tard, les Anglais étaient passés à l'action. La pendule de l'Histoire ne revient jamais en arrière. Sans doute était-il écrit que le cinquième continent n'appartiendrait jamais qu'à une seule nation : l'Australie. Mais dans ce beau pays auquel chacun s'accorde à prédire un brillant futur, le prestige de la France et de ses grands marins, trop longtemps ravalés au rôle de simples figurants, a singulièrement grandi depuis un beau jour du mois de janvier de l'an de grâce 1998.

Philippe Godard et Tugdual de Kerros (descendant direct de Saint-Aloüarn et dépositaire des archives familiales) feront paraître prochainement aux éditions Abrolhos un ouvrage illustré intitulé : SaintAloüarn (1738-1772), lieutenant des vaisseaux du roy, un marin breton à la conquête des mers australes. Renseignements : M. de Kerros, Château de Malakoff, 29120 Sainte-Marine.

Chasse-marée N°141 Mars 2001

Inséré 20/02/19 NIEUWS NOUVELLES Enlevé 20/03/19

'Beaching' of vessels for shipbreaking – legal, illegal or somewhere in between?

Commercial vessels have a 'lifespan' and when they reach the end of it, they are recycled. The European Commission estimates that up to 1,000 ships are recycled each year worldwide. In addition to valuable and re-useable products like steel, ships also contain hazardous waste and pollutants that are harmful to people and the environment. There has been increasing public and political concern over the practice of some shipbreaking facilities to ram vessels onto tidal flats where workers break down the vessels in ways that are dangerous for the workers and damaging to the environment.

To address the hazards, the International Maritime Organization (IMO) adopted the Hong Kong International Convention for the Safe and Environmentally sound Recycling of Ships. The Hong Kong Convention provides a 'cradle-to-grave approach' – a system of control and enforcement over a ship's lifetime from design, through construction, operation and up to the recycling stage. The Convention establishes mandatory requirements on shipowners to ensure the safe and environmentally sound recycling of ships. The Convention also applies to Ship Recycling Facilities. In general, the Convention requires Facilities "to establish management systems, procedures and techniques which do not pose health risks to workers or the population in the vicinity of the Facility and which will prevent, reduce, minimize and to the extent practicable eliminate adverse effects on the environment caused by Ship Recycling." Adopted in 2009, the Hong Kong Convention is

not yet in force. Entry into force will only occur 24 months after ratification by 15 States, representing 40 per cent of world merchant shipping by gross tonnage. Today the Hong Kong Convention has been ratified by only six nations – Belgium, the Congo, Denmark, France, Norway and Panama. Shipping is global and the ideal way to ensure a uniform approach to ship recycling is by an international convention. Uniformity provides certainty and an even playing field, reducing the financial incentives for practices that endanger people and the environment. Yet the ratification process can be painfully slow.

The European Union partially filled the gap by regulating ship recycling based on terms modeled on the Hong Kong Convention. The EU regulations apply to vessels that are flagged in the EU irrespective of where the recycling takes place. The EU Ship Recycling Regulation entered into force in 2013. One of the principal components of the Regulation is the certification of facilities, the so-called “European List” of approved facilities which meet the requirements of the Regulation (and consequently would also meet the requirements of the Hong Kong Convention). The first “European List” of approved facilities was adopted by the Commission in December 2016. It then included 18 shipyards, all located in the EU. The list was updated in May 2018 and now includes 21 shipyards. The European Commission has received applications from shipyards outside of the EU and the applications are pending. As of 1 January 2019 all large sea-going vessels sailing under an EU Member State flag are required to use one of the approved ship recycling facilities. The majority of ships, however, are recycled at sites outside of the EU and mostly in South Asian sites where the vessels are ‘beached’ and broken up largely by hand. Commonly, ships are sold to buyers who reflag and may then have the financial incentive to recycle at a site outside of the EU where the vessel is beached and dismantled in conditions that do not meet the EU standards. On the face of it, this seems to be legal because the vessel is not flagged in an EU country after sale – but beware. The Rotterdam District Court held a Dutch company responsible for breach of the EU Waste Shipment Regulation when the shipowner sold to a buyer who then sent the vessels for scrapping on beaches in South Asia.

The court found that when the ships left the ports of Rotterdam and Hamburg in 2012, the intention was already to demolish the ships which qualified the ships as “waste”, even though they were still seaworthy, certified, insured and operational.

A shipowner who sells a vessel at the end of its lifespan to a buyer who then contracts for shipbreaking at a facility that beaches may not be breaking the law. Nonetheless, there can be reputational and even financial consequences. Ships can be easily tracked to their final destination and a non-governmental organisation (NGO) may ‘name and shame’ the vessel owner despite the fact that the recycling contract is made by the buyer. Media is quick to pick up such stories. Increasingly, investors are also shifting away from companies whose ships end up beached and dismantled in conditions that are harmful to workers and the environment.

So, to conclude, the practice of beaching vessels for recycling is illegal in parts of the world and for all European flagged ships. While the practice may not at this time be illegal in other circumstances, Owners who sell end of life ships to buyers knowing that such buyers are likely to dismantle the ship in an unsafe and environmentally unsound manner, may, at the least, face reputational risk. At the worst, such sellers may find themselves charged with violation of waste shipment regulations.

Source: Gard

Inséré 21/02/19 NIEUWS NOUVELLES Enlevé 21/03/19

Euronav CEO Calls for More Recycling, Ordering Restraint

Fresh from merging with Gener8 Maritime, Belgian crude oil tanker company Euronav reported a net loss of USD 51.6 million for the first half of 2018.

Proportionate EBITDA for the same period was USD 98.8 million, down from USD 151.8 million year-on-year.

According to the company's CEO Paddy Rodgers, the completion of the Gener8 merger during the second quarter of 2018 reflected a huge amount of work for Euronav, providing the company with a platform of over 70 large tanker vessels.

In addition, Euronav took delivery of the third Suezmax newbuilding, the 156,600 dwt Cap Port Arthur on August 8, 2018. The fourth and last vessel from Hyundai Heavy Industries is due for delivery at the end of August. These vessel orders are accompanied by four seven-year time charter contracts.

"Demand for and supply of crude oil remain resilient, boosted recently by a directional change from key OPEC participants and well supported by expansion in ton miles, elevated recycling activity and impending regulatory change," Rodgers said.

"However, the rebalancing of the tanker market requires further affirmative action in reducing primarily older tonnage, restraint from contracting and a supportive oil price structure. Euronav remains confident on the medium term prospects for the large tanker market and today we see some short term improvements in the supply of both crude and tankers."



During the first six months of the year, 41 VLCC equivalents (33 VLCCs and 16 Suezmaxes) were removed from the global fleet, according to Pareto's data, which compares favorably with the 69 VLCCs removed during 1985 – the record year for recycling.

Accompanying this trend, prices in both the VLCC and Suezmax sectors for newbuilds have been rising 9% and 7% respectively during the first semester, according to Clarksons.

Euronav hopes that the trend would be continued amid favorable recycling prices, negative cash flow pressure on older tonnage from challenged freight rates, low utilization and growing pressure from incoming regulatory changes.

"Further fleet rebalancing is however required before the freight market can make sustained progress as the new build delivery schedule remains concentrated particularly in the VLCC sector well into 2019," the company insists.

Speaking on the tanker market, Euronav said that whilst recent proposals from OPEC to increase production are positive for the tanker market, they are caveated by volatile supply signals from Venezuela, Libya and Iran, primarily over how sanctions are imposed on them.

"Should sanction imposition be aggressive this could lead to 20-30 Iranian tankers being removed from the global trading fleet to be used for domestic floating storage which would provide a positive boost to the tanker market in the second half," the company added.

So far in the third quarter of 2018, the Euronav VLCC fleet operated in the Tankers International Pool has earned about USD 17,100 and 60% of the available days have been fixed. Euronav's Suezmax fleet trading on the spot market has earned about USD 12,725 per day on average with 60% of the available days fixed

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

Sinking of US Cargo Vessel SS El Faro

Atlantic Ocean, Northeast of Acklins and Crooked Island, Bahamas

October 1, 2015

NTSB/MAR-17/01

This is a synopsis from the NTSB's report and does not include the Board's rationale for the conclusions, probable cause, and safety recommendations. NTSB staff is currently making final revisions to the report from which the attached conclusions and safety recommendations have been extracted. The final report and pertinent safety recommendation letters will be distributed to recommendation recipients as soon as possible. The attached information is subject to further review and editing to reflect changes adopted during the Board meeting.

Executive Summary

On October 1, 2015, during Hurricane Joaquin, the US-flagged cargo ship SS El Faro sank in the Atlantic Ocean about 40 nautical miles northeast of Acklins and Crooked Island, Bahamas. All 33 people on board perished. El Faro was owned by TOTE Maritime Puerto Rico and operated by TOTE Services, Inc. Damages from the sinking were estimated at \$36 million. Before the loss of El Faro, the last comparable US maritime disaster was the sinking of the US bulk carrier Marine Electric off the coast of Virginia in February 1983, in which all but three of the 34 persons aboard lost their lives.

The NTSB's investigation of the sinking identified the following safety issues:

- Captain's actions
- Use of noncurrent weather information
- Late decision to muster the crew
- Ineffective bridge resource management
- Inadequate company oversight
- Company's safety management system
- Flooding in cargo holds
- Loss of propulsion
- Downflooding through ventilation closures
- Need for damage control plan
 - Lack of suitable survival craft

The report also discusses other issues, such as the automatic identification system, voyage data recorders, and the Coast Guard's Alternate Compliance Program.

Findings

- The mechanical condition or operation of El Faro's boilers, steering, electrical power, and machinery were not factors in the accident.
- The work being performed by the riding gang of foreign nationals did not contribute to the sinking of El Faro.
- Neither improper securement of the trailers and containers nor inadequate maintenance of the vessel's cargo-securing gear contributed to the vessel's initial list.
- Cargo shifting was not a major factor in the vessel's initial list.
- The medical fitness of the El Faro crew and any prescription medication use by the crew were most likely not factors in the accident.
- The captain's decision to depart Jacksonville was reasonable considering the availability of options to avoid Tropical Storm/Hurricane Joaquin.
- There is no evidence that the vessel suffered a hull break or other significant structural failure while on the ocean surface that was a factor in the accident.
- A rogue wave was not a factor in the sinking of El Faro.
- The initial list was caused by an increasing wind on the vessel's beam generated by Hurricane Joaquin.
- The port list, coupled with the vessel's motion, most likely caused air to enter the bellmouth of the suction pipe to the lube oil service pump, which resulted in a loss of oil pressure that caused the main engine to shut down.
- The level of lube oil in the main engine sump was not maintained in accordance with the vessel's operations manual, which increased the propulsion system's susceptibility to loss of oil pressure.
- If the company had provided guidance to the engineers about the list-induced operational limitations of the engine as well as about raising the level of lube oil in the main engine sump before or during heavy weather, the additional quantity of oil in the sump would have kept the suction pipe submerged at greater angles of inclination and increased the likelihood of maintaining propulsion.
- Increasing the minimum athwartships angle of inclination requirements for both static and dynamic conditions would provide an additional margin of safety for vessels exposed to high winds and large sea states.
- The crew was most likely unaware of the operational limitations on the main engine from a sustained excessive list.
- If the ship's officers had known the maximum static list angle at which the main propulsion engine would operate, they would most likely have attempted to reduce the initial list sooner and possibly avoided the loss of propulsion.
- A watertight scuttle to cargo hold 3 on the second deck was open, allowing the unintended ingress of water and violating the ship's watertight envelope.
- If the second deck access hatch (scuttle) had been fitted with a remote open/close indicator at a manned location, such as the bridge, the crew would have known that the watertight hatch to cargo hold 3 was open.
- Because the automobile-lashing arrangement on El Faro did not meet the requirements of the vessel's approved cargo-securing manual, automobiles were more likely to shift from vessel motion in heavy weather.

- The introduction of water to cargo hold 3, combined with the vessel's motion, led to failure of some lashings and automobiles becoming unsecured.
- It is likely that the seawater piping below the waterline to the vessel's emergency fire pump in cargo hold 3 was inadequately protected from impact and was struck by one or more cars that had broken free of their lashings.
- Impact damage to the seawater piping below the waterline to the emergency fire pump in cargo hold 3 most likely led to flooding in the hold, which significantly compromised the vessel's stability.
- The rate of flooding in cargo hold 3 exceeded the design capacity of the bilge pumps and therefore did not lower the water level in the hold, despite continued pumping during the accident sequence.
- Crewmembers in the engine room were most likely alerted to water in cargo hold 3 by the installed bilge alarm system.
- New cargo vessels should be equipped with, and existing cargo vessels should be retrofitted with, bilge high-level alarms in all cargo holds that send audible and visible indication to a manned location.
- All the watertight and weathertight ventilation closures to the cargo holds most likely remained open throughout the sinking sequence.
- Vessels should not have operational requirements to maintain weathertight or watertight ventilator closures in an open position when the same closures are treated as closed when the vessel's stability and load line are assessed.
- Had the vessel's stability booklet or CargoMax software identified the vessel's downflooding points, the ship's officers might have closed the cargo hold ventilation openings.
- About 40 minutes before the sinking, seawater most likely entered the ventilation ducting to several main cargo holds, exacerbating the flooding already under way in cargo hold 3 and accelerating the sinking.
- If a damage control plan had been available and the crew trained in its use, the crew would have been better able to promptly plan for and address the flooding scenario encountered during the casualty.
- Existing cargo vessels should have the same damage control plans and booklets as are required for newly built vessels to assist crews in damage and flooding situations.
- Approval by a classification society of damage control plans and booklets would provide an independent check to ensure uniformity and compliance with requirements.
- A damage control plan would have helped the captain of El Faro assess the flooding situation.
- The damage stability module in the CargoMax software on El Faro could have provided timely vessel stability information to the officers for the damage conditions the vessel experienced.
- The original passage plan's straight-line course at departure from Jacksonville would lead directly into the storm's predicted path.
- Although there is no direct evidence that the company applied pressure regarding the vessel's schedule, inherent pressure could have influenced the captain's decision to continue on despite the weather.
- El Faro was receiving sufficient weather information for the captain's decision-making regarding the vessel's route.

- Although up-to-date weather information was available on the ship, the El Faro captain did not use the most current weather information for decision-making.
- The captain should have returned to the bridge after the second and third mates called him to gain a better awareness of the changing weather situation.
- The captain did not take sufficient action to avoid Hurricane Joaquin, thereby putting El Faro and its crew in peril.
- By failing to adequately consider the suggestions of the ship's junior officers to alter the passage plan and failing to alter his decision to proceed, the captain endangered El Faro and its crew.
- The concepts of bridge resource management were not implemented on board El Faro.
- The company's failure to ensure the implementation of bridge resource management contributed to the sinking.
- The company's safety management system was inadequate and did not provide the officers and crew with the necessary procedures to ensure safe passage, watertight integrity, heavy-weather preparations, and emergency response during heavy-weather conditions.
- The company did not have an effective process for evaluating the performance of its officers.
- The company did not have an effective training program for the use of the CargoMax stability instrument, including its damage stability module.
- Training in heavy-weather operations, including advanced meteorology and advanced shiphandling, from which the captain was exempt, might have provided him with additional information to consider while evaluating options and might have resulted in a different course of action.
- The company did not have an effective officer training program for the use of the ship's Bon Voyage System weather information software.
- The company did not ensure that El Faro had a properly functioning anemometer, which deprived the captain of a vital tool for understanding his ship's position relative to the storm.
- The company subscribed to the Rapid Response Damage Assessment service, although not required, but did not train the crew in its use.
- The company did not monitor the position of El Faro relative to the storm and did not provide the captain with support for storm avoidance and heavy-weather preparations during the accident voyage.
- The company failed to assess the risk posed by Hurricane Joaquin to El Faro.
- The company's lack of oversight in critical aspects of safety management, including gaps in training for shipboard operations in severe weather, denoted a weak safety culture in the company and contributed to the sinking of El Faro.
- El Faro's stability booklet should have included downflooding angles and windheel criteria to increase the officers' awareness of the ship's vulnerabilities in heavy weather, such as unintentional flooding and listing.
- Neither the Coast Guard nor the classification society adequately assessed the vessel's stability booklet to ensure that it contained critical information detailed in Coast Guard regulations and guidance.
- Coast Guard Navigation and Inspection Circular (NVIC) 4-77 (Shifting Weights or Counter Flooding During Emergency Situations) should be revised to include specific

guidance regarding the dangers of taking corrective action if Ro/Ro cargo is adrift or the decks are wet.

- The Coast Guard's Alternate Compliance Program is not effective in ensuring that vessels meet the safety standards required by regulations, and many vessels enrolled in the program are likely to be operating in substandard condition.
- The 2005–2006 conversion of El Faro to carry load-on/load-off containers and the associated increase in draft should have been designated a major conversion by the Coast Guard.
- For inspected vessels in coastal, Great Lakes, or ocean service, having their lifesaving appliances regularly reviewed for compliance with current standards would improve crew survivability.
- The captain's decision to muster the crew and abandon ship was late and may have reduced the crew's chances of survival.
- The severe weather, combined with El Faro's list, made it unlikely that the lifeboats could be boarded or launched.
- The vessel's open lifeboats would not have provided adequate protection even if they had been launched.
- Survivability would be increased if open lifeboats on all vessels remaining in service were replaced with enclosed lifeboats that adhered to the latest safety standards.
- Survivability would be increased if new cargo vessels were equipped with stern-launched freefall lifeboats, where practical.
- The severe weather, combined with El Faro's list, made it unlikely that the liferafts could be launched manually or boarded by crewmembers once in the water.
- Search-and-rescue efforts were carried out as effectively as possible given the extreme weather conditions in the days following the accident.
- Because of differences in latitude and longitude formatting between Inmarsat-C and the Coast Guard's search-and-rescue optimal planning system (SAROPS), the last known position of El Faro according to SAROPS was 23 nautical miles from the actual position.
- Although position errors did not affect the outcome of search-and-rescue efforts after El Faro sank, position information should adhere to a standardized format to eliminate similar errors in future accidents.
- The use of older emergency position indicating radio beacons (EPIRBs) such as the one on El Faro that do not transmit global positioning system (GPS) positions reduces positional accuracy in search-and-rescue operations.
- Providing all persons employed on board vessels in coastal, Great Lakes, and ocean service with personal locator beacons would enhance their chances of survival.
- The poor audio quality and poor placement of the voyage data recorder (VDR) microphones aboard El Faro inadequately recorded conversations on the navigation bridge, which impeded investigators' ability to accurately transcribe the recording.
- The most effective performance testing of voyage data recorder (VDR) audio quality would take place while the ship is under way using its main source of propulsion.
- El Faro's voyage data recorder (VDR) system was not configured or required to capture both sides of internal phone calls, which prevented investigators from hearing the engineering officers' communications with the bridge.
- To ensure optimum sound quality for accident investigation, it is vital that all very-high-frequency radios used for ship operations be recorded by individual inputs on the ship's voyage data recorder (VDR).

- The annual performance test for El Faro's voyage data recorder (VDR) was inadequate because the technician did not replace the locator beacon's battery even though it would expire before the next performance test.
- The postaccident recovery of El Faro's voyage data recorder (VDR) was greatly hampered because the battery had expired about 4 months before the sinking and the beacon was silent during the search.
- The design of the Global Maritime Distress and Safety System equipment used on El Faro allows erroneous ship positions to be sent in emergency alerts.
- Increased reporting and improved transmission of meteorological and oceanographic data from vessels at sea would significantly improve the availability of vital information to enhance weather awareness, forecasting, and advisory services aimed at improving mariner safety.
- Because of the significant benefit that the automatic identification system (AIS) could provide in improving the quantity of weather reports from ships globally, a "proof-of-concept" project is warranted to establish its viability.
- If the "proof-of-concept" project recommended in this report establishes that the automatic identification system (AIS) can deliver, in a single message, (1) meteorological and oceanographic data obtained directly from both automated instrumentation and humans on board vessels at sea, (2) vessel position and time of observation, and (3) other important metadata, via satellite and land-based receivers, to global meteorological authorities via the Global Telecommunications System with acceptable time delay, AIS must be utilized immediately to improve the quantity of ship weather reports across the globe.
- Expanding automatic identification system (AIS) message transmission capabilities to provide mariners with timely access to a variety of navigational, weather, and marine safety information by establishing new channels for the very-high-frequency data exchange system (VDES) is a prudent international effort.
- Had the deck officers more assertively stated their concerns, in accordance with effective bridge resource management principles, the captain's situational awareness might have been improved.

PROBABLE CAUSE

The National Transportation Safety Board (NTSB) determines that the probable cause of the sinking of El Faro and the subsequent loss of life was the captain's insufficient action to avoid Hurricane Joaquin, his failure to use the most current weather information, and his late decision to muster the crew. Contributing to the sinking was ineffective bridge resource management on board El Faro, which included the captain's failure to adequately consider officers' suggestions. Also contributing to the sinking was the inadequacy of both TOTE's oversight and its safety management system. Further contributing factors to the loss of El Faro were flooding in a cargo hold from an undetected open watertight scuttle and damaged seawater piping; loss of propulsion due to low lube oil pressure to the main engine resulting from a sustained list; and subsequent downflooding through unsecured ventilation closures to the cargo holds. Also contributing to the loss of the vessel was the lack of an approved damage control plan that would have assisted the crew in recognizing the severity of the vessel's condition and in responding to the emergency. Contributing to the loss of life was the lack of appropriate survival craft for the conditions

RECOMMENDATIONS New Recommendations

As a result of its investigation, the NTSB makes recommendations to the US Coast Guard, the Federal Communications Commission, the National Oceanographic and Atmospheric

Administration, the International Association of Classification Societies, the American Bureau of Shipping, Furuno Electric Company

To the U.S. Coast Guard:

- Revise regulations to increase the minimum required propulsion and critical athwartships machinery angles of inclination. Concurrently, requirements for lifeboat launching angles should be increased above new machinery angles to provide a margin of safety for abandoning ship after machinery failure.
- Propose to the International Maritime Organization (IMO) that design maximum operating angles of inclination for main propulsion machinery and other critical shipboard equipment be included in damage control documents, stability instruments and booklets, and in the safety management systems for all applicable vessels.
- Propose to the International Maritime Organization (IMO) that all watertight access doors and access hatch covers normally closed at sea be provided with open/close indicators both on the bridge and locally.
- Propose to the International Maritime Organization (IMO) that on new and existing vessels, seawater supply piping below the waterline in all cargo holds be protected from impact.
- Propose to the International Maritime Organization (IMO) to require that new cargo vessels be equipped with bilge high-level alarms in all cargo holds that send audible and visible indication to a manned location.
- Propose to the International Maritime Organization (IMO) to require that existing cargo vessels be retrofitted with bilge high-level alarms in all cargo holds that send audible and visible indication to a manned location.
- Propose to the International Maritime Organization (IMO) that any opening that must normally be kept open for the effective operation of the ship must also be considered a downflooding point, both in intact and damage stability regulations and in load line regulations under the International Convention on Load Lines.
- Require that information regarding openings that could lead to downflooding be included in damage control documents, stability instruments and booklets, and safety management systems for vessels subject to the intact stability criteria of Title 46 Code of Federal Regulations 170.170, regardless of the designation or treatment of such openings in intact stability calculations.
- Propose to the International Maritime Organization (IMO) that existing cargo vessels operating under the International Convention for the Safety of Life at Sea (SOLAS) be required to have damage control plans and booklets on board that meet current standards.
- Propose to the International Maritime Organization (IMO) that damage control plans and booklets required by the International Convention for the Safety of Life at Sea (SOLAS) be class-approved.
- Publish policy guidance to approved maritime training schools offering bridge resource management (BRM) courses to promote a cohesive team environment and improve the decision-making process, and specifically include navigational and storm-avoidance scenarios.
- Require recurring bridge resource management (BRM) training for all deck officers when renewing their credentials.

- Require that all deck officers, at both operational and management levels, take a Coast Guard—approved meteorology course to close the gap for mariners initially credentialed before 1998.
- Publish policy guidance to approved maritime training schools offering management level training in advanced meteorology, or in an appropriate course, to ensure that the curriculum includes the following topics: characteristics of weather systems including tropical revolving storms; advanced meteorological concepts; importance of sending weather observations; ship maneuvering using advanced simulators in heavy weather; heavy-weather preparations; use of technology to transmit and receive weather forecasts (such as navigational telex [NAVTEX] or weather-routing providers); ship-routing services (capabilities and limitations); and launching of lifeboats and liferafts in heavy weather.
- Provide policy guidance to approved maritime training schools offering operational level training in meteorology to ensure that the curriculum includes the following topics: characteristics of weather systems, weather charting and reporting, importance of sending weather observations, sources of weather information, and interpreting weather forecast products.
- Require that vessels in ocean service (500 gross tons or over) be equipped with properly operating meteorological instruments, including functioning barometers, barographs, and anemometers.
- Revise Title 46 Code of Federal Regulations 170.110 (stability booklet) to require (1) stability instructions, guidance, or data on wind velocity used to calculate weather criteria; (2) list of closures that must be made to prevent unintentional flooding; (3) list of closures that must be made for an opening not to be considered a downflooding point; and (4) righting arm curve (metacentric height [GM]) table to note the angle at which initial downflooding occurs, and add a windheel table for vessel full load displacement or the condition of greatest vulnerability to windheel.
- Update the guidance in Navigation and Inspection Circular 4-77 (Shifting Weights or Counter Flooding During Emergency Situations), based on the circumstances of the El Faro accident, to include a warning that actions by ship personnel intended to correct a list can produce dangerous results if Ro/Ro cargo is already adrift and water has reduced the coefficients of friction for lashed cargo.
- Conduct a complete review of the Alternate Compliance Program to assess the adequacy and effectiveness of the program.
- Review and implement training of Coast Guard inspectors and accredited classification society surveyors to ensure that they are properly qualified and supported to perform effective, accurate, and transparent vessel inspections, meeting all statutory and regulatory requirements.
- Review and revise the policy for major conversion determinations to consider load line (maximum) draft as a principal vessel dimension.
- At regular intervals, not to exceed 20 years, review all lifesaving appliances on inspected vessels that are required by Title 46 Code of Federal Regulations, part 199, and require compliance with current standards.
- Require that open lifeboats on all US inspected vessels be replaced with enclosed lifeboats that meet current regulatory standards, and freefall lifeboats where practicable.
- To prevent future errors in converting position data such as occurred in the El Faro accident, work with manufacturers of Global Maritime Distress and Safety System (GMDSS) equipment, communication providers, and land earth stations to remove ambiguity from the Inmarsat-C distress alert position reports.

- Require that all personnel employed on vessels in coastal, Great Lakes, and ocean service be provided with a personal locator beacon to enhance their chances of survival.
- Modify guidance and training for marine inspectors to ensure that voyage data recorder (VDR) annual performance tests include the replacement of locator beacons prior to expiration and that audio used to evaluate quality is recorded while a ship is under way using its main propulsion unit.
- Propose to the International Maritime Organization (IMO) to amend resolution MSC.333(90) to specify that “normal operations” are defined as when a ship is under way using its main propulsion unit and to assess voyage data recorder (VDR) problems, including not capturing both sides of internal phone calls on the bridge electric telephone and unrecorded very-high-frequency (VHF) communications, and identify steps to remedy them.
- If the actions recommended to the National Oceanographic and Atmospheric Administration in Safety Recommendation M-[00-00] establish that the automatic identification system (AIS) is a viable means by which to relay (with acceptable time delay) meteorological and oceanographic data and metadata from vessels at sea for use by global meteorological authorities, propose to the International Maritime Organization (IMO) that vessels required to use AIS also be equipped with meteorological and oceanographic sensors—including, at a minimum, sensors for barometric pressure and sea-surface temperature—that will automatically disseminate the data at high-temporal resolution via AIS.
- Propose to the International Maritime Organization (IMO) that vessels under regulations of the International Convention for the Safety of Life at Sea (SOLAS) that are not already automatically disseminating meteorological and oceanographic data by other means be required to manually disseminate such data while at sea via the automatic identification system (AIS) or the Voluntary Observing Ship program at the times of 0000 UTC, 0600 UTC, 1200 UTC, and 1800 UTC.

To the Federal Communications Commission:

- Require that all US vessels required to carry 406-MHz emergency position indicating radio beacons (EPIRBs) immediately discontinue the use of EPIRBs that are not global-positioning-system (GPS)-enabled.
- Reserve the designated application-specific message (ASM) frequencies for very-high-frequency (VHF) data exchange system (VDES) use in US territories, as identified in International Telecommunications Union (ITU) recommendation ITU-R M.2092-0, and consistent with international efforts.

To the National Oceanic and Atmospheric Administration:

Coordinate with the National Weather Service, vessel operators, automatic identification system (AIS) service providers, and required onboard technology vendors, to perform a “proof-of-concept” project to establish whether AIS, or another suitable alternative, can practically deliver, in a single message (1) meteorological and oceanographic data obtained directly from automated instrumentation and manual observation on board vessels at sea, (2) vessel position and time of observation, and (3) other important metadata, by satellite and land-based receivers, to global meteorological authorities via the Global Telecommunication System with acceptable time delay.

To the International Association of Classification Societies:

- Recommend to your members to increase the minimum required propulsion and critical athwartships machinery angles of inclination. Concurrently, requirements

for lifeboat launching angles should be increased above new machinery angles to provide a margin of safety for abandoning ship after machinery failure.

- Recommend to your members to require that design maximum operating angles of inclination for main propulsion machinery and critical shipboard equipment be included in damage control documents, stability instruments and booklets, and in the safety management systems for all applicable vessels.
- Recommend to your members to require that all watertight access doors and access hatch covers normally closed at sea be provided with open/close indicators both on the bridge and locally.
- Recommend to your members to require that on new and existing vessels, seawater supply piping below the waterline in all cargo holds be protected from impact.
- Recommend to your members to require that new cargo vessels be equipped with bilge high-level alarms in all cargo holds that send audible and visible indication to a manned location.
- Recommend to your members to require that existing cargo vessels be retrofitted with bilge high-level alarms in all cargo holds that send audible and visible indication to a manned location.
- Recommend to your members that any opening that must normally be kept open for the effective operation of the ship must also be considered a downflooding point, both in intact and damage stability regulations and in load line regulations under the International Convention on Load Lines.
- Recommend to your members that existing cargo vessels be required to have damage control plans and booklets on board that meet current standards.
- Recommend that your members require that damage control plans and booklets required by the International Convention for the Safety of Life at Sea (SOLAS) be class-approved.

To the American Bureau of Shipping:

Enhance training of your surveyors to ensure that they are properly qualified and supported to perform effective, accurate, and transparent vessel surveys, meeting all statutory and regulatory requirements.

To Furuno Electric Company, Ltd.:

Update your Global Maritime Distress and Safety System (GMDSS) software to detect and correct user errors when entering ship positions using the global positioning system (GPS).

To TOTE Services, Inc.:

- Establish standard operating procedures for heavy weather that address operational limitations and oil levels in critical machinery to ensure their continued operation.
- Establish procedures for opening, closing, and logging all closures that make up a vessel's watertight envelope while the vessel is at sea.
- Ensure that damage control plans and booklets are aboard all your load-lined vessels, and that officers and crewmembers are trained in their use.
- Require senior officers to receive formal training approved by the manufacturer in all functions found in installed stability programs, including damage stability modules.

- Revise your safety management system and bridge resource management programs to contain detailed polices, instructions, procedures, and checklists to mitigate the risks of severe weather to your vessels.
- Conduct an external audit, independent of your organization or class society, of your entire safety management system to ensure compliance with the International Safety Management (ISM) code and correct noted deficiencies.
- Require your vessels to be equipped with properly operating meteorological instruments, including functioning barometers, barographs, and anemometers.
- Institute a formal company process to provide independent weather routing, passage-planning assistance, and vessel position monitoring.
- Provide formal and recurrent training to your deck officers on the public and commercial weather information systems provided on board each vessel to ensure that the officers are fully knowledgeable about all weather information sources at their disposal and understand the time delays in the information provided.
- Provide shoreside management and vessel senior personnel with training in the Rapid Response Damage Assessment program and standard operating procedures, to include requirements to conduct annual drills and submit departure stability conditions for each vessel on each voyage.

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Nieuw

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

Owners warned of operational and regulatory challenges with scrubbers

Scrubbers have become flavour of the month for large vessel owners to comply with the 2020 sulphur cap, however, ensuring compliant operations could prove difficult with Euronav chief Paddy Rodgers drawing a parallel with the oil water separator record book issue in the US. The issues of having compliant scrubber operations and concerns over open loop scrubbers, the type fitted by most shipowners, were highlighted at seminar

entitled – 2020: Challenge or opportunities – held by ABS in Hamburg on Monday. For the shipowner hoping to simply fit a scrubber and then be able to burn high sulphur heavy fuel oil wherever they like with no questions asked there were warnings it would not be that easy. “This isn't a type approval, this isn't a license to burn heavy fuel oil,” stated Euronav ceo Paddy Rodgers. “You are obliged to monitor and ensure that your emissions are maintained on three or four parameters at all time and a failure to keep a record is itself a non-compliance. “I think we are headed to a territory that to my mind is a lot more like the oily water separator book where a lot of people running scrubbers may find they get detained in port. and they could get detained in port because actually the computer recording instruments failed during the voyage, not the actual scrubber stopping functioning,” he warned. The result could be an owner being hit with a penalty simply because records were wrong regardless of what the actual level of emissions were. In the case of the oily water separator record book owners and managers have found themselves slapped with hefty penalties in recent years. Questions were also raised on possible restrictions of open loop scrubbers with the German Shipowners Association (VDR) highlighting restrictions in an increasing number of ports. Wolfgang Hintzsche said, “We are getting more and more inputs from owners that there are increasing restrictions for open loops, at least in the ports... there is an increasing list in North European, if you look at Norway, Sweden, Germany.” Although owners can switch to using compliant fuels in port this was not seen as ideal solution. “For sure you could be compliant by using MGO (marine gas oil) but most of the owners we talk to are looking forward to only having one fuel, which would be the best alternative for long term discussion.” Euronav's Rodgers also questioned whether open loop scrubbers would really be acceptable if looked at closely by the world at large rather than just the IMO. Lars Robert Pedersen, deputy secretary of Bimco responded that, “One would expect what comes out of IMO in terms of what is criteria is actually acceptable to those countries or else I would not expect them to approve it.” He added: “We have a wash ater criteria from IMO, yes it can be changed over time, but I don't think it will be changed that it will basically outlaw open loop scrubbers.”

Source : Seatrade Maritime News

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