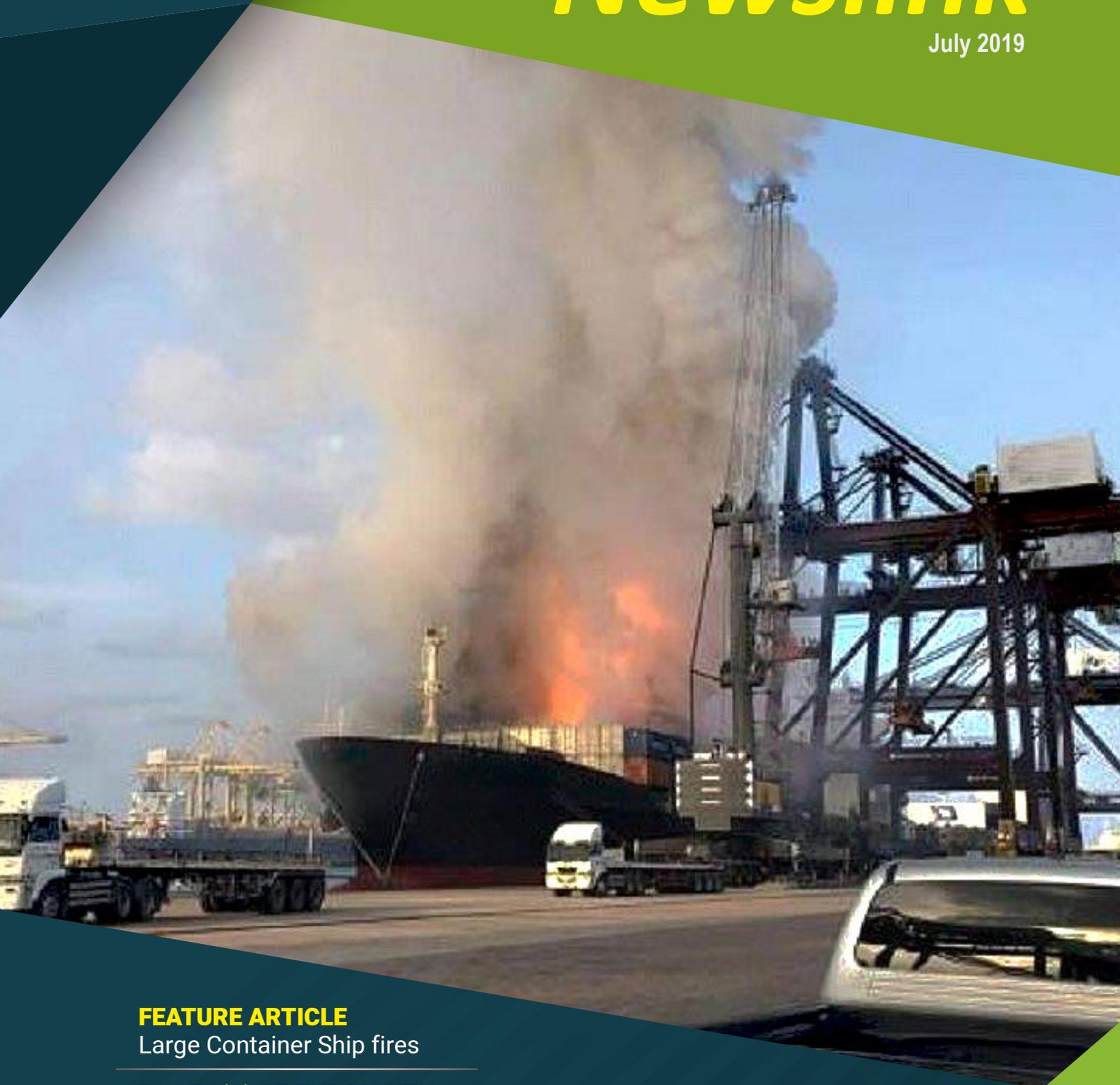




WITH YOU ALWAYS

Marine *Newslink*

July 2019



FEATURE ARTICLE

Large Container Ship fires

PHOTO(S) OF THE MONTH

Containers

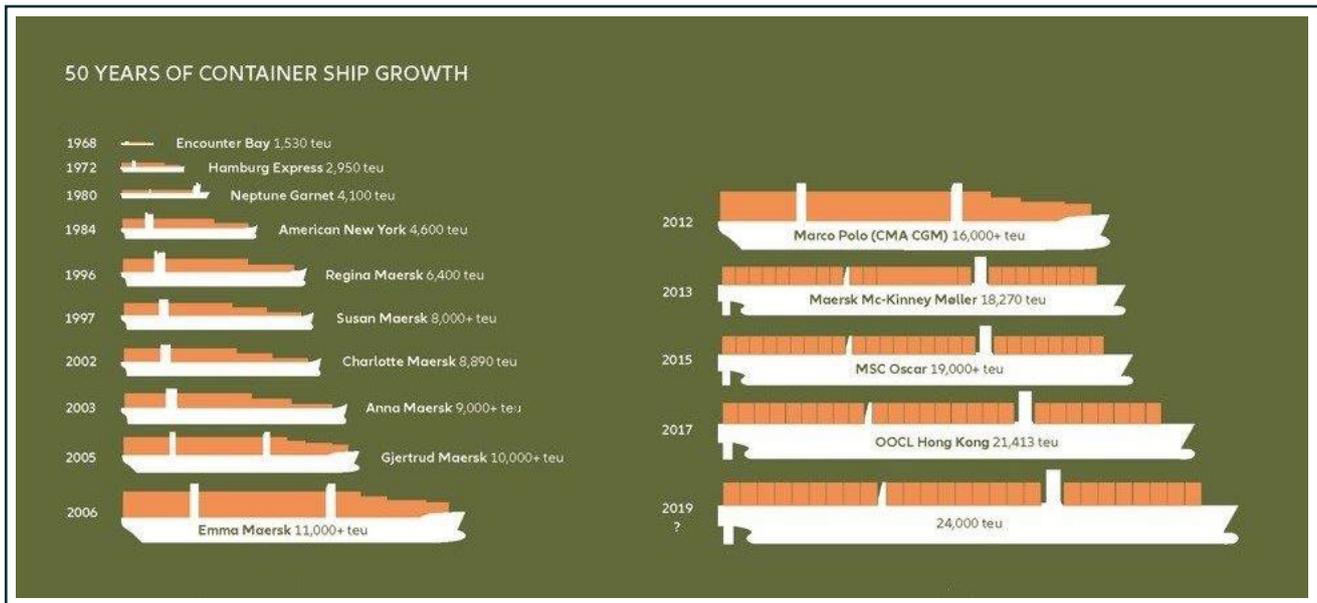
BONUS ARTICLE

What is a TEU?

BACK TO BASICS

Question of the Month

LARGE CONTAINER SHIP FIRES



Large Container Ship fires are fast becoming a major concern for Shipping Industry & marine insurance. Major fire incidents on Large Container Ships such as the M.V. APL VANCOUVER & M.V. KMTC HONGKONG this year and MAERSK HONAM, last year have caused unprecedented cargo loss and fatal casualties on board as well as ashore.

Each year, millions of containers packed with dangerous goods and wrongly declared as non-dangerous are loaded onto ships. Basis provided info, shipping lines fail to take any special precautions for carrying them. As such the containers catch fire, explode or leak, causing disastrous consequences to the ship, its crew, environment and the cargo of other shippers.

Cargo fires on container ships are extremely problematic as they are very difficult to extinguish. In addition, the causes of the fires tend to be found in the cargo itself. With almost certainty, the reasons behind these tragic incidents are being reported to be mis-declared or undeclared dangerous goods.

The International Maritime Dangerous Goods (IMDG) Code currently has extremely high standards to adhere to and continues to improve year on year. The problem is that in



some parts of the world the IMDG Code is not taken as seriously as it is intended. The cargo capacity of container ships has been increasing dramatically and therefore so has the probability of having mis-declared dangerous cargoes on-board.

2019 has been a disastrous year for container ships, especially Large Container Ships. The first three months of the year themselves recorded for the largest number of container ship fires in the shortest amount of time. Between 1st January and 31st March, fires on-board six containers ships had delayed, damaged or destroyed hundreds of cargo containers.

FEW MAJOR ONES ARE AS BELOW:

3rd Jan 2019: M.V. YANTIAN EXPRESS, a container caught fire when ship was off the Canada's Eastern Seaboard. More than 260 containers were destroyed.



Yantian Express

29th Jan 2019: M.V. OLGA MAERSK, fire broke out in engine room when ship was at Panama. No containers were reported damaged, but GA was declared.

31st Jan 2019: M.V. APL VANCOUVER, fire broke out in an under deck cargo bay when ship was off the coast of Vietnam. The damaged containers are still being reported.



APL Vancouver

1st Mar 2019: M.V. E.R. KOBE, fire broke out in containers containing charcoal. The ship was diverted to Hong Kong to unload the damaged boxes; three more containers caught fire as the ship continued onwards to Shanghai.

10th Mar 2019: M.V. GRANDE AMERICA, a container on the combined container/auto carrier caught fire off the coast of France. As the ship became engulfed in flames, crew members evacuated in lifeboats and were later rescued by a British naval vessel. The ship capsized and sank the following day.

25th May 2019: M.V. KMTC HONGKONG caught fire with explosions whilst at berth at Laem Chabang, Thailand. Subsequent



Grande America

explosions injured more than 100 people. Authorities reportedly claimed that nearly 20 containers of undeclared volatile chemicals were loaded on-board. Damages are pegged at about USD 5.0 Million.



KMTC Hongkong

16th June 2019: M.V. DIAMOND HIGHWAY was abandoned by crew in the South China Sea after a fire broke out on board the ship. The fire forced all 25 crew members to abandon ship.

The highest severity of harm from any container ship fire is loss of life. MAERSK HONAM lost 5 crew members to fire & they were the ones who first responded to fire call. Container fires also have huge environmental impact, not least from all the waste generated from burnt and wet material. The extreme heat generated during many cargoes hold fires often means that salvors resort to flooding the cargo spaces with water to contain and extinguish the fire. Disposal of thousands of m/t of general scrap, hazardous waste and contaminated fire-fighting water add to huge environmental impact. Disposing of waste is also becoming increasingly costly. For example, disposal in Europe of some 130 containers and 5,000

cubic meters of fire-fighting water costed nearly USD 10 million.

Added to the cost of the damage to the vessel, loss of earnings, cargo damage, salvage and General Average expenditure, it is not difficult to see the domino effect of such incident.

RISK FACTORS GENERAL AVERAGE

When ships and cargo suffer damage or delay, Master on-board declares "General Average." This contractual obligation requires cargo owners to shoulder part of the loss, based on the value of their cargo and its percentage share of the "value of the voyage;" that is, the total value of the ship plus all cargo on board. The freight is seized and to get their goods back, cargo owners or more typically, their insurers must pay a security deposit to cover the initial estimated cost of salvaging the ship as well as a bond to guarantee payment of any future adjustments to the general average liability.

DANGEROUS GOODS (DG)

Dangerous cargoes are listed in volume two of the three-volume IMDG code and are divided into nine hazardous risk classes. Each cargo has a 'proper shipping name' and one or more four-digit United Nations (UN) identification numbers. For each cargo, the code identifies subsidiary risks, UN packing group(s), special provisions, limited quantity per inner packaging, packing instructions, special packing provisions, emergency schedules for fire and spillage, stowage and

segregation provisions and cargo properties and observations. While the code is comprehensive and well intentioned, it suffers from its ever increasing length and complexity. It also has several grey areas, such as the fact that not all of it is mandatory. It is these grey areas that some manufacturers and shippers seek to abuse.

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

FIRE FIGHTING CAPABILITY

These incidents are not the first major ones to reported which involved Large Container

IMDG class	UN number	Description
class 5.1	UN 1479	OXIDIZING SOLID, N.O.S. (CALCIUM HYPOCHLORITE)
class 5.1	UN 1748	CALCIUM HYPOCHLORITE, DRY or CALCIUM HYPOCHLORITE MIXTURE, DRY with more than 39% available chlorine (8.8% available oxygen)
class 5.1	UN 2208	CALCIUM HYPOCHLORITE MIXTURE, DRY with more than 10% but not more than 39% available chlorine
class 5.1	UN 2880	CALCIUM HYPOCHLORITE, HYDRATED or CALCIUM HYPOCHLORITE HYDRATED MIXTURE with not less than 5.5% but not more than 16% water
class 9	UN 3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CALCIUM HYPOCHLORITE)
class 5.1, class 8	UN 3485	CALCIUM HYPOCHLORITE, DRY, CORROSIVE or CALCIUM HYPOCHLORITE MIXTURE, DRY, CORROSIVE with more than 39% available chlorine (8.8% available oxygen)
class 5.1, class 8	UN 3486	CALCIUM HYPOCHLORITE MIXTURE, DRY, CORROSIVE with more than 10% but not more than 39% available chlorine
class 5.1, class 8	UN 3487	CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE or CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, CORROSIVE with not less than 5.5% but not more than 16% water

Ships. 2017 recorded about 20 incidents of container ship fires. In 2016 the most notable incident was fire on-board M.V. MSC Flaminia which burned for six weeks, resulting in the death of three crew members, the destruction of 70% of the cargo and the vessel being declared a constructive total loss. And in 2018, the biggest maritime incident was fire on-board M.V. MAERSK HONAM, which caused death of five crew members & losses are being pegged to touch USD 1 billion.



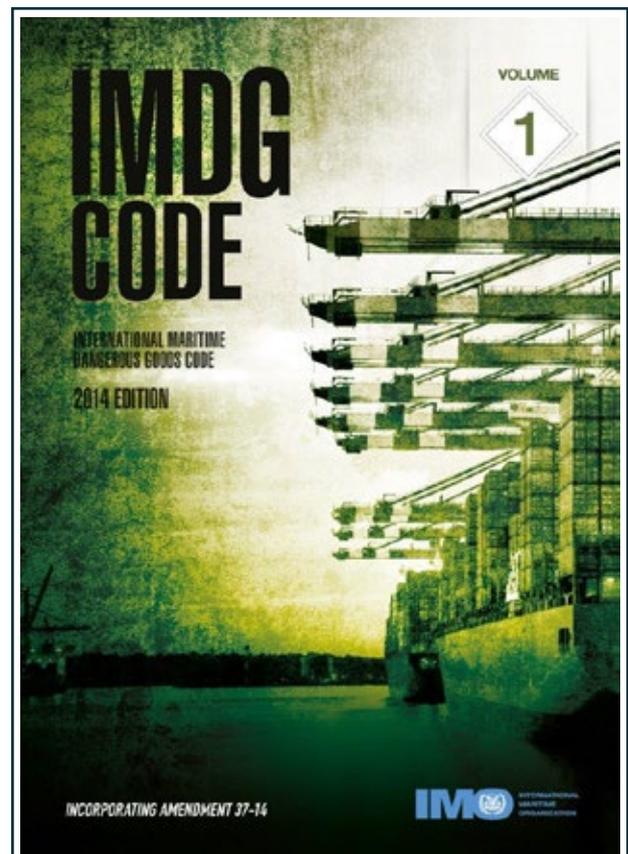
Large Container Ships, while offering lower freights, can create serious exposure and risk for shipowners and cargo owners. It is alleged that fire-fighting capabilities on-board these large container ships are not necessarily in line with the increasing ship sizes. While fire-fighting systems have developed to ensure the crew are able to ensure their safety and thereby complying with International Convention for the Safety of Life at Sea (SOLAS) requirements, fire-fighting capabilities on these Large Ships have not kept up with their upsizing. This is one of the most significant safety issues on board these types of ships and there needs to be considerable development to protect container ships in the event of fire. The reason for fast spread of fire on-board ships is also being attributed to increasing size of container ships coupled with the shrinking size of their crew.

MIS-DECLARATION OF CARGO

Introduced more than half a century ago, the International Maritime Dangerous Goods (IMDG) Code governs the carriage of materials deemed hazardous on cargo vessels. The IMDG Code is evolving to impose stricter rules on DG cargo and

affected shippers are beginning to update their stowage procedures. In the wake of the Honam fire, Maersk Line decided that, DG cargo will no longer be stored near crew quarters or engine rooms on Maersk ships, while cargo classified as fire-resistant will always be placed above deck.

The biggest challenge is the problem of mis-declared cargo, which is thought to be the root cause of several fires. Estimates show the majority (66%) of cargo damage across freight modes, including container fires can be safely attributed to poor packing and labeling of dangerous materials and containers. The size of large container ships and their design will remain a factor, but the risk prevention focus is on preventing fires from starting in the first place. The problem of incorrect packaging of cargo and mis-declaration of cargo is increasing and though, regulations and guidelines for Dangerous Goods exist, they are not being adequately enforced and adhered to. Despite International Maritime Organization (IMO) requirements that shippers declare container contents, there are still many cases where cargo is not being properly declared.



Nevertheless, once the cargo is inside containers, it is difficult to know whether the contents should be classified as DG or not. This creates an incentive for shipper to avoid higher cargo rates by mis-declaring the cargo as non-hazardous, thus allowing it to be stowed in hard-to-access areas on-board ships. This hinders fire-fighting ability to deal with fires as well as the fact that certain chemicals may react with water to form flammable gases & explosion.

CHALLENGE

The main reasons for fraudulent mis-declaration of Dangerous Goods in containers are to save time and money and there is a good chance of getting away with it.

Dangerous Goods require special packaging and stuffing, with limits on package size and quantity per box. Suitable stowage space is also limited on the few ships that do carry such containers and there is usually a surcharge for doing so. Mis-declaration removes all these costs and restrictions.

But there is always a chance the fraud will be discovered - either by diligence or disaster - so the perpetrators try to cover their tracks.

Accidentally mis-declared dangerous cargoes, while dangerous, are usually relatively easy to spot. It could be anything from a typing error in the UN number, HS code or proper shipping name or simply a genuine misunderstanding on the part of the shipper. In such cases,

booking staff can simply go back to the shipper, ask them to correct the declaration and re-submit or withdraw the booking. Fraudulent mis-declarations can be much harder to identify.

LOSS PREVENTION

As shippers & insurers do not have much control on the firefighting ability of a ship and its crew, the Best Cargo Owners can do is to take care of providing complete details about their Dangerous Goods/Hazardous Cargoes.

The first step to avoiding mis-declared cargo is to ensure that the manufacturer has everything properly classified. It's a sensitive topic and grey area when it comes to who is responsible for declaring the cargo. To avoid ambiguity, the first step is for the manufacturer to provide complete and accurate information to their transportation provider, freight forwarder or shipping line. Consignees should also request confirmation of the booking by the seller that the goods have been properly declared, to the carrier, as Dangerous Goods. In the event of an incident, an investigation will take place and investigators will go back to all the parties involved - from origin to destination - to find out whether the information was correct and/or properly classified.

While mis-declarations are often inadvertent mistakes due to lack of expertise and understanding of global logistics, there is the risk that cargo can be purposely mis-

IMO DANGEROUS GOODS DECLARATION	
This form meets the requirement of SOLAS 74 chapter VII, regulation 5; MARPOL 73/78 ANNEX III, regulation 4 and the IMDG CODE, General Introduction, section 9	
Shipper	<div style="display: flex; justify-content: space-between;"> 1 2 </div> Reference number(s) Page 1 of 1 Shipper's Reference Number
Consignee	<div style="display: flex; justify-content: space-between;"> 3 4 </div> Carrier:
Container packing certificate/vehicle declaration DECLARATION It is declared that the packing of the container/vehicle has been carried out in accordance with the General Introduction, IMDG Code, paragraph 5.4.2 TO BE COMPLETED FOR SHIPMENTS IN CONTAINERS OR VEHICLES	<div style="display: flex; justify-content: space-between;"> 5 </div> Name/status, company/organization of signatory Place and date Signature on behalf of packer
Ship's name and voyage No	<div style="display: flex; justify-content: space-between;"> 6 7 </div> Port of loading Instructions or other matter

declared. This can be the case when a certain class of cargo is not allowed through a port, leading the shipper to mis-declare it to get it through. This is a dangerous situation that puts everyone at risk.

If the cargo is declared as non-dangerous, but there are red flags, such as:

- there is no HS code, or it is a fake code like a dangerous cargo (e.g. starts with 2828)
- it sounds like dangerous cargo (e.g. calcium chloride, whitening powder or water treatment compound, bleaching powder, disinfectant, chloride of lime or chlorinated lime - software can be used to spot these)
- documentation is incomplete, particularly if there is no packing survey report
- the customer does not usually ship this type of cargo or use this route
- it is a new customer and KYC checks are not particularly reassuring

The safest option is to treat it as a dangerous cargo and categorise it accordingly.

Booking office staff and agents need to know the proper shipping names, UN numbers and shipping requirements of all dangerous cargoes before considering accepting them for shipment. All booking office staff and agents need to know and trust their customers. This means doing due-diligence checks on new customers and their supply chains or, in the case of slot charterers and freight forwarders, confirming what checks they use on their own customers.

Wherever shippers have a choice and a great deal of control. Regarding moving chemicals, shippers should partner with a logistics management company or third-party logistics provider (3PL) that are well-versed with the complexity of hazardous/chemical logistics and the importance of actively engaging in associations committed to the safe transport of materials. An experienced partner will understand the lead time, the different port requirements and know that mis-declaring or misidentifying cargo isn't the solution. An ethical and savvy partner will navigate the intricate details and complexities of shipping cargo in a safe and expedient way, if it starts

its journey with the proper classification and proper labeling. In the end, a quality logistics partner will work to make sure that everyone is a good player at critical shipping points - avoiding delays, penalties, or sanctions - to get the cargo to its end location safely.

Some shipping lines are now asking shippers to sign DG container packing certificates.

CONCLUSION

Regardless of how promptly cargo owners arrange the guarantee bond, they are in for a long wait before they can retrieve any cargo that is undamaged or salvageable. That's because it can be difficult to find a port that is willing and able to store both ship and containers for months while the physical damage and legal issues are sorted out. It was seven weeks before the Maersk Honam arrived, under tow, at the Port of Jebel Ali in the United Arab Emirates and the Yantian Express spent almost four months in Freeport, Bahamas, before finally sailing back up the East Coast to Halifax, N.S., with the remaining intact containers on board.



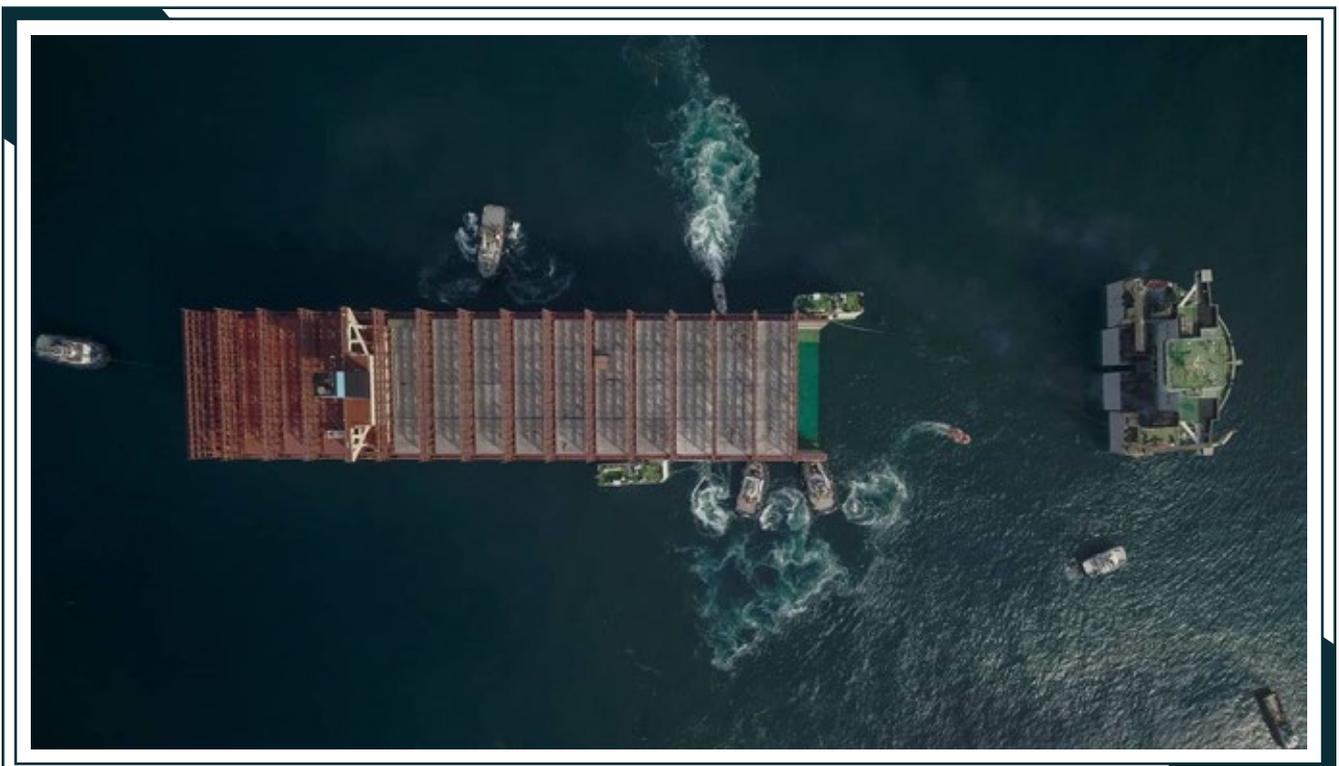
Maersk Honam Fire

For shippers, the wait can be excruciating, as information can be difficult, if not impossible to obtain. Few are still clueless about their cargo containers on M.V. Yantian Express and many still have no idea about fate of their cargo containers that were on-board M.V. APL Vancouver - rather they still do not know the location or condition of their containers.

PHOTO OF THE MONTH: CONTAINERS



Container yard on fire



Undamaged part of Maersk Honam

BONUS ARTICLE: WHAT IS A TEU?

What is a TEU?

Container ship capacity is measured in 20 foot equivalent units (TEU). Typical loads are a mix of 20 foot and 40 foot containers. The world's largest container ship - the 21,000+ TEU OOCL Hong Kong1 - has the capacity to carry around 21,000 containers, which can be laden with anything from cars to electrical goods to shoes. 22,000+ TEU vessels are coming soon.



QUESTION OF THE MONTH: (Please submit your replies by 25th of each month)

Cargo of fruit was exported from India to Jebel Ali, UAE. The coverage under the policy was as per Institute Cargo Clauses (B). Unfortunately the ship had a collision with another ship & had to be taken to refuge port for repairs.

In order to carryout repairs, all the containers were offloaded & then reloaded. When the ship arrived at destination, it was found that the cargo of fruit was considerably damaged. It was found that the damage was due to natural decay.

Is this claim admissible under the policy?

LAST MONTH'S QUESTION:

What is the type of steel used in manufacturing of white goods/appliances? Who are major manufacturer of that steel in India?

LAST MONTH'S ANSWER:

Steel used in manufacturing of white goods/appliances is PPG Steel & Ordinary Steel. Some major manufacturers are Tata Steel Ltd., Tata Steel BSL Ltd., JSW Steel Ltd., SAIL, etc.

CORRECT ANSWERS SENT BY: (In order of replies received)

Hema Raghav - Optima Insurance Brokers Pvt Ltd., New Delhi

V. Vijayanand - Mahindra Insurance Brokers Ltd., Chennai

Bharat Bhushan - Optima Insurance Brokers Pvt Ltd., New Delhi

Satish Marathe - Nasco M.E. Insurance Brokers LLC, Dubai

**PLEASE SEND YOUR REPLIES/ANSWERS TO ADDRESSES
GIVEN ON LAST PAGE OF THE MARINE NEWSLINK**

IF YOU HAVE ANY COMMENTS / FEEDBACK PLEASE SEND IT TO

S. Balachandran

Vice President & National Head - Marine
Shioram.Balachandran@tataaig.com

☎ 98206 34466

Vijay Pal Singh

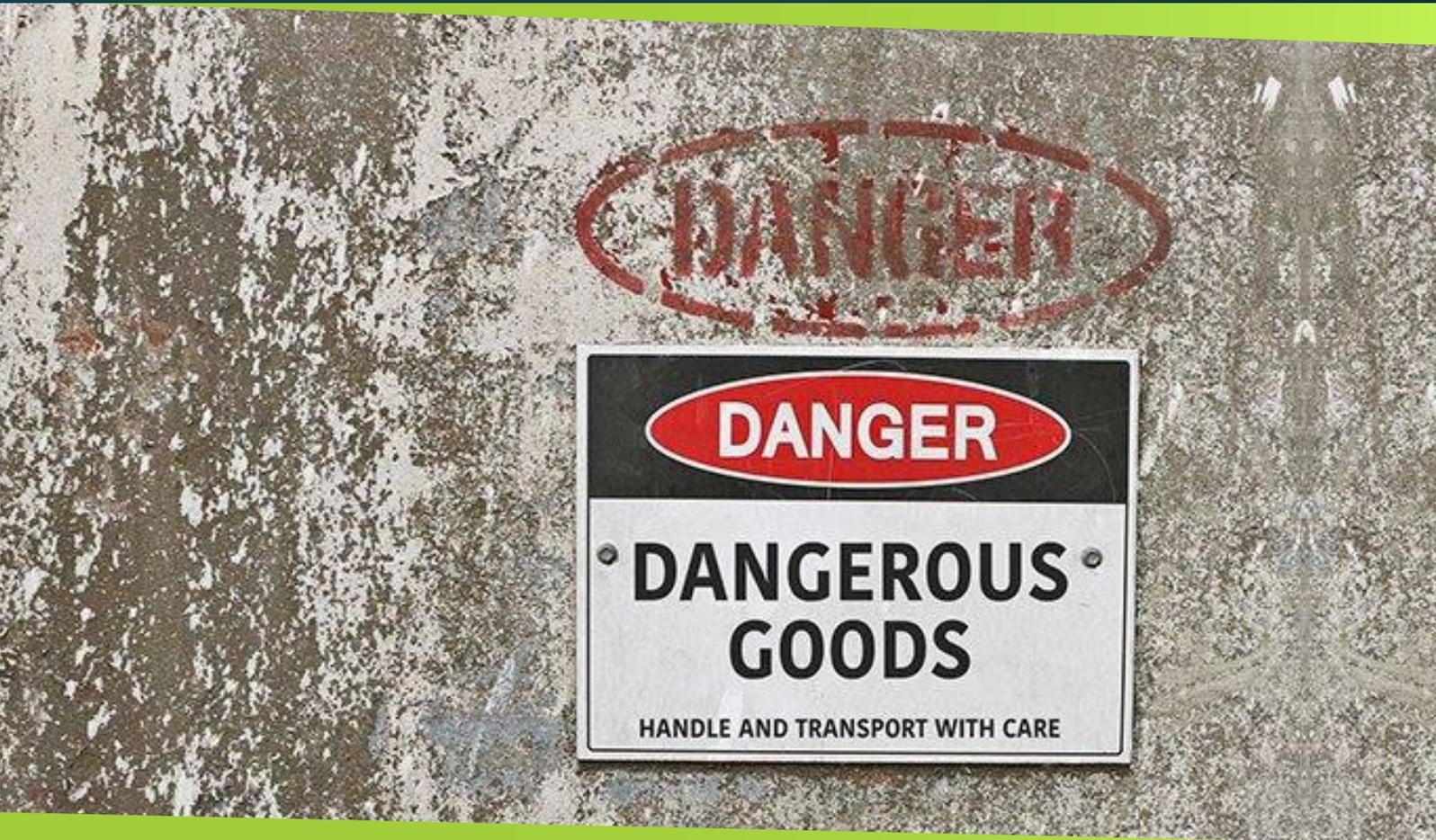
VAS & Marine Loss Control (India)
vijaypal.singh@tataaig.com

☎ 98330 60959

CONTACT US

**Tata AIG General Insurance
Company Limited,**

Peninsula Business Park,
Tower A, 15th Floor, G. K. Marg
Lower Parel, Mumbai - 400013
www.tataaig.com



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