

# Cyber Risks and Marine Insurance - December 2019

**Shelley Chapelski, Norton Rose Fulbright Canada LLP**

[shelley.chapelski@nortonrosefulbright.com](mailto:shelley.chapelski@nortonrosefulbright.com)



# Competing demands for executive time and dollars

**IMO Sulphur  
Cap**

**MLC**

**Hardening  
insurance  
market**

**Trade  
Wars**

**Sanctions**

**Cyber**

**Green  
finance &  
scrapping**

**Ballast  
Water**

# Which seafarer or trade is more dangerous to ship?



# Cyber: Perspective of the marine insurance market

- “At present, marine-related cyber incidents remain ambiguous. There is no present standard across the industry for how to cover this kind of risk across a wide spectrum of peril, and there is no certainty on whether these risks fall within the marine market or the cyber market.
- The general consensus currently places risk of physical loss in the marine market, while the risk of data loss is placed in the cyber market. This has been the broad approach so far; and continues to evolve as ships grow increasingly complex in their operations, taking into account things such as autonomous systems, remote data monitoring and data-rich supply chains
- .... It is tough to differentiate a hack and a malfunction in terms of potential property or casualty loss. This is why marine insurers have chosen to exclude cyber-related insurance from their portfolios.”
- *Rama Chandra*, QBE Singapore, head of marine, *The Marine Insurer* September 2019

# Insurance market slow to venture into field:

- Claims data not well established or understood
- Cyber security is not standardized or consistent in marine industry
- Scope of a cyber incident can be international as opposed to just localized
- How does one underwrite it?



# Types of damage caused by cyber threats:

- Physical loss and/or damage to property arising from a cyber source  
Standard exclusion CL 380 will apply
- Business interruption (BI) or loss of hire (LOH)  
Often requires a covered H&M or property loss as a precondition for cover
- Loss or theft of data  
Marine insurance market does not know how to insure it – what is its insurable value?

## INSTITUTE CYBER ATTACK EXCLUSION CLAUSE (CL 380) 10/11/2003

- 1.1 Subject only to Clause 1.2 below, ***in no case*** shall this insurance cover loss damage liability or expense directly caused by ***or contributed to by or arising from*** the use or operation, as a means for inflicting harm, of any computer, computer system, computer software programme, malicious code, computer virus or process or any electronic system.  
*(emphasis added – 1.2 refers to war risks policies not excluding cover just because use of a computer system is involved in the firing of a weapon)*

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## Clause 380 - its market consequences to date

- Very much in favour of insurers
- No cases interpreting it
- Removal of Clause 380 from a policy does not create cyber cover – deleting the exclusion just allows for some losses which might otherwise be covered but for the exclusion
- Reinsurance, excess insurance and treaties often include clause 380 meaning that if it was excluded from a primary policy, then some losses might only be covered by the primary insurer and only up to the limits of that policy.



## **CYBER COVERAGE CLAUSE JC2019-004 – for Cargo Market Joint Cargo Committee of LMA and IUA**

1.1 It shall be a condition of cover under this insurance that the Insured can demonstrate that they have implemented reasonable measures to ensure compliance with the US or UK national Cyber security Centre recommendations or equivalent national recommendations, current at inception of this insurance. If the Insured cannot provide evidence that these measures, or such other measures that may be required by Insurers were undertaken, then there shall be no cover under this insurance for losses arising from the use of Software.

1.2 Subject to paragraph 1.1 above, this insurance shall indemnify the Insured for any physical loss or damage, liability or expense, which would otherwise be covered under this insurance, which affects solely the Insured or the Insured's property, and arises of the use of Software.

For the purpose of this clause, Software shall mean the programs, source codes, scripts, applications and other operating information used to instruct computers to perform one or more tasks.....

*[due diligence requirement is guaranteed to generate legal fees]*

## **CYBER COVERAGE CLAUSE JC2019-004 – for Cargo Market Joint Cargo Committee of LMA and IUA**

1.3 Other than whilst the subject matter insured is on board any means of conveyance, this insurance excludes physical loss or damage, liability or expense arising from the use of Software, which leads to a Systemic Loss.

A Systemic Loss shall mean the physical loss or damage, liability or expenses, otherwise recoverable under paragraph 1.2 but which affects more than just this Insured or this Insured's property.

1.4 Any cover granted by virtue of this clause shall be limited :

USD [response] each and every loss, or series of losses arising out of one event, and USD [response] in the annual aggregate.

## MARINE CYBER EXCLUSION CLAUSE - LMA5402 11/11/19

This clause shall be paramount and shall override anything in this insurance inconsistent therewith.

1. In no case shall this insurance cover loss, damage, liability or expense directly or indirectly caused by, or contributed to by or arising from:

1.1 the failure, error or malfunction of any computer, computer system, computer software programme, code, or process or any electronic system or

1.2 the use or operation, as a means for inflicting harm, of any computer, computer system, computer software programme, malicious code, computer virus or process or any electronic system.

*[even more emphatic than Clause 380]*

## MARINE CYBER ENDORSEMENT CLAUSE LMA5403 11/11/19

1. Subject only to paragraph 3 below, in no case shall this insurance cover loss, damage, liability or expense directly or indirectly caused by or contributed to by or arising from the use or operation, as a means for inflicting harm, of any computer, computer system, computer software programme, malicious code, computer virus, computer process or any other electronic system.
2. Subject to the conditions, limitations and exclusions of the policy to which this clause attaches, the indemnity otherwise recoverable hereunder shall not be prejudiced by the use or operation of any computer, computer system, computer software programme, computer process or any other electronic system, if such use or operation is not as a means for inflicting harm.
3. [*War risks provision which provides that use of computer to fire weapons is not an exclusion*]

# International Group P&I Cover - cyber?

- No specific exclusion for cyber caused liabilities
- A cyber 'hostile act' or act of terrorism (a war risk) would be excluded from P&I cover
- Some indemnification for fraud situations might exist under FD&D coverage

# Shipping is an attractive target:

- One in five shipping companies admit to being exposed to cyber threats but industry is notoriously secretive about the true state of affairs and some may not even be aware yet that such hacks have been made.
- Petya ransomware attack costing at least US\$300 Million to AP Moeller Maersk
- Other known victims include Cosco, US Coast Guard, Port of Antwerp, South Korean fishing fleet
- Others, especially cruise lines and airlines, don't publicize the hacks because of the reputational harm of disclosing that passports, credit and banking details and other confidential information has been stolen



# Endorsement does not cover:

- “Trap lines” of phishing and fraudulent emails to creditors to redirect payments
- Ransomware and malware attackers sometimes claiming relatively meagre amounts of payment (typically demanded in Bitcoin) in relation to the costs of refusing payment
- Malicious attacks to control GPS, ECDIS & AIS and other software driven processes on ships & ashore
- Theft and sale of customers’ valuable information
- Denial of Service attacks
- Fake service providers collecting banking information and advance payments
- Hacking systems to control them (such as containers with illegal cargo)

# Data– the new currency

- Vessels generate millions data points during a voyage
- Harnessing and interpreting that data goes hand in hand with the advances in automated systems
- Understanding data leads to operational efficiencies, improved safety and predictive maintenance
- Whether or not a ship owner intends to operate unmanned ships, automated systems are driving the investment in vessels, equipment, machinery and ports





# Drowning in Oceans of Data – How to Insure?

- How to identify
- How to capture
- How to analyze
- How to apply to operations
- How to maximize benefits
- How to detect interference
- How to protect from loss
- How to restore or recover
- **How to insure these risks?**



# Evolution of Marine Liability Regimes?



- Insurance is a risk mitigation tool.
- Risks are driven by liabilities.
- Will the growing reliance on automation in the marine industry result in its liability regimes shifting towards absolute liability – making the vessel liable for causing damage even if its owners and operators did not act negligently?
- Even if that occurs, both owners and insurers (H&M and P&I) will look to third party claims for indemnification.
- How will it be determined if the cause of an incident was hacking, a defective sensor, incompatible software, a poorly written algorithm, interruptions in connectivity?
- Even if the exact cause of the failure or negligence can be determined, will it be insured?

# Looming Liability Issue: the Supply Chain



A business supplying goods will typically carry a Commercial General Liability (CGL) policy

- will cover damage to property and personal injury
- will typically exclude marine operations (which exclusion can be “bought out”)
- will also exclude liability arising from Software or Cyber.

A business selling software or cyber related services will have a CGL to cover any accidents on its premises but also a Professional Errors & Omissions (E&O) policy to respond if a customer suffers business damages from the software

- may exclude marine operations
- typically excludes cover for causing personal injury and property damage!

# Supply chain gaps prejudicial to owners & insurers

Who is checking the ship's supply chain of goods and service providers to make sure that they have responsive insurance should a maritime casualty occur?

Even if P&I and H&M continue to be the first insurance responders should a casualty occur involving ANY automated process, let alone an unmanned ship, will they be in a position to make any recoveries from responsible third parties in the supply chain to the ship when those suppliers don't have the right insurance coverage?

Will the lack of responsive insurance held by the suppliers of automated systems undermine the H&M and P&I markets?

# The near future? More chaos and gaps

- Sharp reduction of overall capacity at Lloyds has pushed the interest in developing innovative covers far down the agenda
- No standardization of cyber covers being offered meaning policies which don't marry up
- The scope and nature of cyber risk is evolving faster than the insurance market
- The regulation and nature of cyber protection is even further behind

# Cyber Risks – a Modern Peril of the Seas?

- A few coverholders moving into cyber market – programs by Marsh, Shoreline, SIGco
- Slow uptake by the marine industry on cyber insurance even though IUMI and most other marine industry associations acknowledge that cyber risks, both internal and external, are part of modern risk management
- IUMI's view is that the marine industry stakeholders need to establish risk assessment and mitigation relating to cyber threats and once that is done, insurance solutions may follow
- In the meantime, owners are dealing with a chicken and egg situation – do they search out and buy untested cyber coverage? If yes – do they go to the marine market or the cyber market? Do they unbundle their coverage or keep it tied directly to marine perils? Where and for how much do they insure their data? How can they insure it?





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