

Marine Hull & Machinery and War Risks Market Update

JUNE 2018



Gallagher

Insurance | Risk Management | Consulting

ABOUT GALLAGHER

Founded by Arthur Gallagher in Chicago in 1927, Gallagher (NYSE: AJG) has grown to become one of the largest insurance brokerage, risk management, and human capital consultant companies in the world. With significant reach internationally, the group employs over 26,000 people and its global network provides services in more than 150 countries.

Gallagher's London divisions offer specialist insurance and risk management services. We provide bespoke policy wordings, programme design and risk placement solutions, and consulting support across a range of specialisms. We manage complex, large, global risks on a direct and wholesale basis and serve as primary access point to Lloyd's of London, London company markets, and international insurance markets.

WE HELP BUSINESSES GO BEYOND THEIR GOALS.



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01. INTRODUCTION



Welcome to the June 2018 edition of the Gallagher Marine Hull & Machinery and War Risks market report. This special issue coincides with the biannual Posidonia event where the international shipping community gathers in Athens and it seems a fitting time to celebrate the ongoing commitment of Gallagher to Greek shipping. Our specialist team deliver daily risk management solutions to our many clients in Greece, including some of the largest fleets.

Shipping, like insurance, is a people business. There is no better demonstration of this than Posidonia where the figureheads of global shipping meet in Athens to discuss the unique opportunities and challenges which the industry faces. In this issue we have enlisted the help of some of our

friends and partners to assess some of the key concerns for our clients in 2018 and beyond. Our mission is to navigate our clients through these challenges, managing the risks they face both financially, and more especially in terms of the safety of those at sea, all alongside the preservation of our environment for future generations. With careful consideration of all these factors, we aim to assist our clients in seizing the many wonderful opportunities which global shipping presents and to ultimately achieve long term success.

Today, Cyber Security is one of the most hotly debated topics in the shipping industry and beyond. We are continuing to develop and evolve insurance solutions for our shipping clients. Undoubtedly prevention is critically important in this area and in this special edition, Lloyd's Register give us their unique insight into a subject where they have been at the forefront of advising the shipping industry on risk management solutions.

Technology is an ongoing theme throughout this report. Allianz Global Corporate & Specialty present a piece on the Implications of Technology on

shipping and Epsilon Hellas give us an assessment on the possible impact of unmanned vessels. Shipping like every other sector must embrace the opportunities presented by technology but a well thought out approach is always to be recommended, especially from a risk management perspective.

We also have a contribution from Apollo Syndicate addressing climate change and the challenges and opportunities for shipping. On a similar theme International Registries present an article on the transition to new fuel technologies.

From a legal and insurance perspective, Campbell Johnston Clark take a close look at the recent 'Renos' case and its implications for declaring total loss.

In addition to the guest contributions, we are also pleased to present the usual round up of recent casualties and war/piracy incidents.

We would like to thank our partners for their contributions and insights and hope that they will be of interest to our many clients in Greece and around the world.

02. GALLAGHER IN GREECE

Gallagher has an unwavering commitment to support our many clients and partners in Greece. We have invested in the best people with the breadth of experience to deliver the solutions and service levels which our customers have come to expect. We have the largest dedicated Greek team in London and whether for Hull & Machinery, Protection and Indemnity or any other marine insurance requirements, our team of specialists is on hand to help.

03. MARKET MOVES

Kyu Jin Byun will be soon moving from Royal Sun Alliance, where he was a Specialist Senior Hull Underwriter, to Argo Syndicate



04. THE GALLAGHER GREEK TEAM



Paul Brandram

Paul's Lloyd's career started in the late 1960's with a broking company called P.Wigham-Richardson – a very well established broker to the Greek

Shipping Industry. He left in 1971 to join Frank.B.Hall of New York working in New York from 1971-1975. FBH was a major US Marine broker handling a sizeable portfolio of Greek Shipowners. Paul returned to London in 1975 as a Vice-President of FBH NY opening a Marine Division in their London office. Later that year Paul joined Seascope Insurance Services as a Director. In 1987 he formed Brandram & Garthwaite together with his long term business partner Sir Mark Garthwaite which shortly after merged with Regis Low (a private company founded by close colleagues of theirs from Seascope days). Steel Burrill Jones bought RL a few years later. In 1997 together with all his SBJ Marine colleagues Paul moved to Willis Faber as an Executive Director of their Marine Division and left to join Gallagher in April 2015.

Paul specialises in handling retail business working directly with Greek Shipowners around the world. This involves the production, servicing & placing of all types of marine insurance for them; particularly Hull & Machinery, Protection & Indemnity, War Risks, Loss of Hire etc. In addition, Paul endeavours, where possible, to cross sell other areas of their insurances including property, fine art & aviation business to meet the needs of these high net worth ship owners and their varied international interests.



Dave Clark

Dave started his career at Wigham Poland Broking House in 1970 which subsequently was taken over by Sedgwick Insurance Brokers who in turn

were taken over by Marsh Ltd. In 2002, he joined Willis Ltd. with Willie Kinnear and Chris Taylor, whom he had been assisting for many years while at Sedgwick / Marsh on the Greek Wholesale and Retail Shipping Fleets. In 2014 Dave made the move to Arthur J. Gallagher where he continues to provide support on numerous Mediterranean Fleets.



Katrina Davis

Katrina started her career at Willis in 2000, having graduated from Cardiff University with a degree in Maritime Studies and International

Transport. She was originally a broker on the Italian reinsurance side but having spent much of her childhood in Greece she soon moved over to the Greek team, working alongside Paul Brandram and later William Kinnear and Chris Taylor when they joined in 2002. Katrina also built a very strong Superyacht portfolio which Willis previously had had little to no involvement in. Having joined Gallagher in 2015, Katrina while continuing to focus on the Greek shipowners side she has also in recent years become more and more involved in Middle Eastern business



Nicky Ellis

Nicky started her career in 1989 at V Ships in Southampton. In 1996, she joined Lowndes Lambert London as a Claims Executive, before becoming

more involved in day to day broking. The company later become part of the Heath Lambert Group and Nicky was appointed a Divisional Director in the Marine P&I Division.

Having joined Gallagher in 2005 as part of a team move, and she works closely with many of our long-standing Greek clients and has overall responsibility for the COFR operations. Sometimes involved in claims discussions in addition to her broking negotiations with Clubs, Nicky utilises her market knowledge, relationships and background experience working for a ship-owner to great effect.



David Gibbs

David started his career in November 1977 at Sir William Garthwaite Insurance Brokers, which became Stenhouse Insurance Brokers which was subsequently taken over by Alexander

Howden. In February 1988, he left to join Tyser Low & Co. (later Regis Low) where he first started working with Paul Brandram and Mark Garthwaite. Steel Burrill Jones bought Regis Low a few years later and In 1997 together with Paul & Mark he moved to Willis Faber. In 2015 he left to join Arthur J. Gallagher.



Malcolm Godfrey

Malcolm has worked in the P&I market now for 40 years, beginning in 1978 in the Underwriting department of the West of England. By

1983, he had set up his own company, Godfrey, Merritt & Company, one of the first specialist P&I Brokers.

Moving to the Heath Lambert Group in 1995, Malcolm was appointed Managing Director of the Marine department. In 2005, the Heath Lambert P&I unit was acquired by Gallagher and Malcolm was appointed as Executive Director of the Marine Division.

He continues to work with some of his original clients and since then developed relationships with some of the best known names in shipping.



Wayne Godfrey

Wayne joined Gallagher London in 2010 and is responsible for our Korean book, specialising in P&I, FD&D and Chartered Business. He is also

involved in client accounts in Greece and developing new business in Japan and mainland Europe. Prior to joining us, Wayne lived in Greece and gained experience working at a large tanker operator.



Mike Ingham

Mike Ingham joined Gallagher in September 2006 on the graduate programme after obtaining a degree in Investment and Financial Risk Analysis from Cass Business School

in London. Since completing his ACII qualification in 2008, Mike has predominantly specialised in Hull & Machinery and War Risks. He is now a Divisional Director in the Marine Division working predominantly working with clients from Greece, Northern Europe and the MENA region.





William Kinnear

William began his career at Sedgwick in 1980 becoming involved, from 1983, in Southern European business with a particular concentration on

Greece. He moved to Robert Fleming (RFIB) in October 1992 and helped develop the Southern Europe account. In 1996 William moved back to Sedgwick /Marsh and in 2002 he joined Willis where he was responsible for Southern Europe and Middle Eastern clients and was also Head of Broking. William moved to Gallagher in 2015. He has spoken at various Tradewinds Marine Forums and has been a panellist at some of the Conferences.



Oliver Madley

Oliver started his career at Aon where he focused predominantly on building the Super Yacht account as the dedicated market facing broker. Oliver

joined Gallagher in 2016 from Aon to focus on Super Yachts as well as assisting on the commercial marine accounts. He specialises in Hull & Machinery, Protection & Indemnity, War and Crew Welfare placements on both a wholesale and retail basis. He is also able to assist with ROV and overside equipment placements. Since Oliver's arrival, the Super Yacht account has grown to be one of the most enviable accounts in the market.



Nick Roblin

Nick spent a year at Alston Gayler from January 2009 performing various support functions across the P&I and Hull & Machinery teams, before

beginning a 5 year career at Willis in early 2010. Initially employed as an Account Handler on the Greek team, it wasn't long before the scope of the role grew to incorporate Client Advocacy in both Greece and the Middle East. That involvement in the Middle East coincided with the rise of piracy in the Indian Ocean and with that exposure Nick soon became responsible for the placement of the entire Marine teams' Kidnap & Ransom book. Nick was part of the team that made the successful move to Gallagher in 2014, joining as a Broker but soon earning promotion to Associate Director. Amongst Nick's principle responsibilities is to provide clients with a London focal point for communications on all classes of business.



Paul Tingley

Paul started his Career in the Insurance Industry in 1986 working for Willis Faber Underwriting Management (WFUM), a part of

the Willis Group dedicated to managing the underwriting results of the Groups' Stamp Companies within the Marine, Non-Marine and Aviation Sectors. In 1997, Paul decided to make the bold move into the Marine Insurance industry, and in 2003, an opportunity arose to join the London Office of Willis Marine as an Executive Director. Here he joined forces with Chris Taylor, Willie Kinnear, Dave Clark, Paul Brandram and Katrina Davis who have remained a united Team ever since, ever since, servicing Mediterranean Wholesale and Retail Clients in Greece, Italy, Turkey and Malta, working with underwriting markets in all areas of the world. More recently, Paul's role expanded into the Middle Eastern Ship operators fleets where he has linked up with Bard Poulsso and Nick Peters in the Dubai Office. In January 2015, Paul made the first Company move of his career and joined Gallagher where he continues to provide support to clients from Greece, Turkey and the Middle East..



Haris Lagios

Following internships during his undergraduate studies with Eurobank EFG Shipping Unit where he specialised in ship financing,

and in the insurance and operations department of a ship management company, both in Piraeus, Haris then attended the University of Leeds, where he graduated with distinction from the MSc in International Business course. He joined the Gallagher Graduate Scheme in October 2013 and since then is part of the Marine Team as a Hull and Machinery broker and account executive, focusing on the Greek and North European markets.



Matthew McCabe

Matthew joined Leslie & Godwin in 1992, gaining early experience working in the Marine Claims Division as a technician and

then as a broker for Hull & Machinery, Cargo, Protection & Indemnity and Liability Claims. The merger of Leslie & Godwin and Nicholson Chamberlain Colls in 1995 was followed by the purchase of the Nicholson Leslie group by Aon in 1997, and Matthew moved to Swire Branch Ltd in 1998 as a Claims Broker handling claims for marine clients worldwide. In 2001, Matthew moved from the merged group of Benfield to the Marine Division at Gallagher where he heads our Marine Claims team.



Chris Taylor

Chris began his career at Leslie & Godwin in 1974 in the Reinsurance department moving to Stewart Wrightson in 1975 where he

became exclusively involved in the Greek account. He was part of a team that moved to F.E.Wright in 1978 and then onto Sedgwick in 1989. He moved to Robert Fleming (RFIB) in October 1992 with William Kinnear and helped develop their own Southern European account. In 1996 Chris moved back to Sedgwick /Marsh and in 2002 he joined Willis where he was responsible for running the Southern European team. During the time at Willis he was also extensively involved with Italian & Turkish business. In 2015 Chris moved onto Gallagher. Chris has been regularly travelling to Greece for well over 40 years.



Alex Vullo

Alex started his career at Heath Lambert Group in 2002, where he gained early experience in the marine insurance industry sector within the P&I division. In

2005, the Heath Lambert Protection & Indemnity division was acquired by Gallagher, where today Alex holds the position of Divisional Director, specialising in P&I, FD&D and charterers liability insurance. Alex is responsible for business emanating from the integral maritime hubs in Europe, Far East and Middle East. He is also a member of the Chartered Insurance Institute (CII).



05. ALLIANZ GLOBAL CORPORATE & SPECIALTY

Technological implications in Shipping



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The last decade has seen technological advancements within many areas of the shipping industry including safety, performance enhancement, environmental protection and even marine insurance. Technology is playing an increasingly important role in shaping the future of the maritime world but our growing reliance on it will also significantly alter the sector's risk profile.

Safety-enhancing technology has been utilized within the shipping industry for some time now, from crew monitoring and electronic navigation, through to shore-based monitoring of navigation and machinery.

Such technology can bring huge benefits to the maritime sector, ensuring any issues can be discovered earlier, and effectively managed, before they escalate into major incidents. **Human error** remains the major cause of shipping casualties, but technology offers the potential to reduce this factor and help mitigate losses.

For example, vessel telematics are one way in which human error could be reduced. By analyzing **Voyage Data Recorder** information it is possible to learn lessons from near-misses and identify the actions and behaviors that can lead to crew and officers making the wrong decisions. Improved communication is another area where developments could help improve safety. Vessels at sea are traditionally very isolated, but technology could revolutionize ship-to shore communication and support. With improved communication, we could see more decision-making moved onshore. It could also give ships' crew access to more onshore expertise and technical support. This is something that should be developed further.

Meanwhile, virtual reality technology is becoming more effective and could be used to improve safety beyond its current use in navigational training. It is the next best thing to hands-on training and although it is already used in bridge and cargo simulators, it could also be expanded to train engineers, for example on a particular engineering routine.

More integrated and sophisticated navigational systems and digital charts are another area of development seen in recent years. However, while positive, these advancements have also raised questions about how crew members interact with new technology.

The issue of overreliance on technology among seafarers is ongoing and we still see a number of incidents where officers and crew have relied too much on technology. Sometimes replacing common sense decisions with digital inferences is not such a good idea.

Crew and officers have an increased responsibility to understand the shortcomings and limitations of technology. The human interface with technology will be an important consideration in future safety.

Voyage Data Recorder (VDR) analytics – the telematics of the seas

Ship-owners are beginning to use Voyage Data Recorder (VDR) analysis to improve safety. By analyzing VDR output it is possible to identify and influence the behaviors that drive risks such as human error. Information from VDRs is already being used in accident investigation, but important lessons are now being learned by analyzing everyday operations.

Eventually, such VDR analysis should become standard practice, AGCS believes, as the results of VDR analysis can be used to compare the actions of the crew against industry best practice, identify gaps, and advise shipping companies on where they can make improvements. It is view shared by the **Oil Companies International Marine Forum**: "The proactive analysis of VDR data on a regular basis could provide an important tool for use in accident prevention and the reinforcement of a positive operational safety culture," it has noted².



¹ Safety & Shipping 1912-2012 From Titanic to Costa Concordia, Allianz Global Corporate & Specialty
² Recommendations on the Proactive Use of Voyage Data Recorder Information, OCIMF

VDR analysis can also be used to inform risk management decisions, and could potentially be reflected in insurance premiums. As is already the case in motor insurance, a form of maritime telematics could be developed to improve safety and better reflect risk in premiums.

Ultimately such information could be used in underwriting. We could see each ship-owner's risk management better reflected in their insurance. The better the result of the analytics, the better the risk score.

There is no reason to limit the VDR analyses to just once or twice a year. It is now possible to do this in "real time" with technology already available. Pre-programmed analytics boxes can now be connected to VDRs on board, which analyze the information against a set of rules and provides alerts of breaches to managers straight away.

The future of marine telematics could not only include VDR but also a combination of other information like vessel location and maneuvering data, container tracking information and data from machinery sensors. The ship of the near future will have a connected ecosystem where such big data would be accumulated onshore for analytics and could be vital in making accurate risk assessments.

Real-time tracking of ships and individual containers has already helped companies to see the bigger picture around their supply chains and improve efficiencies. For cargo insurers, container tracking and monitoring is already highly beneficial. Many of AGCS' clients are actively using the technology. In event of theft, the tracking technology improves recovery prospects.

Telemedicine Technology

Technology is also being used to improve crew welfare. For example, offshore health problems can be difficult to address. Insurers, such as Allianz, are now able to offer crew 24/7 access to medical advice through "telemedicine" assistance services, which utilize tablet technology and on-board equipment. Such services could reduce the need to make costly route deviations to seek help.

The Flip Side

While the digital era is opening up new possibilities for the maritime industry, from remote monitoring of engines and systems to the development of autonomous ships, it is also making it increasingly vulnerable to cyber-attacks.

Modern vessels are increasingly dependent on connected computers and software. Bridge systems, such as Electronic Chart Display and Information System (**ECDIS**), Automatic Identification System (**AIS**) and Global Positioning Systems (**GPS**), are now important features of a ship's ability to navigate safely.

Elsewhere on a vessel are cargo handling and management systems, propulsion and machinery management systems and power control and communications systems, all of which can be controlled in real-time through wireless networks. This is leading to increasing concern about the disruption that could be caused by a technical failure or even the ability of such systems to be compromised by criminals, potentially resulting in a serious maritime event such as a collision, property damage or even personal injury. Cyber risk was ranked as the third most important risk facing the shipping sector in this year's

Allianz Risk Barometer.

The increasing reliance on technology and automation will significantly alter the risk profile of the maritime sector yet there is concern about the current pace of development of IT and cyber security standards in the industry.

The shipping sector will be required to speed up their efforts to develop comprehensive cyber security measures to keep pace with the digital transformation.



Allianz Global Corporate & Specialty

Allianz Global Corporate & Specialty (AGCS) is the Allianz Group's dedicated carrier for corporate and specialty insurance business. AGCS provides insurance and risk consultancy across the whole spectrum of specialty, alternative risk transfer and corporate business: Marine, Aviation (incl. Space), Energy, Engineering, Entertainment, Financial Lines (incl. D&O), Liability, Mid-Corporate and Property insurance (incl. International Insurance Programs).

Worldwide, AGCS operates with its own teams in 34 countries and through the Allianz Group network and partners in over 210 countries and territories, employing almost 4,700 people of 70 nationalities. AGCS provides insurance solutions to more than three quarters of the Fortune Global 500 companies, writing a total of €7.4 billion gross premium worldwide in 2017.

AGCS SE is rated AA by Standard & Poor's and A+ by A.M. Best.

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06. APOLLO SYNDICATE MANAGEMENT LTD

Climate change: how it is affecting shipping and its insurers



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Climate change is the number one issue facing not only shipping, but humanity itself. It is driving new behaviours in all sectors of the economy and shipping is no exception.

There are both opportunities and challenges for shipping as the ice caps retreat and sea levels rise. On a similar theme International Registries present an article on the transition to new fuel technologies.

New trade routes are opening up. The Northern Sea Route will eventually allow for faster, more economical voyages between east and west. The North West passage too is becoming increasingly navigable. From an underwriter's perspective these present challenges, but Lloyd's has done valuable work in helping to establish the Polar Code with the IMO.

Logically as sea levels rise, larger ships will be able to use existing draft sensitive channels, offering opportunities for shipowners, but new risks to their insurers.



However the opportunities are more than offset by the enormous challenges that shipping and its insurers will need to overcome. Concerns over global warming are well placed and insurers are all too aware of the effects of climate change. The 3 major Atlantic hurricanes in late 2017 made last year the most costly on record for natural catastrophes. It is probable that this will get far worse in the years ahead. This will drive hull insurance pricing too, as capital providers strengthen insurers' balance sheets to cope with the rise in both frequency and intensity of natural catastrophe claims.

Shipping is seen by politicians and public alike as a key part of the air pollution problem and a major contributor to global warming. The environmental lobby has been successful in helping to establish changes to legislation that affects the shipping industry.

But looking at the facts, Shipping is still a remarkably efficient means of moving cargo around the world. A 10,000 TEU container ship emits around 2% of the CO2 that an aircraft does per ton of cargo carried per mile! Worldwide, cattle grazing emits 7 times the CO2 of global shipping!

The 2020 sulphur emissions cap is approaching fast. Shipowners have had several years to prepare for the changes to sulphur emissions levels, but it is only human nature that some people will move more quickly than others. It is now only 18 months until the new regulations come into force.



There are a number of ways in which shipowners can comply with this legislation:

- Existing vessels may be fitted with scrubbers that use sea water to clean exhaust emissions, leaving behind sulphuric acid that may be discharged later. These are expensive retrofits, often running into the millions of dollars. An owner has to judge the economic viability of such a purchase on an ageing vessel.
- Some shipowners may choose to run their vessels on cleaner bunkers, such as gas oil, but this is expensive. The flip side of this is that cleaner fuelled ships tend to have improved reliability and, for insurers, fewer machinery claims!
- Common rail diesel engines are more efficient, delivering improvements in both emissions and fuel consumption.
- Alternative fuels - LNG powered vessels have started to come into service, notably in the ferry trade. These are currently the most viable alternative clean fuel, but valuable cargo carrying capacity is lost to their often sizeable fuel tanks.
- Sails. Flettner type sails such as the Norsepower system can cut fuel burn by up to 20%.
- Shoreside power may be used to run vessels whilst alongside, rather than rely on the vessel's own generators. Emissions around ports are an increasing public health concern, and it is estimated that they cause around 400,000 premature deaths per annum worldwide.
- Hybrid diesel electric ships are now under construction, allowing vessels to operate with zero emissions battery power in ports and close to land, but use conventional diesels out at sea. One of our clients is pioneering this technology on larger vessels, winning shipping new friends among the residents living near their operating ports.

In Britain we are already seeing that consumer behaviour is being driven by environmental factors. The collapse in the sale of diesel powered cars has been driven by both the Volkswagen emissions scandal and politicians waking up to the public health crisis caused by diesel particulates. As night follows day, politicians will increasingly focus on shipping as a polluter, and those shipowners who are slower at embracing change will be at a disadvantage.

Hull underwriters are now using the many new data points available to us when assessing risk and its pricing. Port State Control records have become a key determinant in the pricing of hull risks. As compliance with MARPOL will be monitored with an even tougher Concentrated Inspection Campaign by PSC inspectors this year, vessel emissions are firmly in the spotlight. Underwriters will undoubtedly look less favourably upon those owners who fail to take their emissions seriously. By inference, that means higher rates for poor PSC performance.

Climate change is already with us and poses an existential threat to our planet. Shipowners should look to capitalise on new opportunities to get ahead of their competitors, by embracing new technologies and regulations. The greater long term interests of not only ship owners and their underwriters, but also humanity itself are in clear alignment.

We would do well to remember the wise words of the Greek philosopher, Heraclitus, when he said that "change is the only constant".



APOLLO
1969 at LLOYD'S

Apollo Syndicate Management Ltd

Apollo is an independent, privately owned Lloyd's Managing Agent that underwrites business through its syndicate APL 1969. Since its formation in 2009 Apollo has grown from an original team of 5, writing 2 classes, to a team of over 90, covering 12 classes. We moved into Marine Hull and War in 2017, following the recruitment of Iain Henstridge from MS Amlin.

With a strong focus on service to brokers, we provide physical damage insurance cover for vessels of all sizes on a worldwide basis. Because of our size and streamlined, transparent structure, our underwriters are fully empowered to decision makers, helping them to match the needs of each of our clients.

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07. CAMPBELL JOHNSTON CLARK

Sveriges Angfartygs Assurans Forening (The Swedish Club) and Others v Connect Shipping Inc and Another (“The Renos”) [2018] EWCA Civ 230:



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This Court of Appeal decision raises three important issues regarding Marine Insurance and Constructive Total Loss (“CTL”)

Factual Background

In August 2012, a fire broke out in the engine room of the m/v RENOS (“Vessel”), causing extensive damage. The Vessel’s owners (“Owners”) appointed salvors under an LOF 2011 and invoked the Special Compensation Protection and Indemnity Clause (“SCOPIC”). The Vessel was insured by a hull and machinery (“H&M”) policy incorporating the terms of the Institute Time Clauses – Hulls (1/10/83) and by an increased value (“IV”) policy incorporating the Institute Time Clauses – Hulls Disbursement and Increased Value (Total Loss Only) Clauses (1/10/83) (together the “Policy”).

The initial surveys conducted by the Owner’s and the H&M Insurer’s, respective surveyors had reached substantially different conclusions on the estimated repair costs, with the Owners’ surveyor placing the value of such repairs at over US\$8 million and H&M Insurers’ surveyor estimating the smaller figure of approximately US\$5 million.

It was common ground that for the Vessel to be a CTL, the repair costs would have to be US\$8 million or more.

Repair discussions between the Owners and H&M Insurers continued through

November and December 2012, and January 2013 whilst each party submitted their own expert’s repair specification to several shipyards receiving a number of quotations of varying amounts. Eventually, in early February 2013, 5 months after the casualty, Owners served a Notice of Abandonment (“NOA”).

The H&M Insurers rejected the NOA on two grounds, namely that:

- I. The Vessel was not a CTL and therefore the Owners were only entitled to claim on a partial loss basis; and/ or
- II. The NOA was, in any event, tendered too late and, therefore, the Owners should be deemed to have given up the right to abandon the Vessel and claim a CTL. The Owners could only claim on a partial loss basis.

Decision

The appeal was brought by the Vessel’s H&M insurers under the Policy. The Court of Appeal upheld the decision of first instance and three important issues emerge:

1. How long does an assured have to serve an NOA before losing the right to claim for CTL?

Where Owners have “reliable information of the loss”, the NOA must be given with “reasonable diligence”, which in many cases may be a short period of time.

However, it was held that where the Owners were faced with “two apparently reliable but starkly conflicting repair



specifications” and there was a bona fide dispute between the Owners and the Insurers as to the scope of the required repairs then there may not be “reliable information” for the purposes of s.62(3) Marine Insurance Act 1906 (“MIA”). In this case, it was held that Owners were justified in taking a reasonable time to make enquiries.

What amounts to “reliable information” will depend on the circumstances of the case. On the facts, the Vessel was “close to the cusp of being a CTL” and therefore greater detail and accuracy was required for there to be reliable information of the scope and cost of repairs. Accordingly, Owners had not lost their right to abandon the Vessel.

Each situation will undoubtedly turn on the specific facts in play, but it is perhaps not surprising that some have suggested that since Owners took charge of the investigations and salvage measures, but ultimately elected to abandon the Vessel and recover on a total loss basis,

that Owners had their cake and ate it. The slight irony in this outcome is that if H&M Insurers take a proactive attitude (investigate a loss and put forward their own repair proposals) that may ultimately be bad for them, as it may give their assureds extra time to contemplate their decision to abandon the Vessel.

2. Costs incurred prior to the date of the NOA – do they form part of the CTL calculation?

This was relevant because without the costs incurred prior to the NOA, it is unlikely the Vessel would have been deemed a CTL.

H&M Insurers accepted that the costs of recovering the Vessel fell within the “costs of repair” and were therefore relevant to the CTL calculation but contended that only the post NOA costs of recovery and repair should count towards whether a vessel was a CTL.

The Court of Appeal held that the wording of s.60(2)(ii) MIA and, in particular, the reference to “future” operations was inclusive rather than exclusive. In this respect it was said that since the provision itself did not make reference to

the NOA and was not intended to draw any distinction between costs incurred before and after the tendering of the NOA, that it was simply making clear that costs not already incurred but likely to be incurred in the future can also be taken into account. It was therefore held that the relevant date for the calculation of such costs is the date of the casualty – so costs incurred prior to the date of the NOA can and do form part of the CTL calculation.

As a side point, in relation to suing and labouring expenses, it was held that it was reasonable and necessary to engage a larger tug initially, but once there was no longer urgency, a cheaper tug should have been used. The judge therefore discounted the figures to be taken into account for the purposes of the CTL calculation.

This is perhaps the least controversial aspect of the decision, with the most contentious aspect being the last (and following point).

3. Can SCOPIC fees paid to salvors amount to “costs of repairs” for the purpose of the CTL calculation?

Ultimately, the Court of Appeal held that SCOPIC remuneration can amount to a “cost of repair” for the purposes of a CTL calculation, as those fees were “an unavoidable part of what had to be paid to recover the Vessel” and an indivisible cost of the salvage operation, which the H&M Insurers had accepted as being recoverable as a cost of repair.



It was further held that paragraph 15 of SCOPIC did not preclude the Owners from taking such amounts into account. The inclusion of the SCOPIC expenses in the assessment of whether the Vessel was a CTL was held not to be a claim “by way of indemnity or recourse or otherwise relating to SCOPIC remuneration”. The claim was for the total loss of the Vessel. The only relevance of SCOPIC remuneration was as part of the total costs required to recover and repair the Vessel. Such costs did not have to be incurred, but could be future or hypothetical. Therefore, it could not be said that an “indemnity or recourse” was sought in relation to them.

The difficulty with this outcome is that it seems, on the face of it, to go against the historical consensus in the industry on the division of responsibility for SCOPIC.

SCOPIC was introduced as a response to the perceived shortcomings of Article 14 of the 1989 Salvage Convention, but with the same intention of promoting the enhancement of environmental protection in the course of a salvage operation.

From an insurance point of view, damage to a vessel itself and/or costs incurred in seeking to avert or minimise damage (“Sue & Labour” expenses) fall under the H&M cover. This will generally include salvage costs (i.e. any Article 13 award). Liability to third parties, including cover

against risk to the environment (Article 14 and/or SCOPIC) is generally covered by P&I insurers. In a situation like the RENOS the inclusion of SCOPIC costs as part of the CTL calculation made all the difference to establishing a CTL and meant that Owners could recover the vessel’s entire insured value (plus IV). In this regard, the H&M insurers were liable for a CTL that in the past may never have been brought and some see this as an indirect claim (on the H&M insurers) in relation to SCOPIC remuneration, which traditionally would not have come within the H&M insurers’ remit.

For the P&I insurers, it might seem odd that their contribution to SCOPIC can afford their assured a big windfall (on a CTL recovery).

For the H&M insurers, the Court’s willingness to include SCOPIC costs as part of the CTL calculation will often mean that Owners find it easier to establish a CTL and it will therefore be interesting to see if the market responds by including express wording in insurance policies dealing with this issue.



Campbell Johnston Clark

Campbell Johnston Clark (CJC) is an international law firm founded in September 2010 specialising in shipping and international trade.

CJC have offices in London, Newcastle and Singapore with 55 staff worldwide. Throughout the past 7 years, we have firmly established our presence in the London and overseas shipping markets with clients and fellow practitioners alike.

We give expert, practical and commercially sound advice on all aspects of shipping, ranging from corporate, transactional and finance work, restructuring and enforcement to the handling of arbitration and litigation, contractual drafting, all aspects of chartering and dry shipping to comprehensive casualty handling and investigation and marine insurance.

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08. EPSILON HELLAS

Unmanned vessels and industry-level implications:
A call for reflection (and caution)



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Shipping has historically been confronted with various changes and –as with every other sector- it has gone through a series of upheavals and relatively calm periods. For example, the transition from the steam to the electronic engine has been long and turbulent enough yet it showcases the resilience and adaptive capacity of shipping firms. It demonstrates their ability to embrace change and innovation without those cycles of change being a significant factor affecting the incumbent firms' survival prospects. An important point to note is that no matter how bold and revolutionary shipping innovations may seem to be, all those manifestations of change that punctuate the historical evolution of shipping, can be arguably characterised as continuous innovation. In essence, they never fundamentally changed the nature of the shipping industry as we know it. Rather, they were improvements, which allowed a more effective or efficient way of performing the same task by the same players. During the implementation of those admirable and commercially meaningful innovations, shipping still relied on its basic functions and elements i.e., navigating a commercial vessel at sea by humans.

The above-mentioned, traditional state of shipping is now challenged. Lately, the popular discussion around the advent of unmanned vessels creates unprecedented implications for the current structure in our industry. Why is that? Because a core element of shipping (the seafarer) is expected to be eliminated. While shipping always relied on seamanship in order to perform its operational tasks, now the control of operations is expected to take place from a shore-based control center (as described by makers). The purpose of this article is neither to question/challenge nor reaffirm the feasibility and potential associated with unmanned vessels. Rather, arguments herein are based on the definitely debatable and ambiguous but widely discussed assumption that unmanned vessels will eventually become a reality. Given this premise, I put forward an argument that calls for caution and reflection since the digital transformation of shipping (exemplified in the rise of unmanned vessels) creates existential implications for the industry as a whole.

For the time being, what we witness is a fierce marketing race between several technology providers (e.g. Rolls Royce Marine and Kongsberg) and countries (e.g. Norway and Finland). Those entities, through dedicated promotional campaigns and organization of fora and events, aim to prove and demonstrate their technical superiority; they strive to convince all stakeholders that they

are the core disruptive innovators that build up the future of the maritime world. In particular, they aim to convince that they are able to lead technological developments, which will result in the realization of unmanned vessels. If we assume that their technological skills and knowledge-related capacities are indeed in place then, a certain set of questions emerges: What will be the nature of the new market landscape that will be established following the purported implementation of unmanned vessels? Who will then be the party, which will be able to provide enhanced value to customers (charterers)? Will traditional shipping firms still be the entities, which transport goods from point A to point B?

One could intuitively argue that indeed nothing will significantly change; existing shipping firms will continue offering their transportation services as they currently do. Management of shipping firms will remain in 'traditional' shipping hands and thus, the ownership structure of the shipping world will not experience any major alteration. However, this conservative perspective that assumes a routine continuation of the status quo ignores a fundamental observation.

All these technological innovation processes will amalgamate into a disruptive outcome that is externally induced. It will be generated and owned by other, non-ship-owning firms. Given this observation, which we view as one of central importance, what are the lessons that we can learn from other industries? How have incumbent firms in other sectors responded to such an upcoming change? What we know is that disruptive change that is externally induced (i.e., spearheaded by actors outside the core ownership body of the industry) leads to value migration and ultimately, to market exit by several incumbent players. Paradoxically or not, and despite the widespread discussion around unmanned vessels, this perspective has not been discussed or debated in the wider shipping community. Rather, the whole discussion revolves around the technological capability and thus, the realization potential of the project called 'unmanned vessels'. Nevertheless, I argue that the market-level perspective warrants more thoughtful reflection.





In fact, I contend that the above mentioned threat (which is universal across industries confronted with similar disruptive scenarios) is aggravated in the maritime business. This is because the latter is a highly conservative industry, which operates under rigid standards of long-established market leadership. When such contexts are confronted with unprecedented levels of disruption stemming from externally induced technological advances, the shakeout is expected to be more profound. Ship owning firms have long availed of excessive profit margins and the sources of value creation can be arguably attributed to the role and relevance of deployed human resources at sea (i.e., seafarers). The latter's selection, recruitment, placement, motivation, training etc. is a highly idiosyncratic and challenging task, which at the same time other factors notwithstanding, largely explains the success or failure potential of every shipping firm. Those seafarers are practically the resources, which control and manage a shipping firm's most valuable asset (its vessels). A disruptive innovation such as unmanned vessels will render these resources obsolete essentially deconstructing one of the traditional sources of value creation in the industry.

Consequently, I argue that unmanned vessels, when eventually realized, will allow non-shipping firms to offer utility to customers (charterers), too since the very sources of competitive advantage and value creation will not simply cease to exist but, importantly, will mutate to something else. More specifically, they will lean towards the centrality of technology for autonomous operations. This will open up the opportunity for market penetration by a new set of firms, which i) have the technological sophistication and knowledge to produce and commercialize this technology or ii) those, which can access that technology and have an active interest in e.g. vertically integrating forward (for example, online retailers such as Amazon or AliBaba or courier giants such as FedEx and UPS).

Certainly, not all firms will be able to integrate and set up a maritime business. However, market exit by many incumbents will definitely take place. The basic reason is simple: traditional shipping firms are good in managing a vessel with people at sea. They are not 'programmed' to invest in disruptive innovation through internal change and fundamental organizational restructuring. After all, the latter is a wieldy exercise for all firms irrespective of the industry one participates in. Therefore, unmanned vessels, as the archetypical example of digitalization in shipping, will shake out a very conservative sector, which is characterized by a stagnant status quo in terms of market leadership.

Any change to this status does not accord with the 'cultural' make-up of traditional shipping firms simply because there was never the need to adapt to such a disruptive extent. Moreover, many mid/low-sized shipping firms will be unable to counterbalance the superior resources of new entrants, which will then have not only an active interest (this is in place anyway) but also the possibility to build or access the critical resources (technology for autonomous operations) that will explain success or failure in the new, reconfigured landscape that will emerge.

At this stage, I would like to stress that my aim is not to convey a message of being an anti-technology evangelist. Technology has served shipping well enough and will definitely keep doing so. Moreover, this line of argument is not a subjectively constructed exercise. Rather, it is based on the disruptive innovation literature which, in turn, has been developed upon empirical insights from variegated sectors. The accumulated knowledge therein clearly demonstrates how innovation processes impact dramatically upon established market structures and incumbent organizations. I argue that shipping is no exception to this reality since the digital transformation of an industry is omnipresent and creates similar implications in all investigated sectors. Technological advances routinely penetrate markets and reconfigure the way business is conducted. Nevertheless, not all sectors are equally conducive to disruptive change. Some markets are more conservative than others in terms of embracing such change and as such, externally induced innovations may fundamentally challenge the very ontological identity of an industry.



Therefore, the aim of this article is to call for wider reflection by all shipping stakeholders. Specifically, the impact of technological innovation on structural change and incumbent firms is of particular practical and educational value for all of us who inhabit the shipping ecosystem and serve traditional shipping firms. Who will be our future customers and their involvement in ownership? What kind of new services/products will we be called to develop in light of the advent of unmanned vessels? What kind of quality certifications and new training requirements will emerge? How can we assess the new risks? What are the resources that we need to intra-organizationally develop in order to fruitfully adapt to the new market landscape? These are some of the questions that other sectors have already answered (or failed to answer when ought to) yet, they seem relatively 'untouched' by the shipping community.

Concluding, I wish to reiterate that the innovations that have historically characterized shipping (such as e.g. the steam engine or telecommunication advances) may have challenged the abilities of incumbents or may have called for revitalization of their skills. However, they have never posed any existential threat to the industry as we know it. Instead, the current technological advances force us to fundamentally rethink who will soon own the assets (vessels) which are 'responsible' for the delivery of 90% of the world's trade. In turn, all of us will be called to forcefully adapt around it.



Epsilon

Epsilon is a leading provider of crew management, manning and training services. It serves some of the most prestigious shipping houses through a portfolio that covers the entire spectrum of crewing operations. It mans an excess of 500 ocean-going vessels and trains more than 1,000 seafarers every month through its offices and training centers in the Philippines (Manila & Cebu), Ukraine (Odessa & Mariupol), Russia (Novorossiysk), Romania (Constanta), Turkey (Istanbul), Vietnam (Hai Phong), Indonesia (Jakarta), Greece (Piraeus), and Cyprus (Limassol). It employs more than 240 employees as shore-based personnel and recruits and deploys approximately 5,900 seafarers onboard at any time. More details about the company and its services can be found at www.epsilonhellas.com or, alternatively, you can contact the author directly by sending an email to kpoulis@epsilonhellas.com

The content of the article promotes a view in the academic tradition and as such it aims to spark a debate. Every effort has been made to provide truthful information but there is no warranty about the accuracy of the statements herein. Therefore Epsilon cannot be held responsible in any way.

09. INTERNATIONAL REGISTRIES, INC.

Leading the way with gas fueled ships



By Bill Gallagher
President, International Registries, Inc.

As the shipping industry comes under increasing pressure to mitigate the consequences of hazardous nitrogen and sulphur oxides, as well as cut its carbon dioxide emissions, new technological solutions and new fuel choices are emerging. New technologies and fuels mean new safety and operational challenges and new rules and regulations. International Registries, Inc. and its affiliates (IRI), which provide administrative and technical support to the Republic of the Marshall Islands (RMI) Maritime and Corporate Registries, is building a robust regulatory framework to help shipowners make a seamless transition to the new fuels and technologies of the future.



Today, most of the world's ships are powered by heavy fuel oil (HFO) or marine gas oil (MGO), both carbon intensive fossil fuels. For the shipping industry, whose emissions amount to three percent (3%) of global man-made carbon dioxide, alternative fuels are a viable and important option when looking to reduce shipping's environmental impact. While there are no easy answers, alternative fuels are emerging as a viable option for some ship operators. These include liquified natural gas (LNG) and liquified petroleum gas (LPG), biofuels, and hydrogen.

Recently, classification society DNV-GL announced that it considered LNG to be the prime contender among alternative fuels for an industry which needs to meet both the 2020 sulphur cap and halve its carbon dioxide emissions by 2050. LNG is viewed by some as a commercially viable bridging solution to a zero-emissions shipping industry of the future.

All alternative fuel options have their own specific benefits and their own individual challenges, and this is something that the RMI Registry (the "Registry") understands. That is why the Registry has taken steps

to ensure that if LNG does emerge as the key alternative fuel for shipping, it is ready with robust regulations.

As the world's largest gas carrier registry with 188 LNG and LPG ships under its flag (as of April 2018), the Registry is determined to continue leading the way with LNG powered vessels. To provide technical support for this fleet, they have assembled a group of technical experts including individuals with over 30 years of experience in LNG ship management, as well as other professionals with over 20 years of experience in gas carrier design and construction.

By taking an active role at the International Maritime Organization (IMO) in developing an international regulatory framework for the use of gas as a ship's fuel, the RMI has built on its existing expertise, becoming an authority on LNG as an alternative fuel choice. The RMI's IMO efforts include participating in the IMO Working Groups that drafted the International Code of Safety for Ships using Gases or other Low-flashpoint Fuels (IGF Code) and the Amendments to the International Convention on Standards of Training, Certification and Watchkeeping

for Seafarers (STCW) 73/78, adding Regulation V/3 on mandatory requirements and qualifications of Masters, Officers and Ratings, and other personnel on ships subject to the IGF Code.

Beyond an understanding of the technical requirements for the design of ships meeting the IGF Code, the RMI also appreciates the operational considerations associated with the introduction of this new fuel. Representatives from the Registry have participated in the development of ISO Standard 20519 on LNG Bunkering and the Guidelines for Safety Zones for LNG Bunkering prepared by the Society for Gas and a Marine Fuel (SGMF).

The RMI has leveraged on this experience in real world operations too, by working with shipowners on the implementation of gas fueled ships in their operations. Specifically, the RMI has approved programs at accepted training facilities for compliance with the new crew training requirements contained in STCW Regulation V/3. For shipowners, this means availability of flag State approved training courses, helping to facilitate



The Marshall Islands Registry
www.register-iri.com

International Registries

International Registries, Inc. and its affiliates (IRI) provide administrative and technical support to the Republic of the Marshall Islands (RMI) Maritime and Corporate Registries. The RMI Registry is the second largest registry in the world, surpassing 4,351 vessels and 159 million gross tons at the end of April 2018. IRI has a network of 28 worldwide offices located in major shipping and financial centers throughout the world that have the ability to register a vessel, including those under construction, record a mortgage or financing charter, incorporate a company, issue seafarer documentation and service clientele.

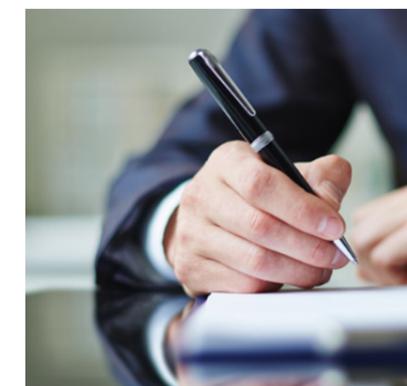
The most important asset to the RMI Registry is its customers and IRI strives to provide them with full service from any office, 24 hours a day.

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the startup of these ships. Similarly, the RMI has worked with shipowners in discussions with coastal States to ensure acceptance of their gas fueled ships, with consistent requirements designed to achieve the desired level of safety.

Although the transportation of liquefied gas is not a new technology, its widespread use as a marine fuel represents a new application which requires understanding and experience for the transition to be accomplished safely and efficiently. In this case, selection of a technically qualified flag State at an early stage in the project is an important consideration.



10. LLOYD'S REGISTER

Cyber security? You're right it's a hot topic



By Elisa Cassi
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Cyber security is a hot topic – and so it should be! Over the past year, we have seen that the marine industry is far from immune to cyber-attacks and security breaches, and the consequences can be far-reaching.

One of the key challenges associated with increased automation and digitisation is the vulnerability to cyber-attack; as the industry continues to invest in digital systems, the risk will only increase.



What is cyber security?

Cyber security is not just about preventing hackers gaining access to systems and information that can potentially result in loss of confidentiality and/or control. It is also about addressing the maintenance of integrity and the availability of information and systems, ensuring business continuity and the ongoing utility of digital assets and systems.

Why is cyber security now top of the agenda?

Information and communications technology (ICT) is revolutionising shipping, bringing with it the 'cyber-enabled' ship era. Today's leading manufacturers and ship operators want to innovate using the latest ICT systems, going beyond traditional engineering to create ships with enhanced monitoring, communication and connection capabilities – ships that can be accessed by remote onshore services at any time and from anywhere. The rapid evolution in the use of, and reliance upon, digital and communication technologies, as well as the advances in automation and the potential for the integration of multiple electronic systems, increases the importance of addressing inherent vulnerabilities.

What does this really mean for the shipping industry?

Ships are becoming increasingly complex and dependent on the use of digital and communication technologies; in line with increased connectivity comes a new need to implement secure technologies and processes to mitigate threats to operational technology (OT).

ICT and OT used to be separated by numerous human-centred processes, allowing for an incremental approach to cyber ICT security. As the boundaries of autonomous systems extend, however, these 'fire walls' are disappearing and cyber security must be considered with the utmost importance as a fundamental component in the risk profile of critical assets that are connected.

Don't think you have a cyber-enabled ship?

Ship-based cyber systems include: navigation systems, including electronic charts, global positioning systems (GPS), and dynamic positioning systems (DPS); radar and automatic identification systems (AIS); communications systems, including radio communications (terrestrial and satellite) and data communications (broadband, voice over IP (VoIP), internet access and e-mail); integrated bridge systems; control systems for the wide range of electro-mechanical systems on board ships, such as main engine, generators, ballast tanks, life support, fuel and oil pumps, watertight doors, fire alarms and controls, cargo hold fans and environmental controls; and equipment used by charterers, such as survey equipment (sonar and seismic survey systems, for example), wireless access points, IP ports and wireless phones.

If my cyber security is not optimal, what are the potential risks?

Compromise of a ship's systems may lead to various unwanted and harmful outcomes at an individual ship or fleet level. For example: physical harm to the system or the shipboard personnel or cargo (the worst-case scenario being a risk to life and/or the loss of the ship); disruptions caused by the ship no longer functioning or sailing as intended; loss of sensitive information, including commercially sensitive or personal data; and permitting criminal activity, including kidnap, piracy, fraud, theft of cargo and the imposition of ransomware.

Poor security could also lead to potential financial loss or penalties, loss of customer and/or industry confidence, reputational damage, and even litigation.

Why would I want to increase the cyber-enabled capability of my operations?

Cyber systems transform a ship into a total system of interlinked systems ('a system of systems'). While cyber systems are not exact substitutes for traditional electro-mechanical systems on board ships and for operators, they provide opportunities to combine these traditional components with more complex behaviour. When designed properly, the use of ICT can increase efficiency and safety through improved monitoring and communication, and greater situational awareness on the bridge, in the engine room and in other operational areas.

Specifically, cyber systems impact ships by: interconnecting systems through computer networks; integrating systems;

creating layers of embedded and/or application software that separate the operator and the ship; changing the role of the operator to a manager of many linked, complex systems; shifting the operator's perception of the ship and its environment to one defined by human-machine interfaces; enhancing the ability and efficiency of the crew – or changing the organisation of work – through automation; and creating the potential to remotely monitor and change the operation of the ship using a wide range of data from anywhere in the world.



What does 'good' cyber security look like?

Because a cyber-enabled ship consists of multiple interconnected systems and because of the rapid pace of technology development, assuring that a cyber-enabled ship will be safe cannot be prescriptive and cannot rely on knowledge gained from previous systems. Instead, it requires a 'total systems' approach – one that takes account of all the different systems on board and on shore, how they are designed and installed, how they connect and how they will be managed.

This is the approach that Lloyd's Register (LR) takes, applying a non-prescriptive, risk-based process from the earliest concept stage, through onboard integration, to operation – one that is based on extensive experience of system design and installation on board ships and other marine platforms.

Cyber security is a through-life issue that requires consideration from project inception to asset disposal. In addition to its impact on system development, special consideration must be given to the education and associated organisational

culture of all related staff. Incident response planning and the maintenance of an asset's security status through timely, carefully tested patching also need to be considered throughout an asset's lifecycle. Cultural Risk Factors specific to the maritime industry also need to be considered and revisited. This includes factors such as: low awareness of maritime cyber security, complexity of the maritime ICT environment, fragmented maritime governance context, inadequate consideration of cyber security in maritime regulation, lack of a holistic approach to maritime cyber risks, overall lack of direct economic incentives to implement good cyber security in the maritime sector, and slow regulatory change.

Cyber security needs continual maintenance!

The cyber security landscape is a constantly changing one, as new threats and countermeasures emerge. Even with the best cyber security strategy in place, at some point you may suffer a breach. It is important to have in place robust incident response plans that can be deployed quickly and effectively. And it is vital that staff know what to do in the early stages of a cyber security threat. In fact, the greatest security vulnerabilities come from people – 90% of cyber security incidents can be traced back to human error or intent. Good security outcomes

are therefore underpinned by positive security behaviours, so training is vital to increase the overall awareness of cyber risks and ensure that the appropriate behaviours, awareness, attitudes and technical skills are embedded within a business.

What should I do to address cyber security?

Across the industry, there's still huge variation in levels of awareness and preparedness for the increasing role of cyber technologies and the cyber security risk you can be exposed to. Understanding the level of cyber readiness is the essential first step to identifying, mitigating and managing the risk. LR conducts readiness reviews to quantify existing cyber capabilities and help develop strategies to maximise the benefits while minimising the risks. Uniquely, LR takes a 'whole asset' approach and looks at all the connected equipment, systems and software, both individually and in terms of their interactions with, and potential impact on, each other. LR can undertake a detailed technical assessment of the entire asset, identifying theoretical cyber threats and vulnerabilities. And we can carry out practical interventions, such as penetration testing and ethical hacking, ascertaining the real, practical risks. This combined desk-based and practical work approach provides a robust, objective and fully quantifiable basis for developing a cyber security strategy. LR can also review the levels of cyber security readiness within offices and identify awareness and technical training needs. This assessment also allows for the identification of the residual risks – those that cannot be reduced or avoided currently, and must therefore be understood, accepted or insured against.

How can LR help?

LR has created cyber security requirements as part of its cyber-enabled ships guidance and procedure. The recently revised Cyber-enabled ships ShipRight procedure, which details LR's framework for accepting cyber technology and was the industry's first ShipRight procedure, now includes a Cyber SECURE descriptive note. This helps to raise awareness of cyber security and recognises that cyber security has been assessed (in the context of design and build), and that an appropriate cyber security governance system is in place to mitigate the risk of introducing vulnerabilities to cyber-attack, or other unauthorised access, during the design, procurement, construction and installation of the cyber-enabled systems.

This is complemented by newly released 'Type Approval Requirements for components within Cyber Enabled Systems on board Ships – Procedure for Network and Network-related devices'. This provides all the benefits of traditional type approval, as well as reassurance on supply chain quality and robustness within the marine environment. The new

procedure also incorporates consideration to the functioning of a cyber-enabled system, such as cyber security.

In addition, a Cyber Secure programme has been developed that consists of a set of consultancy services designed to help ship operators understand how cyber secure they are now and what level of security they want to achieve in the future. The recent acquisition of Nettitude strengthens LR's existing broad portfolio of cyber security services, spanning certification, compliance, training, auditing and security consulting and now including penetration testing, information security consulting, managed security services and incident response.

Together, Nettitude and LR now provide a complete suite of cyber security assurance services to help clients identify, protect against, detect, respond to and recover from cyber threats.



Lloyd's Register

We started out in 1760 as a marine classification society. Today, we're one of the world's leading providers of professional services for engineering and technology – improving safety and increasing the performance of critical infrastructures for clients in over 75 countries worldwide. The profits we generate fund the Lloyd's Register Foundation, a charity which supports science and engineering-

related research, education and public engagement around everything we do. All of this helps us stand by the purpose that drives us every single day: Working together for a safer world.

In a world of increasing complexity – overloaded with data and opinion – we know that our clients need more than technology to succeed. They need an experienced hand. A partner to listen, cut through the noise and focus on what really matters to them and their customers. Our engineers and technical experts are dedicated to assurance. That means a commitment to embracing new technology, and a deep rooted desire to drive better

performance. So we consider our customers' needs with diligence and empathy, then use our expertise and over 250 years' experience to deliver the smart solution for everyone.

After all, there are some things technology can't replace.

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11. NEW GALLAGHER MARINE CYBER PRODUCT

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INSURING CLAUSE:	COVERAGE DESCRIPTION:
 Breach Response	<p>Should there be an actual or suspected security or privacy breach:</p> <ul style="list-style-type: none"> The coverage of costs to engage a lawyer to handle, notify, respond and project manage, including legal expenses; Public Relations fees to mitigate reputational damage following a breach; and IT Forensic costs for conducting a review or investigation into the source of the breach and terminate.
 Computer System Restoration Costs	<p>Following damage to insured programs or data due to a cyber-attack or accidental/operational employee error, cover is provided for:</p> <ul style="list-style-type: none"> IT consultant costs in restoring, updating, repairing, recreating, or replacing damaged data, programs. Cover includes Insured own expenses e.g. additional working hours spent by employees.
 Business income loss and extra expense	<p>Cover is provided for income loss and extra expense due to the suspension or downtime of the insureds business caused by a cyber-attack or accidental/operational employee error.</p>
 Outsource service provider income loss and extra expense	<p>Cover is provided for income loss and extra expense due to the suspension or downtime of the insureds business caused by a contracted IT outsource service provider who has suffered a cyber-incident.</p>
 Cyber extortion	<p>Cover is provided for the payment or expenses to eliminate or remove a ransomware threat or other extortion attempt. This includes the payment of cryptocurrencies if reasonable/necessary.</p>
 Security & privacy liability	<p>Damages and legal cost cover for the failure to prevent a security or privacy breach including corporate confidential information.</p>
 Security & Privacy Regulatory Claims Coverage	<p>Legal costs and expenses cover to investigate and defend a privacy regulatory claim. This cover also includes the payment of fines/penalties where insurable by law.</p>
 Institute Cyber Attack Exclusion	<p>Payment of losses expressly excluded by marine insurers under a CL380 Exclusion provided the losses would have been covered should the exclusion not have been present.</p>
 Cargo Loss Mitigation Costs	<p>Mitigation costs cover for potential damage or deterioration to customer cargo and would have otherwise led to a claim for failure to protect systems. These costs include re-warehousing and additional logistics.</p>

This table does not replace contract terms and conditions and is a general summary of cover only.

12. CASUALTY REPORTS



Ever Judger Fire

The 2014 built bulk carrier *Ever Judger* (82,000 dwt) was anchored off the port of Balikpapan in eastern Kalimantan, Borneo, Indonesia when she caught fire following a fuel spill.

As reported on the Rooselaw newsletter (No. 262) the 229m vessel had just loaded a cargo of coal bound for Lumut in Malaysia when diesel fuel in the water along her port side ignited and flames spread to the vessel. Local tugs were deployed to provide assistance. They took steps to cool the hull and prevent the fire from spreading to the cargo holds. The fire, which caused damage primarily to the aft of the vessel, was extinguished an hour later at 12:00 local time on 31st March 2018.

All of the 20 strong Chinese crew were evacuated from the vessel with one crew member hospitalised suffering from burns. Thick plumes of smoke engulfed the Bay of Balikpapan. Two fishing vessels also caught fire and four fishermen are reported to have been killed with another man remained missing. Further assessment of the damage to the vessel was underway. The cargo was not thought to have been affected. The local authorities including the police are investigating the cause of the incident. Fuel samples have been taken from the vessel as well as from the Pertamina Oil Terminal so that investigators can identify

the source of the fuel. According to the article blame was originally focused towards the Pertamina terminal with reports that the fuel had originated from one of their many pipelines which span the Bay. Reports suggested local workers may have been attempting to burn off the spill and the flames drifted towards the bulk carrier and the fishing vessels.

This has been strongly denied by Petermina who allege the spillage came from the *Ever Judger* and that tests had shown the pollutant was marine diesel.

Britannica HAV / Deborah

The 2,289 dwt general cargo vessel *Britannica Hav*, capsized after having collided with the Belgian flagged fishing vessel *Deborah* in the English Channel 50 miles north-east of Cherbourg on 20th March 2018. According to Rooselaw newsletter (No.260) the **Britannica Hav**



was reported to have been struck and holed in her port side by the 39m fishing vessel. The breach caused water ingress into the vessel which the crew were unable to control using the vessels pumps. The **Britannica Hav** developed a list and eventually capsized. The seven crew members were able to deploy the lift rafts and escape before the vessel capsized. They were picked up by the **Deborah** and later transferred by a French Navy helicopter to the Quergueville military base for assessment and treatment. The emergency salvage tug **Abeille Liberté** proceeded to the casualty, as also did patrol vessel **Aramis**. The Navy anti-pollution vessel **Argonaute** was deployed to the capsized vessel, which remained afloat and continued to drift at three knots in a south westerly direction in the busy shipping channel.

As worldmaritimeneews.com reported, according to France's Maritime Prefect the stricken vessel was towed to the site by tug *Abeille Liberté*, and escorted by two other units. The tug attached a tow line through the freighter's bow thruster tunnel in order to bring the drifting ship under control. The stricken vessel finally arrived at the Le Havre harbor in the afternoon hours of 22nd March 2018.



Geos

The 60m long research vessel *Geos* caught fire off Kuala Baram, Malaysia in the early hours of 17th April 2018. According to shipwrecklog.com the fire started after an explosion in the engine room while doing offshore oil exploration. The fire quickly engulfed the research vessel forcing the crew to jump overboard into the sea. Authorities were alerted and quickly launched a search and rescue operation. Rescuers arrived on scene all pulled 37 of the 38 crew to safety. As the website states two crew sustained injuries

and were taken to hospital for treatment. One crew person was reported as missing. Several tugs arrived a short time later and began to extinguish the blaze on the *Geos*. The tugs were able to contain the fire, but reports stated there were several areas within the superstructure still on fire.

Worldmatimeneews.com later reported that the Malaysia Maritime Enforcement Agency (MMEA) informed that his body was found inside the stricken vessel in the afternoon hours of 18th April 2018.



Vitaspirit

Whilst the bulk carrier *Vitaspirit* was transiting the Bosphorus near Istanbul, the vessel suffered a mechanical issue with the a failure of her steering and allided with a waterfront villa in the Anadolu Hisari area, eastern Bosphorus near the Fatih Sultan Mehmet Bridge. The 74,269 dwt vessel was proceeding southwards along the Bosphorus under control of a local pilot when the rudder locked and she veered off to port. Her aft anchor was released but it was unable to

hold the bulk carrier which crashed into the embankment striking the Hekimbasi Salih Efendi waterfront mansion and causing significant damage to the property. The incident was caught on video from numerous angles by surprised onlookers and many have been uploaded to YouTube. Two of the videos can be viewed by clicking here and here. The roof and upper floors of the 18th century wooden building, which was constructed in 1861 and is used to host weddings and concerts, collapsed and fell into the water.

There were no casualties resulting from the accident. Local lifeboats Kiyem-1 and Kiyem-2 were dispatched to the site together with coastal safety tugs Kurtarma-3, Kurtarma 6, Kurtarma 7 and Kurtarma 8. The tugs pulled the vessel back to the fairway and subsequently she was towed to an anchorage in the Mamara Sea where she moored for damage assessment and investigations into the incident. The Istanbul Courts have arrested the vessel following an application by the owners of the property.



Maersk Honam

A major fire erupted on board the ultra large containership Maersk Honam on 6th March 2018 whilst the vessel was in the Arabian Sea travelling on a westbound voyage from Singapore to Suez, and beyond. The vessel was carrying 7,860 containers bound for ports in Malta, Italy, Spain and France. The fire is reported to have begun in one of the cargo holds following a huge explosion. The 2017 built vessel was reported to be some 340 nm off Agatti Island in the union territory of Lakshwadeep when the distress call was made. The crew attempted to fight the fire but their efforts were unsuccessful and they sent out an emergency distress message seeking assistance. The ALS Ceres diverted to the scene, reaching the casualty at 11.25pm on 6th March 2018 and 23 crew members were safely evacuated to the vessel. Four crew members were missing. Other vessels have also diverted including the MSC Lauren, Edith Maersk and Gerd Maersk. Weather conditions in the area were favourable at the time of the incident.

According to Rooselaw newsletter No. 259, five days after the original explosion, the resulting fire was reported as having been largely brought under control after the Indian Coast Guard continued their efforts to douse the flames with their fire monitors. Teams from Smit Salvage and Ardent Global, the joint LOF salvors, arrived at the casualty's location on 10th March 2018 and have carried out on board inspections of the vessel.

At the time fires were still smouldering in Holds 1, 2 and 3 and preventative steps were being taken to prevent any flare up. The fire has seriously affected Holds 1, 2 and 3 of the vessel but the spread to other holds and cargo on board appears to have been halted, possibly by the position of the accommodation block, which separates Holds 3 and 4. The 162,000 deadweight containership has 9 cargo holds and as such two thirds of the cargo seems to have avoided the worst effects of the fire. There is of course the possibility that other cargos, particularly those stowed on deck, may be affected by smoke and this will have to be ascertained in due course during the survey process. The vessel was then now under tow of the tug Amazon Chieftain Z, with the line attached to the vessel's aft end. Boundary cooling operations were continuing and electrical power has been restored, including power to the reefer containers. The bodies of three of the four missing crew members have been recovered by salvors, one other crew member rescued from the vessel has since died and two others remained in a serious condition in hospital. The owners Maersk were looking to identify a suitable port of refuge which could handle a casualty of this size and deal with the aftermath of such a significant fire. There are a limited number of ports which are able to accommodate a vessel of this size let alone a fire damaged vessel with significant damaged cargo and extinguishing water on board.

A week later, according to newsletter 260, the vessel continued to be towed in a north easterly direction with no confirmed port of refuge. Cargo in the affected holds continued to smoulder and emit smoke and this would need to be addressed before entry into a port of refuge. According to updates from newsletter No. 261 on 28th March 2018, arrangements were in place for the containership to be taken to Jebel Ali in the UAE where sound cargo will be discharged for on forwarding. The vessel being slow towed and at the time was still over 575 nm miles from Jebel Ali. On arrival she will proceed to a holding position until salvors have dealt with the hot spots and the fire is completely extinguished. They would need to remove debris from the holds in order to access the hot spots. Specialist vessels and equipment were being sourced and directed to Jebel Ali. The vessel finally reached Jebel Ali anchorage on 23rd April 2018 and following salvage works in the meantime, it was hoped that she would be permitted to berth to discharge sound cargo within the next 7 days from 16th May 2018.

13. WAR AND PIRACY

The general cargo vessel **FWN Rapide** (IMO 9320520, Built 2005, dwt ,) was attacked by pirates on 21st April 2018 whilst approaching Port Harcourt, Nigeria. The vessel's owners ForestWave Navigation reported that 11 of the 14 crew of board have been taken hostage. The vessel was en route from Takoradi, Ghana to Onne, Nigeria. (Rooselaw newsletter No.265)

Bulk carrier **Dino** (IMO 9392078, Built 2009, 33,371 dwt) was attacked by pirates on 7th April 2018 40 nm southsouth- east of Brass, Nigeria. As reported on Rooselaw newsletter No.263, pirates were able to board the ship but the crew had taken refuge in the citadel. Pirates stole property and caused damage to equipment on board.

The fishing vessel **Marine 711** was hijacked by pirates on 26th March 2018 whilst in the Gulf of Guinea, off Ghana. The pirates took five hostages. Following later reports (Rooselaw newsletter No.266) three hostages were later released on 27th April 2018. The three South Koreans were taken to the South Korean warship Munmu the Great, which was deployed to assist in the rescue operation.

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MARINE CASUALTIES

Article	Source	Photo Source
Ever Judger	rooselaw.co.uk/RoosePartners%20Casualty%20Newsletter%20-%20Edition%20262%20-%204%20April%202018.pdf	rooselaw.co.uk/RoosePartners%20Casualty%20Newsletter%20-%20Edition%20262%20-%204%20April%202018.pdf
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PIRACY REPORTS

Article	Source	Photo Source
FW Rapide	rooselaw.co.uk/RoosePartners%20Casualty%20Newsletter%20-%20Edition%20265%20-%2025%20April%202018.pdf	
Dino	www.rooselaw.co.uk/RoosePartners%20Casualty%20Newsletter%20-%20Edition%20263%20-%2011%20April%202018.pdf	
Marine 711	www.rooselaw.co.uk/RoosePartners%20Casualty%20Newsletter%20-%20Edition%20266%20-%202%20May%202018.pdf	



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