

# Marine Hull & Machinery and War Risks Market Update

**FEBRUARY 2019**

IMO 2020 Special Edition



**Gallagher**

Insurance | Risk Management | Consulting

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## Welcome to the February 2019 edition of the Gallagher Marine Hull & Machinery and War Risks Market Report.

In this special first edition of 2019, we are taking the opportunity to look ahead and address the new IMO MARPOL sulphur regulations due to take effect in 2020. The legislation without doubt presents some of the biggest challenges to face the shipping sector in modern times. Shipowners must carefully consider the commercial implications of the various options available to them and, most importantly, manage the associated risks.

We have asked a number of our friends and partners to contribute to this extended report. This includes a Q&A with Tim Wilson of Lloyd's Register who offers valuable insight on compliance options to successfully meet the 2020 deadline. A flag state perspective is also provided in a regulatory update by Nick Makar of International Registries. Risk management commentary from the insurance world is offered by Ole Wikborg of Norwegian Hull Club and Mike MacColl of Axa XL.

The new regulations are looming against the backdrop of an undoubtedly more challenging insurance environment. Ahead of the next Hull & Machinery renewals, Underwriters will certainly be asking owners and managers about their plans to comply with the regulations and their procedures to manage the risks.



## 02. MARKET UPDATE

Natural disasters and extreme weather continued to hit the headlines in 2018 as once again, the trend of increased natural catastrophes continued.

Hurricanes Harvey, Irma and Maria (HIM) in 2017 were among the biggest marine loss events of the past five years and would feature highly among the top 10 marine losses of the past decade. The three storms in 2017 caused an estimated \$1bn of insured losses for the yacht market alone, as well as causing extensive damage to ports, cargo and inland marine risks such as warehouses, buildings under construction and weather stations. Natural catastrophes continued to generate losses for marine insurers in 2018. Hurricane Florence and Michael caused damage and disruption to several ports on the US east coast in September. Florence is estimated at USD 2.5bn, Michael is estimated at USD 6-10bn. Losses to the marine market from these events are modest, however, a factory fishing vessel 'North Star'

being constructed at Eastern Shipyard in Florida (close to completion) was very badly damaged. Estimates are difficult at this stage but a total loss would be over USD 70m. Typhoon Mangkhut caused damage to coastal infrastructure, shipping containers and yachts in Hong Kong and China, while an offshore engineering vessel Hai Yang Shi You ran aground near Hainan. Typhoon Jebi, the most powerful storm to hit Japan in 25 years, caused tanker Houn Maru to break its mooring and collide with a bridge linking Kansai International Airport to the mainland.

The shipyard fire at Lurssen in Germany on 14 September may turn out to be the largest pure hull loss ever. In the event it is declared a total loss the claim will be in excess of EUR620m. It is this loss

more than any other that has galvanised hull underwriters, their management and Lloyd's of London to look for higher prices and to trim back the book. With larger and more sophisticated vessels entering the sector – and more risky trading areas such as polar waters being explored – the risk of ever larger single losses occurring is growing. A loss of an ultra-large or very large vessel now has the potential to generate claims in the \$1bn to \$2bn space.

Attritional losses were stable but proving to be material against the backdrop of a reduction in marine insurance premium rates in recent years. Machinery breakdown (including engine failure) claims continued to be among the largest causes of loss by value and frequency. Claims arising from contaminated fuel continue to raise

difficult questions around causation and who is liable for damage. This will be brought even more into focus as vessels switch to low sulphur fuels to comply with the 2020 regulations. This topic is explored in more detail by Mike MacColl of Axa XL in his article later in this report.

### London Market

Following on from a string of poor marine underwriting results over many years, Lloyd's of London has demanded that participating syndicates demonstrate clear plans to return to profitability. This overall poor performance on a number of lines of business was further exacerbated in 2017 by the major catastrophe losses which hit the market. Marine hull insurance is a repeat offender in terms of results and a number of Lloyd's syndicates have announced modifications and withdrawals of their offering in this area.

- Advent Syndicate 780 has announced a complete shutdown of their marine insurance book. This comes amidst discussions that Advent will be merged with Brit which is also owned by parent group Fairfax Financial Holdings. It seems likely that Advent's overall portfolio will be part run-off, part transferred to Brit.
- Brit Syndicate themselves have withdrawn from yacht business where they were considered a substantial player.
- AM Trust Syndicate 1861 have closed their Lloyd's marine book in its entirety, withdrawing from hull, liability and cargo. AM Trust were a new participant in the marine market in 2015, headed by ex Swiss Re hull Underwriter Peter Townsend.

- Aspen Syndicate 4711 has ceased writing marine hull along with a withdrawal from two other lines of business (aviation and professional indemnity). Aspen has since sold the renewal rights to Helvetia who have opened a new office in London. The Helvetia team will be Ralph Godwin and Simon Wells (both ex Aspen) and Iain McLeod (ex Channel Syndicate).

- Barbican Syndicate 1955 have withdrawn from marine hull and cargo business.
- There is no intention to replace senior marine hull Underwriters who left Tokio Marine Kiln Syndicate 510. Des Keane and Konstantinos Tampakakis departed earlier in the year.

- CNA Hardy Syndicate 382 have closed their marine hull book along with other non-profitable lines of business citing that these lines have struggled to deliver profitability even in light of improving market conditions.

- Standard Syndicate 1884 will enter run off from 1st January 2019. Standard Club concluded that 'current overcapacity and a weak pricing environment have made Lloyd's a challenging environment for it to develop a profitable underwriting business with sufficient scale.

- Channel Syndicate 2015 have withdrawn from marine H&M business. They will continue to write some of the book via their parent company Scor.

- Liberty have announced they will no longer write marine hull business through their Lloyd's Syndicate 4472 but will instead renew and grow their portfolio via their company security.

The above follows on from the complete marine withdrawal of WR Berkley Syndicate 1967 in 2017, and also the scaling back of marine hull business (blue water) by Canopus Syndicate 4444.

The tougher stance towards hull & machinery risks is not limited to Lloyd's. Other London market participants have indicated intent to scale back on their participation and withdraw from risks with poor historical performance or where technical rating is considered inadequate.

RSA have recently announced they will exit London Market Marine Logistics, Marine Trades, and Ports and Terminals as well as International Construction, International Freight and our Delegated Authority to Lodestar (for Fixed Price Protection and Indemnity Insurance). They will continue to offer Marine Hull and Hull Construction. As is the case for much of the London market, they will be looking to secure meaningful premium increases across this portfolio in order to return to profitability.

It is widely believed that there could be further casualties in a marketplace which has been characterised by over-capacity in recent years. There has already been some hardening of rates and this is expected to continue in 2019. How significant will largely depend on whether capacity enters the market in other parts of the world in an attempt to take advantage of a more favourable rating environment.



## 03.CASUALTY REPORTS



### **Aeneas / Panamax Alexander / Sakizaya Kalon / Osios David / Nyk Orpheus**

On 15 July 2018 chaos erupted in the Suez canal when a number of vessels in the southbound convoy were in collision according to Roose law. The accident is reported to have resulted from an initial mechanical issue which occurred on board the 5,100 TEU containership Aeneas, causing the vessel to run aground. Three bulk carriers which were following the

Hyundai Merchant Marine containership: the Panamax Alexander, Sakizaya Kalon and Osios David were then in collision as they tried to stop and avoid the grounded Aeneas and each other. The Panamax Alexander was also reported to have grounded. Tugs were deployed to the accident site and the Aeneas was pulled free and taken into the port of Suez. The Osios David also proceeded into Suez under escort or tow whilst the Panamax Alexander and the Sakizaya Kazon, which was thought to have suffered rudder

failure and required a tow, headed to an anchorage in the Great Bitter Lake. Whilst the Panamax Alexander was en route to the anchorage she was in collision with the fully cellular containership NYK Orpheus which was in a northbound convoy. The NYK operated vessel completed inspections in Port Said and has since proceeded. The casualties led to serious delays for dozens of vessels in both the northbound and southbound convoys with the southbound section being closed to traffic for several hours. The Suez Canal Authority, whose tugs were involved in assisting all the affected vessels, were reported to have arrested the four vessels involved in the original incident seeking compensation for tug assistance and damage to the canal. The claims are likely to be significant.



### **Fjordvik**

On 3 November 2018 the 1975 built cement carrier Fjordvik ran aground on a breakwater whilst approaching the port of Helguvik in Iceland and subsequently suffered a hull breach. As Roose Law reported the Bahamas flagged Fjordvik was proceeding into the port of Helguvik, which sits on Iceland's South West coast, when she struck the breakwater at 00.50 hours coming to rest broadside to the structure on her port side. The weather at the time was stormy and may have been a factor in the accident. The vessel was under control of a local pilot at the time of the grounding and had 14 crew members on board. She was also loaded with 104 m/t of marine gas oil on board.

The Icelandic Coast Guard received an emergency call from the vessel notifying them of the grounding and shortly afterwards two rescue helicopters were dispatched to the site together with rescue teams and a local lifeboat from Suðurnes and Hafnarfjörður. As the vessel was being pounded by the surf and continuously pushed against the breakwater, the Coast Guard ordered an emergency evacuation.

### **Lürssen shipyard fire**

At 02:00 hours on Friday 14th September 2018, a fire broke out in a 400-foot floating drydock at the Lürssen Shipyard in Bremen, Germany as Maritime Executive reported. The blaze also affected a yacht within the dock.

According to Lürssen, all personnel aboard the vessel were evacuated and examined for smoke inhalation injury. The rest of the yard was also evacuated, and more than 110 firefighters and 30-40 firefighting vehicles responded to the scene. A team from the Jos. L. Meyer shipyard also provided support.





### Aulac Fortune

The 2010 built tanker (dwt 17,542) caught fire in Hong Kong waters off Lamma Island on 8th January 2019. One person has died and two others are missing. As gcaptain.com reported, the fire on board the Vietnamese-flagged vessel was believed to have started as crews were preparing for bunkering operations from a fuel oil barge. Authorities said the fire started at around 11:30a.m. local time when the vessel was rocked by three explosions. Seven crew members also suffered injuries, including one who was reported in a serious condition, according to the South China Morning Post. One of the injured was a crew member of the oil barge. The blaze was extinguished at around 4:30p.m. The tanker had a total of 25 crew members on board. The vessel had just offloaded an oil cargo in Dongguan, Guangdong province and had stopped to load fuel before it was scheduled to depart for Thailand when the incident occurred.

### Eastern Shipyard

In October 2018, Hurricane Michael hit Panama City, Florida-based Eastern Shipbuilding Group's Allanton shipyard with category 4 hurricane-force winds. Insurance Marine News reported that this has caused up to \$75m worth of damage, with several UK-based insurers said to be exposed to marine construction losses.

Allanton Yard is located about 15 miles east of Eastern's headquarters and main yard in Panama City, and just a few miles west of Mexico Beach, Florida, where Hurricane Michael hit land.

"Both shipyards have taken hurricane damage," ESG president Joey D'Isernia said. Hurricane surge swept a nearly finished 261ft Alaska factory trawler, the North Star, into Saint Andrews Bay where it was resting on its starboard side. The trawler was built by ESG for Seattle-based Glacier Fish Co and was launched in April 2018. The vessel was scheduled to be completed and depart for Alaska in November.

"The boat was nearing completion, and because of all the destruction down there, we have not been able to survey the vessel," Jim Johnson, president of Glacier Fish, told the Seattle Times. Other projects at Eastern include the new Ollis-class vessels for New York's Staten Island Ferry, and Tier 4 tugs for McAllister Towing and Transportation Co.



### Yantian Express Fire

A fire broke out in one container on the deck of the German-flagged containership Yantian Express on Thursday 3rd January 2019, and spread to additional containers, Hapag-Lloyd, the owner of the vessel informed World Maritime News.

"The crew of 8 officers and 15 seafarers is unharmed. Efforts to extinguish the fire in the containers were launched immediately but have had to be suspended for the time being due to a significant deterioration of weather conditions," the German liner company said.

The 7,510 TEU vessel, was deployed in the company's East Coast Loop 5 (EC5) service, and was on its way from Colombo to Halifax via the Suez Canal when the incident occurred. On January 7th 2019 the 2002-built ship was approximately 800 nautical miles off the coast of Canada, Nova Scotia.

According to Maritime executive two more ocean-going tugs have been dispatched to meet the containership Yantian Express at a position about 900 nm southeast of Halifax. The Express has been drifting or moving ahead at a slow bell in the North Atlantic since January 3 2019, when a cargo fire forced her crew to evacuate.

The new additions to the salvage team are the DonJon-owned Atlantic Enterprise and the Boskalis AHTS Sovereign, according to the U.S. Coast Guard. The AHTS vessels Smit Nicobar and Maersk Mobiliser are already present and assisting. As reported in the article, dated January 14th 2019, operator Hapag-Lloyd says that the fire was largely under control, thanks to a response effort headed up by salvage

company Smit. Five crewmembers have returned to the Express to assist the operation. According to the same report the Mobiliser had the Yantian Express in tow and was moving ahead at a "slow speed," but Hapag-Lloyd did not yet have an estimate for the time of her arrival at a port of refuge. The full extent of the damage from the fire is currently unknown.



#### Sincerity Ace

World Maritime News reported that the fire-stricken car carrier Sincerity Ace was taken under tow on January 8 2019, the vessel's owner Shoen Kisen Kaisha confirmed. The company added that the 650-foot unit is being towed by the salvage tug Koyo Maru heading to a yet-to-be-determined location in the Far East. Sincerity Ace suffered a significant vessel fire in the middle of the Pacific on December 31 2018. At the time, there were 21 seafarers aboard the ship. The crew battled the fire in an attempt to extinguish it but were not successful and were forced to abandon the vessel.

The US Coast Guard and Navy coordinated rescue efforts of the crew with other merchant ships in the area. Due to difficult search conditions and rough weather, 16 crew members were rescued. When the tug arrived on scene the crew was instructed to exert all efforts to try and locate and recover the bodies of the remaining 5 crew members together with

assistance from another vessel the owner chartered. Unfortunately they could not locate the missing crew, Shoen Kisen Kaisha said. Vessels transiting the area have been asked to keep a sharp lookout for the bodies of the missing crew and report any sightings to local authorities. "Our thoughts and prayers are with the crew and their loved ones during this difficult time. Our company is working closely with our crewing department to ensure everyone is being properly cared for, especially the families of the missing crew," the company added.



#### Star Centurion- Antea collision

Twenty-two crew members have been evacuated from Vanuatu-flagged MV Star Centurion following a collision between the cable layer and a Hong Kong-flagged tanker MT Antea on Sunday 13th January 2019 according to World Maritime News.

The collision took place 35 nautical miles east of Changi, Singapore at 06:20 a.m., local time, resulting in the capsizing of Star Centurion. The tanker, which has also sustained damages to its hull, the Jakarta Post reported. Based on the

released footage on media outlets of the incident, the tanker, owned by Indonesian Pertamina, punctured a huge gash in the side of the cable layer, formerly known as Lewek Centurion, causing it to list heavily.

The pipelaying vessel, managed by Vallianz Offshore Marine Pte. (VOM) and owned by Trevakis Ltd, has been at anchor at outer port limits of Singapore since January 8, 2019, Vallianz Holdings said in a statement to WMN.

Based on the available information, there are no signs of an oil spill at the site. (World Maritime News Staff).

#### Durban Queen í

As reported by the Maritime Executive the 1983 built asphalt tanker suffered a loss of stability and capsized east of Qatar on 20 November 2018. She was on a voyage from Hamad to Doha. All crew were safely rescued by the French frigate Cassard.



## 04. AXA XL:

### IMO 2020: Systemic risk in the Hull account?



**Mike MacColl**

Global Head of Hull  
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AXA XL, a division of AXA



So, we've had a window on what might happen as we approach 2020 with regard to the new fuel regulations, particularly where scrubbers are not the chosen route to compliance. "Chaos" springs to mind and, whilst shipowners have a myriad of complex practical and financial decisions to make, Marine insurers might also want to reflect on what happened recently out of Galveston and then get a crystal ball out and look toward 2020, it is, potentially, not a pretty picture.

Galveston threw up an issue that most Marine insurers (absent those with technical teams perhaps) were blissfully ignorant of. Cat fines were the hot topic five or six years ago, with the Joint Hull Committee issuing guidelines in 2013 on the subject. Many cat fine related claims have been encountered and paid for since, but 2020 (see opposite page) brings an enhanced threat, to safety at sea, to shipowners and their charterers and to insurers at the other end, and not just Hull & Machinery insurers. Not new, maybe, in the world of blending fuels but new in terms of its immediate threat and, in particular, it's likely impact on shipping. Might it propagate a rapid escalation in the frequency of machinery related claims on Hull & Machinery, Loss of Hire, Legal Liability, Cargo and P&I/FD&D insurers and, maybe, introduce systemic risk? Let's hope not.

With Galveston (and subsequently other areas), we saw FAME become infamous (to the wider world at least) and ISO 8217 not a testing standard capable of spotting it, although for charterers/fuel suppliers aware of Clause 5 of ISO 8217, it does state that no material should be present in the fuel at a concentration that is harmful to personnel, jeopardizes the safety of the ship or adversely affects the performance of the machinery". From Galveston, many vessels suffered blocked filters, purifiers & injectors, clogged pumps and, in the worst cases, blackouts and engine damage. At least one vessel ran aground; some required tug assistance and some used expensive chemicals to dilute/clean up the problem. Others lost time and some have banded together to take legal action. It could get very messy....and what about the discovery of tanks filled with contaminated/incompatible fuel...who's going to pay for removal and cleaning of those when there's no damage?

#### We might expect to see claims arising in the following areas, all are inter-related:

##### Hull & Machinery policies:

- Damage to filters, purifiers and engines
- Hull damage from groundings or collisions as a consequence of loss of power/black outs
- Claims for Salvage assistance
- General Average

##### Loss of Hire insurers for:

- Loss of Charter Hire arising as a consequence of any of the above

##### Claims on Cargo insurers for:

- General Average
- Maybe cargo damage as a consequence of a grounding or collision.

##### Claims on P&I insurers for:

- Non-payment of Cargo contribution in General Average
- Wreck removal claims following a CTL after grounding, a collision perhaps or an explosion on board?
- FD&D claims, plenty of those?

##### Charterers Liability insurers for:

- Liability to Owners for damage to the vessel
- Unsafe port claims - supply of contaminated or fraudulently tested/sampled bunkers in a nominated port perhaps?

There may be many more possibilities.

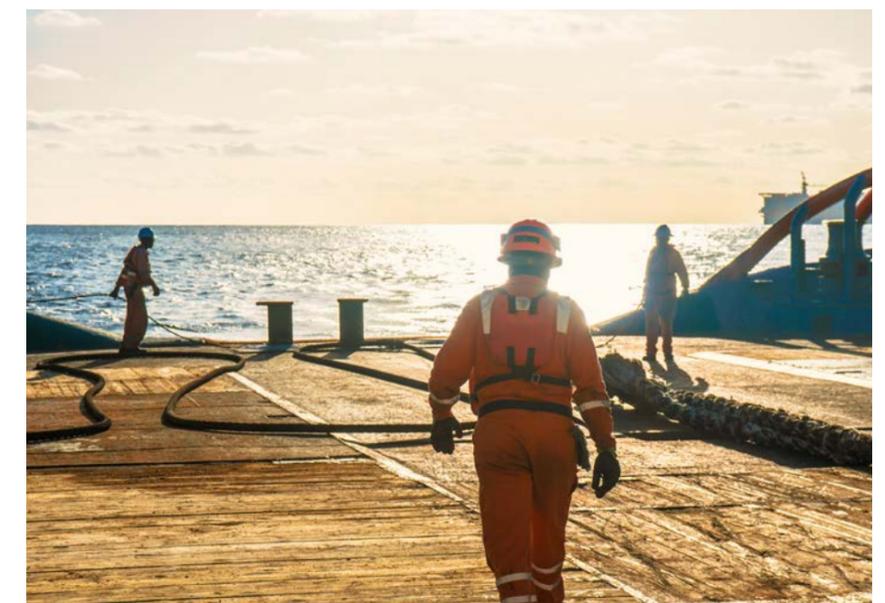
Whether fitting scrubbers or not, the additional expense of preparing for 2020 is no doubt an unwelcome distraction for shipowners in a relatively depressed shipping market (albeit light at the end of the tunnel in some sectors) but it is one to be taken very seriously. Similarly, the prospect of an increase in frequency and severity of claims is a concern for a long suffering marine insurance market. Insurers need to be up to speed on the technicalities and close enough to their clients to understand best practice when they see it.

For those that seek to rely on insurers, it might be worth taking a step back and looking at why that might not be as easy as it sounds. This is not an unknown or altogether unexpected challenge. Insurers will expect Owners to be on top of all aspects of the new demands of fuel sampling, testing and on board management and to be able to demonstrate that to a high standard. They will owe a duty of care in the preparation and execution of procedures to mitigate loss and to ensure vessel crews are (re) trained accordingly and well in advance. Safety first, surely, so they will be

expected to exercise the necessary level of attention not only for their own benefit (preservation of the assets) but for the safety of the crews they employ and for the preservation and safe delivery of the cargoes they carry.

Problems will likely be encountered by even the most diligent Owners. However, if procedures and best practices are adhered to by competent and well trained crew, the risk of having such a problem should be minimal, a rare and fortuitous occurrence

both unexpected and unintended. If the worst happens, well organized procedures followed to the letter will greatly assist with a claim, in the first instance, on a Hull & Machinery policy. The same applies when insurers wish to subrogate against a responsible third party.



## So what can Owners do?

With a heavy focus on protecting the safe and efficient operation of the ship, carry out a Risk Assessment, ship by ship, following the MEPC (Marine Environment Protection Committee) approved guidance on ship implementation planning. Covering inter alia vessel capability and fuel quality:

- Risk assessment and mitigation plan (impact of new fuels)
- Fuel oil system modifications and tank cleaning
- Fuel oil capacity and segregation capability
- Procurement of compliant fuel
- Fuel oil changeover plan (from conventional residual fuels to 0.50% sulphur compliant fuel oil)
- Documentation and reporting
- Contact the manufacturers of your engines and purifiers and request advice on what limitations exist concerning fuel quality for safe, normal operation of their equipment
- Check historical records of bunker suppliers with fuel testing laboratories and identify any previous quality issues.
- Samples should be sent for laboratory analysis immediately upon completion of bunkering operations

- Ensure bunkers are segregated with no comingling taking place during loading
- Do not consume new bunkers until the analysis report has been received.

Don't just follow minimum standards; implement the best possible practices to ensure the prospect of damage or delay is absolutely minimized in all circumstances. A "blue chip" approach will stand owners in good stead at every partnership level within their business, from their relationship with customers, banks, classification societies, regulators, law enforcement agencies, Port State Control through to their Crews on board and with their Insurers....to name but a few.

Discuss and agree the Fuel Changeover Plan with charterers so as to ensure the vessel will be supplied with suitably compliant and tested fuel in advance of the changeover date. All fuel samples should be carefully obtained, clearly labelled, dated and sent for analysis as a matter of routine. Ensure reporting procedures are tight and crews are given the support and the tools they need to confidently deal with the issues they face day to day.

Compatible lubricating oils (of the correct spec for the fuel envisaged) should be stored on board. Stock levels should be reviewed and updated well in advance. Compliant fuels may require additional measures to address lubricity either through the use of additives as

well as passing the fuel through coolers to increase viscosity. Make sure these capabilities are readily available to the crew on board.

The fuel supply chain should be understood and only reputable suppliers, operating to IBIA/MEPC best practice guidelines as a minimum, should be engaged. If possible, there should be evidence of satisfactory representative testing at all stages of production. Crews should be encouraged to raise the alarm if the slightest doubt suggests fuel contamination at levels that can't easily be managed on board or that might lead to damage. For example, the supply of compliant fuels will be more of a concern away from the major bunkering ports and, despite avenues that exist for reporting the use of non-compliant fuels, vigilance will be necessary at every stage.

Improve contractual terms, maintaining rights of action against charterers/fuel suppliers wherever possible (make sure that if rights are waived, your insurers are happy to accept that in advance). Commercially, this could be sensitive but, in the event of a claim against a Hull & Machinery policy, Owners record will be better for a successful recovery by their insurers against a third party.

Put in place comprehensive training/retraining programs to ensure crews are up to speed with fuel and lubricity issues and the procedures to cover all likely eventualities. Empower and support them, with help from ashore, to make the right decisions notwithstanding commercial pressures to do otherwise.

If contaminated bunkers are received onboard, it is important that a proactive approach is adopted to mitigate the effects as far as is possible.

- If possible, bunkers should be chemically treated to bring them back within specification, by the use of additives stored for that eventuality or procured locally.
- Owners will need to ensure that there is alternative fuel supply available onboard to consume during the interim period whilst looking for the best option to remove/offload the affected bunkers ashore.
- Consideration should be given to ensure that adequate cleaning is undertaken of any tanks or pipelines that held the contaminated bunkers prior to discharge to ensure that there is no cross-contamination of future bunkers.
- Preserve all of the evidence as may be required.
- If a claim on your Hull & Machinery/ LOH Underwriters (or others) is even a remote possibility, put them on notice as soon as possible and keep them informed. Give their surveyor access to everything they need.

## What can Underwriters do?

Underwriters should be wise to the best practices employed by their clients, they should engage with them and understand the technicalities involved, working closely with owners to get a clear picture of the difficulties that could be faced from refinery to the ship, with sampling, testing and management of fuels on board from tanks through to the engine(s).

Gathering information from Owners who employ the highest standards will assist with risk selection...understanding best practice allows Underwriters to differentiate good from not so good. Today, "what are you doing in preparation for 2020" is a fair question and the more technical the answer the better.

Understanding how good an owner is at managing risks such as these, makes the claims process so much easier when something goes wrong. Their knowledge and procedures might also greatly assist in a recovery action against a third party fuel supplier (charterer, bunker supplier or refinery for example), thus helping to protect against an inflated claims record by claims that were not a consequence of their own actions.

When a claim occurs, make sure the right surveyor is engaged...a surveyor who understands the issues, can work in harmony with the owners technical team and can stand up in court to give evidence if needed. Consider legal assistance at the outset to help gather/preserve evidence, in conjunction with the surveyor and other experts.

There is so much information circulating on the implications of 2020 in so many circles, nobody can really claim not to be aware of the sort of problems that could be encountered without the exercise of diligent, well thought through and, most importantly, practiced procedures. Insurers will be there to support those clients that don't really need us to do what is right. Those owners that don't switch on to the potential and do nothing can be less certain of that support.



AXA XL is the P&C and specialty risk division of AXA SA. AXA XL Insurance offers property, casualty, professional, financial lines and specialty insurance solutions to mid-sized companies through to large multinationals globally

## 05. INTERNATIONAL REGISTRIES INC. :

### ‘MARPOL ANNEX VI - 0.50% Global Fuel oil Sulphur limit - Update and Regulatory Perspective’



**Nick Makar**  
Regulatory Affairs Advisor

### Background

The International Convention for the Prevention of Pollution from Ships (MARPOL) is the main international convention aimed at addressing the various sources of ship-generated pollution. Six technical annexes contain the regulations on prevention of pollution by oil, noxious liquid substances, harmful substances carried by sea in packaged form, sewage, garbage, and air pollution from ships. Annex VI is the most recently added annex to MARPOL, which was specifically developed to address air emissions from ships. It was adopted at a diplomatic conference in 1997 and reached sufficient ratification thresholds for entry into force on 19 May 2005. Work began on a revision that same year, leading to a comprehensive set of amendments in 2008 that took effect in 2010. The revision took into account an agreement to review the nitrogen oxide (NOx) emission limits after its entry into force in 2005, the general growing contribution of ship emissions to air quality in many regions, and marine diesel engine technology improvements.

Regulation 14 of MARPOL Annex VI contains the requirements pertaining to the control of sulphur oxides (SOx) and particulate matter emissions, by limiting the sulphur content of the fuel oil used onboard the ship, both within and outside of designated SOx Emission Control Areas (ECAs). Under the 2008 amendments, based on a delicate balance of compromises, a step-wise reduction of limits was established. Modest near-term reductions of fuel oil sulphur content limits were instituted in 2010 for SOx ECAs

(from 1.50% to 1.00%), and in 2012 globally (from 4.50% to 3.50%). More aggressive long-term reductions followed in 2015 for SOx ECAs (from 1.00% to 0.10%), and a global reduction (from 3.50% to 0.50%) was set to occur in 2020 pending the results of an associated availability review. Accordingly, the upcoming reduction of the fuel oil sulphur content limit from 3.50% to 0.50% on board ships operating outside of designated SOx ECAs is not a new regulatory development, but the final step in a series of progressive reductions agreed over a decade ago.

Although regulation 14 of MARPOL Annex VI required the fuel oil availability review to be completed by 2018, the International Maritime Organization (IMO) Marine Environment Protection Committee (MEPC) agreed that a final decision on the date of implementation of the 0.50% sulphur limit should be taken at MEPC 70 in October 2016. The basis for the early decision was to allow maritime administrations and industry sufficient time to prepare and plan for the implementation. The review, carried out for the IMO by CE Delft (an independent research and consultancy organization), concluded that the refining sector has the capability to provide fuel oil with a sulphur content of 0.50% or less in 2020 to meet the demand of the shipping sector, while maintaining the supply for the use of fuels by the non-marine sector. As a result of this review, some concerns were raised with respect to fuel oil quality due to the expected increase of new fuels when transitioning, on a global scale, from 3.50% to 0.50%, and potential regional supply deficits. Notwithstanding these concerns, a need for legal and practical certainty was

considered essential and the MEPC agreed to retain 1 January 2020 as the effective date for implementing the 0.50% fuel oil standard outside of ECAs. Resolution MEPC.280(70) was issued by the IMO to notify all stakeholders of this decision.

#### Consistent Implementation of Regulation 14.1.3 of MARPOL Annex VI

In connection with the decision taken at MEPC 70 to retain 1 January 2020 as the effective date for the global 0.50% fuel oil sulphur content standard (regulation 14.1.3 of MARPOL Annex VI), a consortium of Member States and industry associations presented a paper outlining issues that can be expected to arise with the implementation of the 0.50% sulphur limit, regardless of the effective date. The MEPC was invited to consider a process to examine how the limit may be effectively implemented to ensure a level playing field. It was noted that without consistent implementation to all ships, a level playing field could not be ensured for ships using fuel oil compliant with the 0.50% sulphur limit. This is due to the expected significant gap between the costs for operators complying with this regulation and of those not complying. The additional operating costs resulting from the change are of a magnitude that may cause serious commercial distortion if there is uneven implementation of the standard.

Recognizing these concerns, the MEPC agreed to establish a new work output on what additional measures may be developed to promote consistent implementation of the 0.50% global sulphur limit. This new output was given

highest priority, and it was agreed that the scope of work should not change the MEPC's decision on the effective date of implementation of the 0.50% sulphur limit and should be kept general to allow for the accommodation of any emerging implementation issues. The scope of work relates directly towards ensuring a level playing field. It covers a range of issues from shipboard actions required before transitioning to using new 0.50% fuel oils, and comprehensive guidance on enforcement and verification measures, all while also ensuring the safety and well-being of the ship and its crew when undertaking efforts to comply with the 0.50% fuel oil sulphur limit.

Substantive work commenced on the new output at the 5th session of the IMO Sub-Committee on Pollution Prevention and Response (PPR) in February 2018, where an action plan was agreed to develop a single set of “consistent implementation guidelines” to support consistent implementation of the 0.50% global fuel oil sulphur limit. The guidance is intended to specifically address preparatory and transitional issues, such as ship implementation planning; impacts on fuel and machinery systems; operational considerations and crew awareness and training. Updated control mechanisms and Port State control (PSC) verification actions will be considered, including guidance on fuel oil non-availability scenarios and a standard non-availability report format. Guidance on safety and fuel quality issues will also be incorporated.

An Intersessional Working Group Meeting was convened in July 2018 at IMO headquarters to advance the work of PPR on this task, with a focus on ship implementation planning. Progress was made developing various sections of the consistent implementation guidelines, although much remains to be finalized. In particular, a Fuel Oil Non-Availability Report (FONAR) format and guidance still requires refinement to reconcile differing views regarding the degree of information to be provided. MARPOL currently does not provide a standard format for this notification. Ultimately, it is up to Parties of MARPOL Annex VI to determine the appropriate action to take in non-compliance situations with due regard to mitigating evidence provided in case of non-availability. Standardizing the information to be reported in such instances will help ensure consistent handling by authorities and will also be very helpful towards ensuring the obligations of signatory countries to provide safe and compliant fuel oils are being fulfilled. This is a key component to the successful implementation of the 0.50% global fuel oil sulphur limit.

Amendments for uniform testing/ verification protocols for fuel samples were similarly progressed but still require further work. The progress is positive in that there was general agreement to develop a definition of “sulphur content” based on a single ISO standard, and that



there would be a consistent testing protocol applied in the same way to both MARPOL (representative) samples taken during bunkering and “In-Use” fuel oil samples. The unresolved issues that require further work relate to how to incorporate reference to ISO Standards in IMO regulations, and appropriately standardizing/defining terminology used in the MARPOL regulations. Lastly, amendments to regulation 14 to standardize the designation of in-use fuel oil sampling locations were generally agreed.

These amendments, and the current draft of the consistent implementation guidelines, are being reported back to the 6th session of PPR in February 2019 for further development and finalization. PPR will then forward its outcome to the next session of the MEPC scheduled for May 2019 for subsequent approval.

Additionally, the Intersessional Meeting submitted a report on two urgent matters directly to the 73rd session of the MEPC which was held from 22-26 October 2018. The first urgent matter was for MEPC to approve a finalized draft of the ship implementation guidance and a standardized template for a Ship Implementation Plan (SIP). Secondly, several potential safety implications

associated with the use of low sulphur fuels were identified, and the Intersessional Meeting agreed to recommend MEPC to invite the IMO Maritime Safety Committee (MSC) 100 to consider this outcome.

## SIP Guidelines

Considering the need for industry to have timely and early access to aspects of the consistent implementation guidance relevant to ship planning and preparation, a circular on guidance on the development of a ship implementation plan for the consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI was approved by the MEPC. The guidance includes a template for the development of a voluntary SIP, envisaged as a ship management tool when preparing and updating procedures on a ship specific basis for actions that need to be taken to safely transition the ship into using 0.50% compliant fuels prior to 01 January 2020. The SIP is not mandatory; therefore, it is not required to be reviewed or endorsed, but may be a helpful reference during verification inspections. Regardless, early planning and action will be crucial to ensure the ship is in compliance when the 0.50% fuel oil sulphur content standard takes effect on 1 January 2020. This is because there is no phase-in period when the standard changes from 3.50% to 0.50% on this date. Therefore, the ship

must begin the transition to use of 0.50% compliant fuels at an appropriate time in advance. The SIP guidance was issued as MEPC.1/Circ.878.

## Safety Implications

The other notable outcome of the Intersessional Meeting was the consideration of safety aspects associated with the use of low sulphur fuels, presented in a paper co-sponsored by several Member States and industry associations. Importantly, several safety related aspects that could not be addressed under the risk assessment measures of the SIP were identified. These relate to fuel oil parameters that cannot be addressed directly by the ship's crew, requiring laboratory analysis to accurately determine, or which cannot be reliably ascertained under current testing protocols. The identified parameters are:

- Stability
- Compatibility
- Temperature (cold flow properties)
- Acid Number
- Flash Point
- Ignition Properties
- Cat Fines

Although widely supported, when discussing the above safety related aspects in more detail, some divergent views were expressed regarding the potential severity of the situation in 2020 noting the identified issues occur at present and that previous experience with the shift to 0.10% compliant fuels in ECAs was positive. However, it has been made clear that these safety implications are not fundamentally new but are expected to become more prevalent with the introduction of 0.50% compliant fuels on a magnitude of a global scale. Regardless, the issue should not be considered only as a transitional matter when shifting to the 2020 sulphur standard.



## Experience Building Phase (EBP) Proposal

A consortium of Member States and industry associations submitted a document to the 73rd session of the MEPC on safety implications and respective challenges associated with 2020 compliant fuels. The paper contained a proposal to establish an EBP associated with the worldwide availability of safe compliant fuel oil. The proposal was submitted further to the consideration of safety implications associated with the use of low sulphur fuel oil at the Intersessional Meeting in July, and was intended as an institutionalized data gathering measure, with the purpose of providing greater transparency and detailed information on the compliance situation after 01 January 2020.

The proposal had no intended impact on the 0.50% standard, nor did it attempt to delay the effective date of 01 January 2020, which can only be changed by an amendment to regulation 14 of MARPOL Annex VI. There was no suggestion in the paper to delay or weaken the general enforcement provisions of MARPOL Annex

VI in a wholesale manner. Compliance with the 0.50% global fuel oil sulphur standard is expected to be enforced on 1 January 2020 in the same manner as the current 3.50% global standard, and the 0.10% standard within ECAs, are enforced today. Concentrated inspection campaigns are being carried out by PSC regimes in anticipation of the transition, and strict enforcement should be expected.

A pragmatic approach by Administrations is sought specifically in those instances where a ship is not able to achieve compliance due to fuel non-availability and fuel quality problems despite all best efforts. This is relevant regardless of the means by which a shipowner chooses to comply with the standard. A benefit expected from the proposal is that information gathered will provide greater transparency to enable all Contracting Parties of MARPOL Annex VI to take appropriate enforcement action in a consistent manner in such situations.

Following an in-depth discussion, the Member States who spoke were evenly split on the proposal. As a compromise, further concrete proposals are requested for consideration at the 74th session of the MEPC on how to enhance the implementation of regulation 18 of

MARPOL Annex VI. In particular, proposals should focus on fuel oil quality and reporting of non-availability of compliant fuel oils, including the enhancement of the Global Integrated Shipping Information System (GISIS) database for collection and analysis of the data. This outcome addresses several of the concerns raised regarding connotations associated with the EBP as it relates to enforcement under regulation 14, but still allows the essence of the proposal to be further considered at the next session of the MEPC.

## Carriage Prohibition Amendments

In association with the work plan on consistent implementation of the global fuel oil standard, the PPR Sub-Committee also considered proposals to ban the carriage of fuel oil for use on board ships that exceeds the 0.50% sulphur limit. The proposals were widely supported, as the carriage ban was seen to facilitate effective enforcement of the requirement, ease administrative burdens during compliance verification, and facilitate consistent implementation. In doing so, it would assure a level playing field and render the need for more complex and burdensome at-sea verification methods moot.

Some concerns were raised that the proposed draft amendment to regulation 14 might be too simplistic to assure legal certainty of the provisions and to ensure the carriage ban was not interpreted as applying to ships exempted or allowed to use an “equivalent arrangement” to meet the sulphur limit, such as an exhaust gas cleaning system (EGCS). When permitted, these arrangements allow the use of fuel oil with sulphur content exceeding the required limits under MARPOL Annex VI, as EGCSs remove SOx emissions from the exhaust to a level equivalent to using compliant fuel oil.

Notwithstanding these concerns with the amendment, during consideration at the MEPC it was clarified that equivalencies can be applied to the standards in regulation 14 of MARPOL Annex VI, including the carriage prohibition, in the same manner as the current legal provisions allow, including ships exempted to undertake research trials of emission reduction and control technology under regulation 3.2 of MARPOL Annex VI. The carriage prohibition also does not apply to the carriage of fuel oil as cargo, taking into account the specific definition of “Fuel Oil” in Regulation 2.9 of MARPOL Annex VI.

In October 2018, the MEPC adopted the carriage prohibition amendments to regulation 14 of MARPOL Annex VI. Under tacit amendment procedures, the amendments are set to enter into force on 01 March 2020. Importantly, the entry into force date of the carriage prohibition does not in any way impact the effective date for the 0.50% global fuel oil sulphur standard.

## Summary

All ships are expected to be fully compliant when the 0.50% global fuel oil sulphur standard takes effect on 01 January 2020. It should be quite clear that due to the established tacit amendment processes in MARPOL, there is no possibility to amend or delay the standard or its effective date prior to 01 January 2020. However, being aware of the uncertainties and challenges associated with the consistent implementation of the 0.50% global fuel oil sulphur standard, a consistent approach is needed to safely address these challenges, while not delaying the enforcement of the standard after it takes effect. Planning and preparation by all stakeholders is crucial for effective compliance and to preserve the smooth flow of maritime trade. There is still work to be done at IMO to finalize the remaining supporting guidance for consistent implementation and to ensure safety considerations are appropriately addressed when transitioning to 01 January 2020 and beyond.



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# 06 LLOYD'S REGISTER (LR): 'Sulphur 2020'



**Tim Wilson**  
Principal Specialist Fuels  
Lubes and Emissions at Lloyd's Register  
(LR).

## Questions & Answers with Tim Wilson

Implementation of the MARPOL Annex VI Reg. 14.1.3 0.50% sulphur limit for fuel oil, used on board ships operating outside emission control areas, shall enter into effect on 1 January 2020. LR recognises this is presenting one of the most significant challenges to all stakeholders in the marine fuel oil market, from the producer to the user.

The transition period has started; decisions need to be made, and implementation plans need to be drawn up. Options at this stage are clear - essentially, compliant fuel oil or High Sulphur Fuel Oil (HSFO) in conjunction with exhaust gas cleaning systems (EGCS). The right choice is less obvious and must be evaluated based on your ships' specific operation and risk criteria.

### 1. Compliance options are dependent on ship type and numerous other operational and economic variables. Could you give a brief overview of what should be considered when making a decision and what you see in terms of trends within the industry?

Putting aside those who have already put in place long-term alternative fuel strategies, when it comes to complying with the Sulphur 2020 limit, shipowners and operators have essentially two options - one is to switch to 0.50% compliant fuel, the other option is to install an approved abatement technology such as an exhaust gas cleaning system (EGCS) also known as a 'scrubber' and continue to burn High Sulphur Fuel Oil (HSFO). Both options require careful consideration and the second will not necessarily eliminate the need for 0.50% compliant fuel storage. We are supporting clients through this decision-making process, including through the use of our 'Options Evaluator' tool which looks at the main options available, and thus enabling clients to make their own assessment of the most viable way forward - considering the commercial and economic implications of each option to maintain their advantage in the market.

In terms of trends, some charterers have seen the value of EGCS so now VLCCs (very large crude carriers), and bulker carriers are potentially looking to install them in response. Yet, shipowners and operators must understand that scrubbers are not necessarily such a straightforward solution, having their own challenges - the availability of HSFO being a key one, the degree of price differential to the Very Low Sulphur Fuel (VLSFO - 0.50%) another along with the additional OPEX and maintenance placed on the crew.

Compliant fuel also comes with its challenges; considering their current limited availability, uncertainty reigns and concern is therefore being expressed as to whether these 0.50% fuels will still meet the quality requirements specified in the international marine fuel specification, ISO 8217, when the supplier is focused on meeting the 0.50% target and is perhaps less focused on the critical operating parameters. The ISO TC28 SC4 WG6 committee (which develops the ISO 8217) has formally advised the market that all marine fuels must meet the requirements of ISO 8217 in its entirety and that the requirements for ship's fuels to meet the current conventional diesel propulsion arrangements do not change with the reduction in the sulphur content.

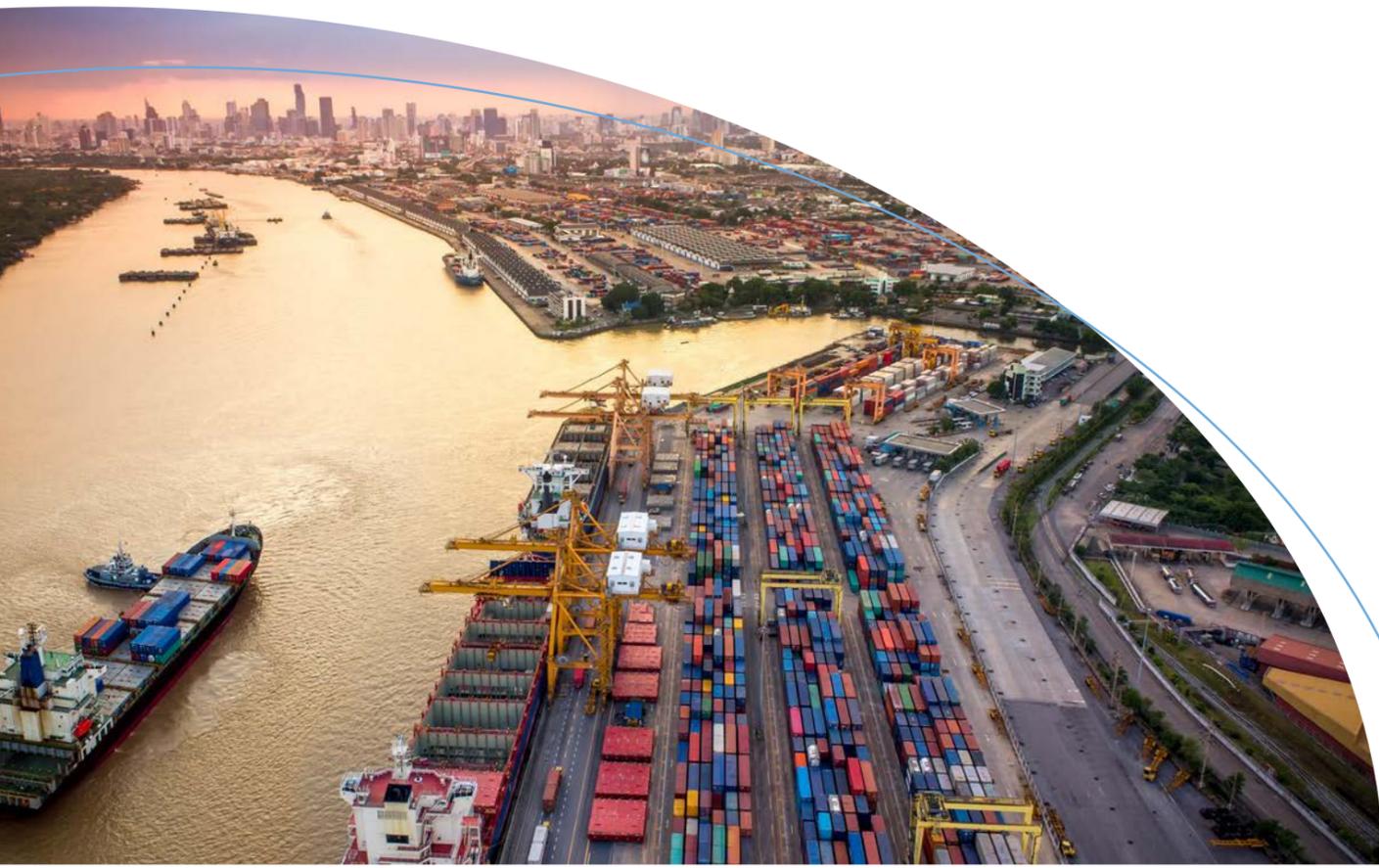
### 2. Do you have any advice on how to best approach the implementation date?

The challenges posed by the Sulphur 2020 fuel change are not to be underestimated; timely planning, preparation and engagement between stakeholders and proactive fuel change management to enable the full scope of ship adaptability to the changing bunkering scene, will be crucial to ensuring the marketing potential of the ship is maintained. This applies to all sectors of the bunker supply and fuel user chain.

With the Sulphur 2020 limit coming into force in just 12 months shipowners and operators should already be planning and at the point of deciding what their particular strategy for compliance is. The IMO has recommended that shipowners and operators engage a ship implementation plan for each ship in their fleet, considering the known and potential safety risks in the process of switching from the HSFO we have today to VLSFO compliant fuel and defining the measures that will mitigate those risks. The preparatory steps prior to phasing of the loading of VLSFO will differ ship by ship and will need to be negotiated with the fuel purchaser, for the most part this is the charterer, considering not only the economic implications but also the ship's system preparations and possible modifications needed as well as crew familiarisation of the new bunker supply environment to mitigate any operational and safety risks. The main objective being that by 01 January 2020 the ship is fully compliant for both outside and inside ECA operations, having achieved this in a controlled, safe and forward-planning manner.

Shipowners and operators are then recommended to enact a 'fuel change management plan', to do that they are advised to complete a risk assessment to work out what changes they need to make to their current practices, procedures and ship fuel system design. When this is complete, the crew need to be made aware of these changes. The timing of this change is important in that this transition is best completed sooner rather than later so that the ship/fleet and crew are well prepared and familiar with the new fuels, well before 01 January 2020.

It's important that shipowners and operators discuss their plans with their stakeholders in the supply chain, identifying any concerns and agreeing expectations. For example: charterers might need to load the more expensive distillate grade fuel because that is the only available option in way of compliant fuel, which will have commercial implications. They will need to understand that there will likely be no choice and better forward planning might help to limit the risk. Suppliers will need to know what is the specific fuel specification that the ship is willing to receive and in turn must be willing to provide, in advance, the typical specification of the fuel that will be delivered and when, so the necessary preparations can be made.



**3. If you select the option of installing an exhaust gas cleaning system (EGCS) what are the key considerations you should be thinking about?**

We are informed that around 100 EGCS are being ordered per month and roughly 20 manufacturers, ranging in experience, are ready to install them. However, the retrofit of an EGCS is not an easy undertaking and it is estimated that it takes at least one year to plan and implement. There are a list of activities and considerations a shipowner or operator must take before going down this route. The following table sets out the typical process, following a feasibility study, once the decision is made to proceed to commissioning. However, it is dependent on ship type and many other influencing factors, the table also does not consider the time needed to consider the feasibility of fitting an EGCS.

| PROCESS   | MONTHS    |
|---|-----------|
| EGTS System selection                                 | 2         |
| Selection of Vendor and Engineering consultant        | 2         |
| On board survey: 3D-scanning and project planning     | 3         |
| Engineering analysis                                  | 3         |
| Class approval  | 1         |
| Shipyard selection & preparing retrofit specification | 3-4       |
| Production: Shipping EGTS & pre-fabrication of piping | 3-4 weeks |
| Installation and commissioning                        | 3-4 weeks |

\*EGTS (exhaust gas treatment system) and EGCS (exhaust gas cleaning system) are interchangeable terms

It is also important to consider the time the vessel will need to be off hire during the installation and the associated implications. We can give guidance through a feasibility study, reinforcing the need to start planning sooner rather than later.

If a shipowner or operator has opted to install an EGCS, they will require a stringent and robust approach to selecting the right manufacturer and EGCS type, we can offer consultancy support in this area to help the client determine what is on offer and what cannot be overlooked, such as structural assessments each owner and operator will need to undertake before selecting an EGCS specific to each ship.

It is also worth noting that Singapore's Maritime Port Authority (MPA) has recently announced a ban on the discharge of wash water associated with the wet, open-loop configuration of exhaust gas cleaning systems, including the discharge from any closed-loop bleed off arrangements. The ban will reportedly become effective from the onset of the IMO-mandated global limit on sulphur in fuel on 1 January 2020. Vessels fitted with open-loop systems will be required to use compliant fuels in Singapore port waters or alternatively, ships fitted with hybrid systems will be required to switch to the closed-loop mode of operation.

**4. If intending to use compliant fuel oil, what do you need to know?**

Outside Emission Control Areas (ECA) operations, the Sulphur 2020 limit will result in an increase in fuel formulations being offered and there's uncertainty regarding the degree of diversity of these formulations, so shipowners and operators will need to consider what structural and procedural adjustments onboard will need to be made. Whether that's considering loading a light product compared to a heavy one, and or making greater efforts to segregate and avoid comingling fuels - industry experts warn against mixing one bunker with another as there's a high risk of destabilising the fuels and in most situations, crews can't easily assess the degree of risk of this happening until the fuel is already onboard, so segregation of bunkers is important. The next step is managing the diversity of the viscosities of the fuels and managing any incompatibility thus observed between the different bunkers onboard: if crews must mix, then working out the ratio's involved and any potential resultant properties is key.

Going forward, the fuel will still be diesel but the formulations will change so a proactive fuel change management plan onboard each ship is required, such as a Plan, Do, Check, Act approach, amending current fuel management practices as required will help crews manage change. Many ships will have this in place already, so it'll be a case of scrutinising and adapting it to fit with the Sulphur 2020 limit. The plan requires focused and clear guidelines for each scenario the crew might face, this plan should then be communicated to the crew to raise awareness and build a relationship with management, so if there's any concerns or updates every stakeholder will be made aware.

The IMO has released a circular, MEPC 73/5, recommending ships create a ship implementation plan. This is encouraged as the process of transition starts now and should be completed before the 01 January 2020 date. We can guide fleets through the process of assessing the adaptability of a ship to manage the uncertainties and variables of the compliant fuels being supplied along with the process of mitigating the identified risks and safety concerns.

**5. You mentioned the importance of fuel management practices, could you explain this in more detail?**

All ships should have a fuel management protocol onboard, which is likely to be a procedure covered in the company's ship management system, and is an important procedure addressed in their International Safety Management (ISM) code. However, shipowner and operators need to go beyond this and ensure their crew have a proactive mindset to comply with the Sulphur 2020 limit. This should address an additional fuel change plan, for which the ship implementation plan will include key preparatory milestones, so considering whether there is a need to update their fuel management strategies to include bunker segregation and fuel compatibility.

This proactivity towards fuel management could include using the new bunkers loaded within two days of receipt while other fuels of known acceptable quality are still retained onboard. This provides the advantage of being able to address any issues with the suppliers at an early stage of receipt, before the contractual time conditions run out with the supplier to make any complaint about the fuel that has been supplied. Bringing the crew on board early with changes and amendments to the operational procedures will limit the risk of any unexpected issues occurring and putting the operations of the ship at risk. It is good to test and plan-ahead so everybody knows what to expect when the time comes, with plans in place to mitigate any issues and/or risks.



**6. We have recently seen issues with contaminated fuel and quality concerns, what is in place to protect shipowners/operators in light of the Sulphur 2020 limit?**

ISO-8217 is the marine fuel standard that gives the criteria of the core parameters which must be met by any fuel if it's to be used onboard a ship. Whilst Clause 5 of ISO 8217 does not prescribe specific test methods, it is an all-encompassing requirement specifying that it is unacceptable to supply, blend or allow even an accidental ingress of any product(s) that would render the fuel unacceptable for its intended use.

This is more definitively explained in the informative Annex B of ISO 8217, which states the impracticability of carrying out chemical analysis and so expresses its expectation on the supply chain to have in place adequate quality assurance and management procedures to ensure that the resultant fuel is compliant with the requirements of Clause 5.2: "The fuel shall be free from any material at a concentration that causes the fuel to be unacceptable for use in accordance with clause 1 (i.e. material not at a concentration that is harmful to personnel, jeopardises the safety of the ship, or adversely affects the performance of the machinery".

For Sulphur 2020, there is some speculation that because we're going to have a diverse range of fuel blends there will be quality issues. This might not necessarily happen because all residual fuels are for the most part blended, and blending has been a common practice in the shipping industry for many decades, but it's right to be cautious.

Another aspect of fuel quality and contamination drills down to the choice of supplier. The well-established oil majors are already declaring their hand in bringing in a range of compliant 0.50% products all meeting ISO 8217 requirements and offering sound technical support. The selection of the supplier is more important considering recently highly publicised cases of deleterious contamination of fuels. There is a higher expectation that bunker buyers will be seeking more assurances from suppliers that they are heeding to the ISO 8217 Annex B expectations on suppliers where it states '... It is therefore not practical to require detailed chemical analysis for each delivery of fuels beyond the requirements listed in Table 1 or Table 2. Instead, a refinery, fuel terminal or any other supply facility, including supply barges and truck deliveries, should have in place adequate quality assurance and management of change

procedures to ensure that the resultant fuel is compliant with the requirements of Clause 5.'

We recommend purchasing against the latest revision of the international marine fuel standard ISO-8217:2017. With this, the supplier knows the parameters and targets set out in ISO-8217 and understands that there's clauses in the standard that expects the supplier to have quality assurance within the supply chain and consequently their responsibilities to heed to that.

An operator experiencing fuel related issues should make certain to duly log the case in detail, documenting the evidence leading up to, during and after the operational problems were experienced, along with any mitigating actions taken. This should include the current status of Remaining On Board (ROB) management, engine machinery maintenance, fuel handling and treatment practices routinely applied. Thus, by keeping a log of the encountered issues and ensuring system samples are taken at the time of the incident in the event they are needed for later analysis, the case can be more effectively pursued.

#### 7. At MEPC 73 the Committee also approved the ban on carriage of non-compliant fuel oil and turned down the proposal for an experience-building phase, could you expand on what these mean for the industry?

There's a belief in the industry that some ships will travel with an abundance of HSFO in their tanks just for storage rather than for use, and as the Sulphur 2020 regulation limits the fuel that is in use this is a bit of a grey area. Therefore, the IMO stated that unless the owner or operator has an approved certified EGCS onboard to use HSFO, the HSFO will need to be removed or they could face penalties. The ban will come into force on 1 March 2020, sending out a clear message to the industry that non-compliance will not be tolerated.

With regards to the experience-building phase proposal, which would have provided compliant fuel availability and quality insight, this was rejected by the Committee because it was vague and in need of further defining. It also wasn't clear that the timeline to implement this would be realistic before 2020.

#### 8. In summary, what is your advice to successfully meet the 2020 deadline?

Planning is critical to successfully meeting the Sulphur 2020 deadline. Approximately 50% of the world fleet have little or no experience operating in an ECA and having to switch to working with low sulphur fuel nor have they experienced this type of change before, so training and awareness is fundamental to get this change safely and effectively implemented.

Shipowners and operators need to tell suppliers what fuel they want and when because suppliers will need to make sure their equipment, barges and storage facilities are compliant and ready to use by that date, as well as getting that fuel ready for distribution.

With the introduction of a diversity of fuels, it is important that shipowners and operators know the critical characteristics of the fuel and these are made transparent by the supplier. Independent fuel testing can be a way of confirming this, providing shipowners and operators with an informed approach towards managing the fuel effectively, such as optimising treatment plants and their engine settings, and supplying a track record of safe and compliant fuel ready for auditing.

Yes, there are risks and safety concerns, however the industry can tackle these with a sense of confidence if sufficient planning, testing and stakeholder engagement is implemented. If you mitigate and plan for the risk, you can alert charterers, refiners and suppliers, who can also plan-ahead.

If you have any questions or need support, please visit: [www.lr.org/sulphur2020](http://www.lr.org/sulphur2020)



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## 07. NORWEGIAN HULL CLUB: “Scrubbers - An Underwriter’s Perspective”



**Ole Wikborg**  
Head of London Branch

With the arrival of the IMO MARPOL 2020 regulations came the exhaust-gas scrubbers as one way for the ship owners to comply with the new regime. A scrubber will wash the undesirable content of the traditional heavy oil fuels exhaust gas with seawater, to satisfy the maximum 0.5% sulphur requirement of the regulations. Installing and using scrubbers seems to be a viable economic alternative as it allows the ship to continue burning HFO (Heavy Fuel Oil or high-sulphur “residual fuel oil”, which is based on the high viscosity, tar-like mass, that remains after the distillation of petroleum products) rather than more expensive fuel options, i.e. MGO (Marine Gasoil fuels that consist exclusively of distillates).

A wide-spread and much encompassing debate elaborating on what is the best suitable solution has followed in the wake of the enactment of the regulations, getting more and more heated as the day of implementation and compliance is getting closer. The debate covers anything from technical solutions and economic challenges to exchanging views on taxation, usage fees and associated scientific research.

During the debate, some have argued that insurance cover may be lost if a ship is not compliant with the regulations. Non-compliance may trigger a withdrawal or suspension of the MARPOL certificate, leading to the ship being considered unseaworthy. Underwriters may consider this as an alteration of risk, regardless of any link with the actual loss.

For the ship owner, the economic considerations include the high installation costs rewarded by the marginal running expenses of continued use of HFO against switching fuel to the significantly more expensive 0.5% sulphur graded MGO. Worth noting is that during the scrubbers fitting, the ship is deprived of her earning capability, and the charter hire may not flow as intended. However, it is envisaged that the price difference between HFO and MGO will make scrubber-fitted ships more attractive to charterers, hence offering a profitable investment opportunity for the ship owner.

Underwriters of Hull & Machinery insurance have their own worries.

Marine insurance underwriting is combining risk pricing, risk selection and risk spread. The historical performance and claim experience related to a specific type of risk will determine the mixture. This is also the case for the assessment of the insurance risk associated with scrubbers.

In general, to alleviate risk, underwriters are relying on safety nets created by governmental regulation and various official bodies, but first and foremost on the approval process of the classification societies. So here is the first concern: Scrubbers are not a part of a ship’s equipment that is approved by the classification societies. Further, there is no official governmental approval of the scrubbers as such, only that the IMO emission regulations are satisfied.

A second question that has been raised is if the scrubbers will be a part of the ship and crucial for the ship to operate as intended. If the answer is “no”, a named perils policy may not respond to a claim that directly involves the scrubber. However, the prevailing view is that a scrubber is an integrated part of a vessel’s equipment and thus must be regarded as covered by the vessel’s Hull & Machinery insurance.

At the time of writing, scrubbers have been in use for some time, suggesting that some practical operational experience has been gained. It may be argued that the scrubbers currently in use are quite basic and at the infant stage of development. Technical improvements, however, are made every time a new system is installed and put in operation. In the past and as

new equipment has been fitted to ships, underwriters are often facing claims that should be a part of the research and development bill and not insurance related, i.e. the damage is a result of technology that isn’t working properly or a consequence of under-dimensioned technical specifications.

What sort of claims have underwriters experienced so far? They are undoubtedly of technical nature and may easily fall in the “research and development” category mentioned above. The question of whether incidents are “sudden and accidental”, often being a requirement for insurance cover to be triggered, may have a less obvious answer.

General claim experience is still limited. Without being exhaustive, physical damage claims are related to and have occurred in three areas:

- There are “Christmas-three” breakdowns caused by the brackets and nozzles of the washer, i.e. the spraying mechanism, being under-dimensioned
- There is damage to the scrubber support brackets and foundations because of vibration combined with the considerable weight of the scrubber
- There is extensive corrosion damage to the lower part of the scrubber and to the hull at the under-water exhaust outlets

A complete risk assessment must be broader and should not be limited to the three points mentioned. There are risks associated with the installation of the

scrubber at the ship yard and when the scrubber is in operation. Both the ship owner and the underwriter should ask themselves any relevant questions, e.g.:

- Is the installation included in the vessels Hull & Machinery insurance during the installation and test phases or is a separate insurance required?
- Will there be a “Delay in Delivery” effect, i.e. will the vessel be ready to resume her trading as planned or will she be delayed?
- With a view to the above type of damages, what are the additional potential damages to the scrubber?
- When the scrubber is mortgaged or leased, is the scrubber included in the Hull & Machinery sum insured and the interest of the Mortgagee or Lessor properly protected?
- What are the commercial consequences of serial defects and non-performance?

Current plans are for scrubbers to be fitted to approximately 2,000 ships out of a total fleet of close to 90,000 ocean going vessels. It remains to be seen if scrubbers will represent a better insurance risk than the vessels’ running on MGO or alternative fuels, including LNG, in the future. There is a duty on engine makers as well, to ensure that the engines will tolerate the change in fuel quality or the added-on equipment represented by a scrubber and to issue proper instructions to the ship owners and their crew. Insurance, primarily Hull & Machinery insurers, will no doubt respond to the claim pattern that will emerge, whatever that may prove to be.



**Norwegian Hull Club** is a mutual marine insurance company that serves members and clients worldwide, with roots back to 1837. The Club employs 134 people and has offices in Bergen, Oslo and Kristiansand - all in Norway - and opened a branch office in London in November, 2016. Norwegian Hull Club ranks amongst the world’s largest pure marine underwriters it insures more than 10 000 vessels and units and acts as Claims Leader for more than 5 500 of these units.

## 08. WAR AND PIRACY NEWS

### Double Attack West of Congo

Two ships were attacked by pirates west of Pointe Noire, Congo, shortly after midday on 29 October 2018 as reports by [insurancemarinenews.com](http://insurancemarinenews.com). Chemical/oil products tanker Anuket Amber (IMO 9395733) was bunkering LPG tanker BW Frigg (IMO 9733337), when pirates attacked both ships. BW Frigg managed to escape, but the Anuket Amber was hijacked. Communication with the ship was lost. Later the same day pirates attacked offshore tug/supply ship Ark Tze (IMO 9418767) and kidnapped four crew members. The hostages were later transferred to Anuket Amber.

### Attack on Lng In The Gulf of Guinea

On 6 November 2018, pirates pursued and fired on an unnamed LNG tanker in the Gulf of Guinea according to [maritime-executive.com](http://maritime-executive.com).

At about 0600 hours UTC, nine pirates in a speedboat approached the vessel at a position about 30 nm southwest of Bonny, Nigeria, an oil and gas production hub in the Niger River Delta. The attackers opened fire on the vessel and made several attempts to get close, but the master sped up and took evasive maneuvers. The pirates ultimately abandoned the attack and departed. According to maritime security firm AKE, LNG carriers' double-walled, insulated tanks are not vulnerable to small arms fire. The ICC IMB reports that the vessel and crew were safe.

Piracy is unfortunately common in the Gulf of Guinea, especially off the coast of the Niger River Delta. Kidnap-for-ransom is the most common type of attack, and according to Oceans Beyond Piracy, 100 seafarers were kidnapped in the waters off the Gulf of Guinea last year

### Pirates boarded a containership and seized 11 crew members off Nigeria early on 27 October 2018

According to World maritime news the vessel in question is the MV Pomerania Sky, operated by Germany's Peter Dohle Schifffahrts. The ship's management company and Polish Ministry of Foreign Affairs confirmed the incident, saying that eight of the kidnapped crew were of Polish nationality. Media reports suggest that two Filipinos and one Ukrainian were also among the taken seafarers.

The attack reportedly occurred some 60 km off the coast of Nigeria on the fairway to the port of Bonny. At the time, the vessel was on its way from Luanda, Angola to Nigerian port of Onne.

Midocean (IOM) Ltd informed that nine crew members remained on board the containership and were unharmed, according to Reuters. The company added that the vessel proceeded to safe waters.

According to a later article from [worldmaritimenews.com](http://worldmaritimenews.com) on 19 December the eleven seafarers who were kidnapped have been released, the Ministry of Foreign Affairs of Poland informed.

"All seafarers, including eight Poles, two Filipinos and one Ukrainian, are in a safe place and are waiting to return to their families," a spokesperson of the ministry said.

The ministry thanked the shipowner, Germany's Peter Dohle Schifffahrts, as well as Nigerian authorities for cooperation on the matter.

"From the very beginning, the matter was dealt with by the inter-ministerial team headed by the deputy minister of foreign affairs, and we are glad that the release took place before Christmas," the spokesperson added

### Glarus

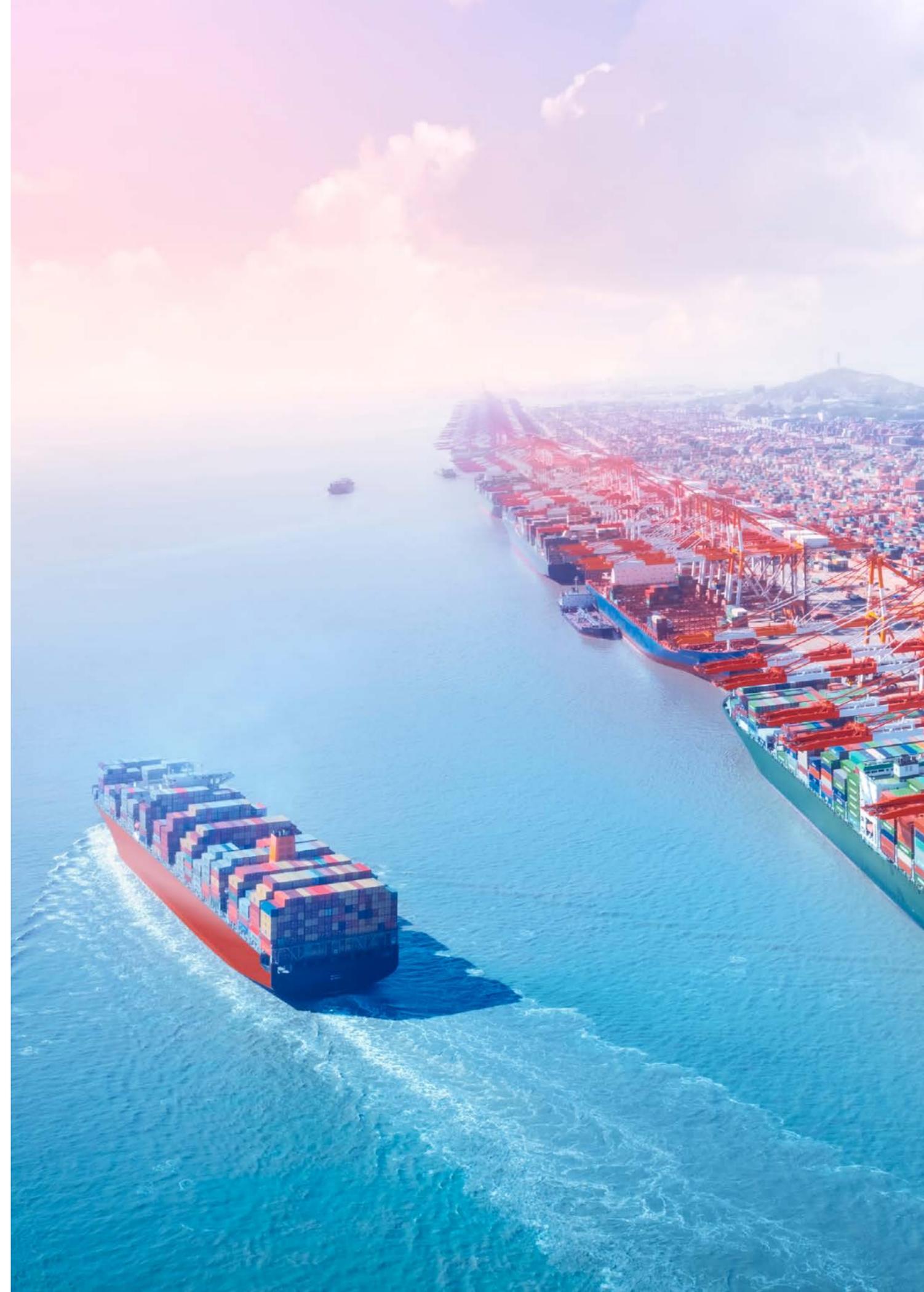
On 22 September 2018 pirates kidnapped 12 crewmembers from the Swiss bulk carrier Glarus in Nigerian waters according to [maritime-executive.com](http://maritime-executive.com). The vessel was carrying wheat between Lagos and Port Harcourt in the Niger Delta, and the attack happened about 45 nm southwest of Bonny Island. The pirates reportedly used long ladders and cut the razor wire on deck to gain access to the vessel. The crew were released on 26 October. According to Safety4sea Basel justice authorities have started proceedings for kidnapping, illegal restraint and hostage taking.

## MARINE CASUALTIES

| Article   | Source   | Photo Source  |
|---|--|---|
| AENEAS/ PANA-MAX ALEXANDER / SAKIZAYA KALON / OSIOS DAVID / NYK ORPHEUS | <a href="http://rooselaw.co.uk/RoosePartners%20Casualty%20Newsletter%20-%20Edition%20277%20-%202018%20July%202018.pdf">http://rooselaw.co.uk/RoosePartners%20Casualty%20Newsletter%20-%20Edition%20277%20-%202018%20July%202018.pdf</a>  | <a href="http://rooselaw.co.uk/RoosePartners%20Casualty%20Newsletter%20-%20Edition%20277%20-%202018%20July%202018.pdf">http://rooselaw.co.uk/RoosePartners%20Casualty%20Newsletter%20-%20Edition%20277%20-%202018%20July%202018.pdf</a>         |
| DURBAN QUEEN  | <a href="https://www.maritime-executive.com/article/french-frigate-saves-crew-of-sinking-asphalt-tanker">https://www.maritime-executive.com/article/french-frigate-saves-crew-of-sinking-asphalt-tanker</a>  | <a href="http://rooselaw.co.uk/RoosePartners%20Casualty%20Newsletter%20-%20Edition%20296%20-%202018%20November%202018.pdf">http://rooselaw.co.uk/RoosePartners%20Casualty%20Newsletter%20-%20Edition%20296%20-%202018%20November%202018.pdf</a> |
| FJORDVIK  | <a href="http://rooselaw.co.uk/RoosePartners%20Casualty%20Newsletter%20-%20Edition%20293%20-%202017%20November%202018.pdf">http://rooselaw.co.uk/RoosePartners%20Casualty%20Newsletter%20-%20Edition%20293%20-%202017%20November%202018.pdf</a><br><a href="http://www.ruv.is/frett/fjordvik-arrives-in-hafnarfjordur">http://www.ruv.is/frett/fjordvik-arrives-in-hafnarfjordur</a> | <a href="http://rooselaw.co.uk/RoosePartners%20Casualty%20Newsletter%20-%20Edition%20293%20-%202017%20November%202018.pdf">http://rooselaw.co.uk/RoosePartners%20Casualty%20Newsletter%20-%20Edition%20293%20-%202017%20November%202018.pdf</a> |
| LURSSSEN FIRE   | <a href="https://www.maritime-executive.com/article/fire-breaks-out-at-luersssen-shipyard">https://www.maritime-executive.com/article/fire-breaks-out-at-luersssen-shipyard</a>  | <a href="https://www.maritime-executive.com/article/fire-breaks-out-at-luersssen-shipyard">https://www.maritime-executive.com/article/fire-breaks-out-at-luersssen-shipyard</a>   |
| AULAC FORTUNE   | <a href="https://gcaptain.com/tanker-rocked-by-explosions-in-hong-kong/">https://gcaptain.com/tanker-rocked-by-explosions-in-hong-kong/</a>  |   |
| EASTERN SHIPYARD  | <a href="https://insurancemarinenews.com/insurance-marine-news/eastern-shipbuilding-hit-hard-by-hurricane-michael/">https://insurancemarinenews.com/insurance-marine-news/eastern-shipbuilding-hit-hard-by-hurricane-michael/</a>  | <a href="http://fisherynation.com/archives/75686">http://fisherynation.com/archives/75686</a>   |
| YANTIAN EXPRESS FIRE  | <a href="https://worldmaritimenews.com/archives/267899/hapag-lloyd-crew-evacuated-from-fire-stricken-yantian-express/">https://worldmaritimenews.com/archives/267899/hapag-lloyd-crew-evacuated-from-fire-stricken-yantian-express/</a>  |   |
| SINCERITY ACE   | <a href="https://worldmaritimenews.com/archives/268260/fire-stricken-sincerity-ace-taken-under-tow/">https://worldmaritimenews.com/archives/268260/fire-stricken-sincerity-ace-taken-under-tow/</a>  |   |
| STAR CENTURION- ANTEA COLLISION   | <a href="https://worldmaritimenews.com/archives/268394/report-20-rescued-from-sinking-cable-layer-after-collision-with-tanker/">https://worldmaritimenews.com/archives/268394/report-20-rescued-from-sinking-cable-layer-after-collision-with-tanker/</a>  | <a href="https://www.thejakartapost.com/news/2019/01/14/cable-ship-sinks-after-collision-with-tanker-in-bintan.html">https://www.thejakartapost.com/news/2019/01/14/cable-ship-sinks-after-collision-with-tanker-in-bintan.html</a>             |

## PIRACY REPORTS

| Article  | Source   | Photo Source |
|--|--|--------------|
| DOUBLE ATTACK WEST OF CONGO  | <a href="https://insurancemarineneews.com/insurance-marine-news/three-vessels-attacked-one-hi-jacked-crews-of-two-kidnapped/">https://insurancemarineneews.com/insurance-marine-news/three-vessels-attacked-one-hi-jacked-crews-of-two-kidnapped/</a>  |              |
| ATTACK ON LNG IN THE GULF OF GUINEA  | <a href="https://www.maritime-executive.com/article/pirates-attack-lng-carrier-in-gulf-of-guinea">https://www.maritime-executive.com/article/pirates-attack-lng-carrier-in-gulf-of-guinea</a>  |              |
| PIRATES BOARDED A CONTAINERSHIP AND SEIZED 11 CREW MEMBERS OFF NIGERIA EARLY ON OCTOBER 27 | <a href="https://worldmaritimenews.com/archives/263541/pirates-kidnap-11-crew-from-boxship-off-nigeria/">https://worldmaritimenews.com/archives/263541/pirates-kidnap-11-crew-from-boxship-off-nigeria/</a><br><a href="https://worldmaritimenews.com/archives/267054/kidnapped-crew-of-mv-pomerania-sky-freed/">https://worldmaritimenews.com/archives/267054/kidnapped-crew-of-mv-pomerania-sky-freed/</a> |              |
| GLARUS KIDNAPPING OFF NIGERIA  | <a href="https://www.maritime-executive.com/article/pirates-attack-lng-carrier-in-gulf-of-guinea">https://www.maritime-executive.com/article/pirates-attack-lng-carrier-in-gulf-of-guinea</a>  |              |



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