



### The Newsletter of the Nautical Professional Education Society of Canada

(Society founded in 1995 by the British Columbia Branch of The Nautical Institute)



### May 2022

The first article, "Ultimate Responsibility", was included in the October 2016 edition of Seatimes – almost six years ago. It is reproduced it here because we have many young readers who will not have seen it before. An edited version first appeared in the August 2016 edition of Seaways, the Journal of The Nautical Institute. At that time, Dylan Fowler was a Director of the British Columbia Branch of The Nautical Institute.

"Ultimate Responsibility". My Journey Becoming a Navigation Officer: People often ask me why I wanted to become a Marine Navigation Officer. My father has been a Master for many years, and from a young age I have always admired his position and professionalism as a Captain. But there are other reasons why I have chosen this path; I love the beauty and power of the ocean, the sheer size and engineering of ships, the practice of marine navigation, and I love the responsibility. Sailing as a Cadet I often heard the phrase "ah Cadet, no responsibilities, easy life". I hated this statement. I wanted responsibility; I strived for responsibility; without some sort of responsibility what is your purpose onboard a vessel? Being a Navigation Officer you have lots of responsibilities, you are responsible for the lives of the sailors that sleep soundly below the bridge, you are responsible for the safe navigation of the ship, you are responsible for protecting the marine environment, and you are responsible for contributing to the safe and effective operation of the ship.

My journey to becoming a Navigation Officer started in September 2012 at British Columbia's Institute of Technology (BCIT), in North Vancouver, BC, Canada. For my first semester of school I was given a general overview of the various aspects of shipping and navigation. After 6 months I was off to join my first vessel *Americas Spirit* in Whiffen Head, Newfoundland. I remember the day clearly, it was cold and grey outside, I was driven to an oil terminal that felt like it was in the middle of nowhere and was greeted by a 260m long Aframax conventional oil tanker. Walking up the gangway I felt like I was going to be sick. A flood of emotions were running through my body – excitement, nervousness, anticipation, and sadness for knowing the fact I would be away from the people and things I loved back at home. After 5 months of sailing up and down the East coast of North America it was time to come back home for another school term at BCIT. My second school term was much more valuable. I had some sailing experience under my

belt I could better relate and understand topics. Before I knew it I was back out to sea, this time on *Matterhorn Spirit*.

I joined her on May 7, 2014 in Brofjorden, Sweden. I was onboard her for 7 months sailing all over the North Sea and Baltic. I was on a mission, a mission to get as close to that officer role as possible as this was to be my last time sailing as a Cadet. I was expected to act like an officer and that is what I did. Even while disposing of garbage when in port, while the wind was blowing nasty food juices in my face, in my mind I was there acting as the responsible officer, overseeing the operation and making sure the garbage was disposed in accordance with statutory and terminal requirements. On December 13, 2014 I returned home to Victoria BC, Canada, where I began my final school term at BCIT as a Cadet. It was a



very important year for me. At the end of the 7 month long semester I would face my oral examination to become an officer. I studied hard, I put in the effort, and on July 20, 2015 I officially became a Navigating Officer. I stepped out of that Transport Canada building and on to the brick road of Government Street with a piece of paper in my hand, a piece of paper that said I could legally hold a navigation watch on any size of vessel anywhere in the world.

I was ready to go. I couldn't wait to get out to sea as a Navigation Officer. I waited for what felt like forever, until finally one day I received notice from my company. It wasn't the news I wanted to hear but a few days later I was on a plane to Manila in the Philippines to do some company specific training. I was there for little over 3 weeks doing mostly simulator





courses. They put us through the paces, navigating through some of the busiest shipping lanes in the world in all kinds of conditions. It may have been all simulated, but it felt very real, and I left the Philippines with even more confidence than before. I waited a few more weeks at home and then one day it came. I was to join *Galway Spirit* as she was passing through the Strait of Gibraltar en route to Rotterdam. A few days later on November 13<sup>th</sup>, 2015 just before midnight, I found myself on a small tugboat heading towards *Galway Spirit*. As I was sitting in the rolling tugboat a flood of emotions washed over me much like my first time joining a vessel on *Americas Spirit*. I was excited to finally be joining a vessel with a proper stripe on my epaulets, but with that stipe came a whole lot more responsibilities and expectations. This is what I had been striving for since the beginning, but as we approached closer and closer to *Galway Spirit*, the pitted feeling in my stomach became stronger and stronger. I signed the Articles of Agreement early morning November 14th and I was officially a Third Officer.

The responsibility I was looking for hit me hard. In my handover I read my duties and responsibilities. The list seemed to never end. My primary duty and responsibility was to hold a navigation watch while out at sea and a cargo watch while in port from 8-12 am and pm. But that was only the tip of the iceberg, my secondary duties extended from port papers and ships administration to keeping inventory and organization of flags and day shapes. I remember my first navigational watch as an Officer. It was on that same day that I joined *Galway Spirit*. Saturday's for a Third Officer are generally a busy day and not the ideal conditions for a first time Officer. Emergency systems are tested, alarms going off everywhere, fire zones needing to be isolated. It was the quickest 4 hours of my life. After watch there is still always much work to do. I had to familiarize myself with all my secondary duties, all of the ship's computer systems and where I could find the information I needed to do my jobs. I remember feeling completely overwhelmed, like I was never going to remember everything and wouldn't be able to do my job. But with time these tasks became almost second nature.

Standing watch on the bridge felt right, it was what I had been striving for. I would find myself smiling from ear to ear for no apparent reason, just because of the fact that I was happy to be doing what I loved. For my first few days as a Navigation Officer I simply just had to follow the passage plan, maintain a good lookout, actively assessing the situation,



using all available means to determine the vessel was safe. There were a few overtaking/being-overtaken situations but nothing exciting, as we steamed north off the coast of Portugal and across the Bay of Biscay. But soon we were in the English Channel and transiting through the Dover Straights where my knowledge and skills were really to be put to the test. I remember my first collision avoidance situation where I was required to take substantial action. Leaving the port of Rotterdam, following the Traffic Separation System (TSS), I detected a vessel crossing from starboard in the

approaching junction. The Closest Point of Approach (CPA) was zero. We were steaming half ahead, there was a vessel overtaking me on my starboard side. I weighed out my options; reduce speed further, alter boldly to starboard to pass astern - but after accessing the situation I determined that I would be able to pass at a safe CPA ahead by increasing to full ahead and a slight alteration of course to port. This I saw to be the safest option due to the overtaking vessel on my starboard quarter and the large amount of vessels astern of me that would also have to overtake in a narrow traffic lane if I had reduced speed drastically. It was when I put that telegraph to full ahead and the rudder to port that my heart really started racing, as the situation unfolded and I saw that I was passing safely ahead I could relax and I left the bridge that evening with a boost in confidence.

Throughout the next few months my experience and skills grew as a Navigation Officer. I was presented with different situations in which I had to apply the different rules of the collision regulations. I became more and more familiar with the ship's equipment on board. I'll always remember the first time I called the Master to the bridge. Our ship was awaiting orders, steaming dead slow into the heavy wind and seas making about 1.5knots over the ground. Two vessels were approaching from my port side; one was overtaking the other, both with zero CPA. Rainsqualls were passing every 5 minutes or so, at one moment visibility could be over 10 miles and the next less than 2. As the two vessels approached it became clear the one would pass ahead of me but the other continued to maintain her course and speed. I waited until she was at a 2.5-mile range and when I could see she still hadn't taken any action, I called the Captain. We both contemplated our options, we couldn't reduce speed as we were already barely moving, increasing speed would reduce the CPA with the vessel passing ahead, an alteration of course to starboard and running parallel to the two vessels seemed the best option but would still result in a close guarter situation. I was standing by the horn and just about to blast 5 short when finally she altered her course to starboard and it became clear she was going to pass astern. Both vessels passed our ship at the exactly same time, one ahead and one astern, CPA both less than a mile. That situation got my heart pumping and made my palms sweat. When I looked over at the Captain I couldn't read any emotion on his face. No sign of nervousness, but also not too relaxed, just calm and collected, the face of years and years of experience. The situation that day was a perfect example of the importance of calling the Master in good time whenever in doubt. While holding watch you are the Master's representative, the responsibility of the safe navigation of the ship is with you, but overall the responsibility is with the Master, he will be the first to be questioned and convicted in the event of a collision or accident. That is why he has four gold bars on his epaulettes; that is why his title is "Master", that is why he holds the ultimate responsibility.



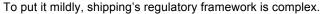


I signed off Galway Spirit on March 10, 2016. I had successfully completed my first contract as an Officer. I still had a lot to learn and experience to gain but for the first time since my journey started I felt a complete sense of pride for what I had accomplished. After all, I was a Navigation Officer, sailing on the vast ocean, responsible for keeping my crew, my ship, and the oceans I love safe. Dylan Fowler AMNI

### Four inefficient shipping regulations that no one talks about. Do you know exactly how many regulations and laws govern today's shipping?

For an industry that's about 5,000 years old and moves approximately 90% of the world's goods, while navigating some of the most challenging environments on international waters, there are bound to be a bunch of rules. In fact, there are so many, it's almost impossible to give an exact number.

Shipping was amongst the very first industries to adopt the widely implemented international safety standards. Because of its inherent global nature, the International Maritime Organization (IMO) has developed a comprehensive global maritime safety regulations framework. But that's obviously not all. There's SOLAS, MARPOL, COLREG, LOADLINE AND ISPS, which just cover ship operations. Then there's STWC and ILO 147 for the seafarers, and ISM dealing with the shipping companies. On top of this, there are numerous local and port regulations to follow, certifications to obtain, taxation frameworks, cybersecurity guidelines, along with many other maritime instruments concerning more specific issues that are also in force worldwide.



But what makes this landscape sometimes unnecessarily cumbersome are obsolete rules and requirements that have lost their relevance with time. "We're using AI on ships while



forcing them to have a bell on board. In between these two generations of technologies, there's a huge gap that's getting too big to manage," says Hendrik Bußhoff, Head of Product Autonomy Solutions, Wärtsilä Voyage. "With every technological advancement, we keep adding new regulations to the books without retiring or at least reviewing the old

"Many of these old conditions of operation are mindlessly enforced, and unnecessary solutions are engineered to incorporate them in modern automated systems merely to check a box". - Hendrik Bußhoff, Head of Product Autonomy Solutions, Wärtsilä Voyage

Here are four such examples of obsolete regulations and redundant systems that shipping could sail without.

The Foghorn: In reduced and low visibility conditions, as per rules, a ship is supposed to sound the horn to signal its presence to other ships. In return, other ships are required to keep a lookout 'by sight and hearing'. On most ships, when you go on the bridge wing, you hear your auxiliary engines, engine room fans and possibly the noise of a few hundred reefer containers. There's hardly a chance of hearing another ship, not to mention determining its accurate bearing and range. So why do we have this requirement? That's because back in the days, you had little choice but to listen. And it did work well when you were on a sailing ship or older three-island designs where the bridge is separate from the engine. But today, it's a different scenario. You no longer have to depend on hearing other ships to be aware of their presence or sound the foghorn to make them aware of yours. We now have a rich set of technology choices to solve this archaic problem that are much better and more accurate than honking the horn or ringing the bells and gongs.

Unmanned engine rooms are a good example of similar progression. Original regulations required an engine room watchkeeper to utilise their senses of hearing, sight, smell and touch. But when we substituted human watchkeeping with 'unmanned' technological solutions, we didn't have to substitute the senses of touch and smell. "That's because, 50 years ago, someone was brave enough to say it doesn't make sense anymore, given all the technological advancements. Take the example of smell, for instance: The original purpose behind this requirement was to ensure that the whole ship doesn't go up in flames. But today we are better off with a contemporary fire detection system than trying to sniff out smoke. So, we decided to get rid of the 'smell' part of the regulation. And, thus, in engine rooms, we have advanced a little further than we have on the bridge," points out Bußhoff.

Logbooks and Noon Reports: There are many digital ways today to quickly and efficiently record data. Yet, the golden standard to date is writing things down. This makes the information neither searchable nor can it be structured or unified. Similarly, like everyone else, ships start their days at midnight and yet are still required to file noon reports. "Noon reports made sense when navigation was based on stars, and around noon the sun offered a convenient opportunity to calculate the vessel's position. We definitely no longer depend on the sun to determine the ship's position and yet continue to obsess with noon reports," says Bußhoff. "Ships are generally not even required to carry sextants anymore. So, even if you remembered how to use it, your noon position often is just out of reach nowadays."

The Magnetic Compass: Lots of time and money is spent on adjusting and operationally monitoring the deviation of the magnetic compass. However, what used to be a tool of immense value on wooden ships, now delivers questionable results on today's ship made of steel. As we know, steel corrupts the core alignment of the compass that's based on Earth's magnetic field. And it doesn't get any better when you have thousands of containers made of, well, steel again. Meaning, the compass has to be reconfigured during every port call as every loading and unloading





operation disrupts your careful adjustment. And so, what is often perceived as your last navigational resort to bring you home if the lights went out, has every chance of underperforming when it is needed the most. But then again, considering today's systems, your engines most likely also went out with your lights, making having the compass futile again.

But that's not all. "There is a particular failure mode on many new builds connected to the magnetic compass," tells Bußhoff. "Because there is a requirement to have the compass visible on the steering station, many ships have a periscope-like duct, pointing upwards. This open duct catches not only light but often rainwater, which finds its way down, dripping directly on instruments, damaging them and often triggering the same short-circuit against which the magnetic compass is immune to." Thus, the question here is: Does the compass still solve a real problem onboard? Or is it just another nugatory remnant from shipping's evolutionary past, only delivering a perceived sense of safety?

**Numerous Certificates to sail:** To give an example, we simulated an inland voyage carrying grain from Nakskov in Denmark to Salzgitter, a small port about 200 kilometres south of Hamburg, Germany. The journey starts somewhere in the Baltic Sea, and we travel down Germany's inland river system. To complete this single journey, it requires six different operator qualifications and certifications along with expert knowledge of the German language. Starting with the standard deep-sea certificates of competence to the different pilot exemptions certificates and separate river licenses along with a Class A general inland waterways license, it can take about ten years of training to get there. In short, no one person can be expected to have all these skill sets alone. So, typically a vessel would have to have multiple crewmembers on board to be able to navigate this small stretch or spend a handsome amount on getting special pilots' assistance at each junction.

The bigger problem with such an arrangement is that all these qualifications and pilot exemption certificates are then tied to resources onboard a specific ship, in a particular area.

Instead, if the operations were carried out by a remotely monitored vessel, there won't be a need to have six different specialists onboard anymore. Having the right competencies available in a single remote-control centre, and used only when they are needed, would both suffice and optimise the process. This way, the same bunch of experts, who are no more tied to a particular vessel, can be shuffled to manage multiple ships in a fleet as, when and where their specialised skill sets are required.

This will not only cut costs and ease operations but also help tackle any plausible crew shortages. Having niche specialisations among operators will also make training easier and faster. "Instead of spending ten years to obtain multiple licenses and certifications to operate one vessel, a person can operate multiple vessels on a particular stretch with a specialised but much shorter training," says Bußhoff.

Shipping is full of such examples where we're expected to have modern automation work around rather ancient rules, which merely exist because "things have always been done that way". They were the smart solutions in their age and time, but technology has advanced by leaps and bound since. And there are much more intelligent, precise and safer systems to take care of the same functions. But we have not bothered to get rid of some of these archaic rules and replace them with something more contemporary.

The sea is an unforgiving medium where safety always comes first. Bad weather, wind and waves make for a dangerous environment that challenges the ingenuity of engineers, designers, and navigators. That won't change when the balance between humans and technology shifts in favour of technology. Plus, as the push for decarbonisation becomes a dominant driver, the introduction of new technologies will bring new ways of working and demand a new mindset from everyone involved in shipping.

But before we start building ships with new technology, maybe, it's time to re-evaluate a bit, think which regulations and guidelines are still relevant and make sense, and which ones have become outdated.

The answer is not to simply keep adding new regulations, but also to analyse the old rules and their fundamentals – ask why they exist in the first place, and then implement intelligently – revise where needed, and get rid of the unnecessary.

After all, regulations are not a checklist with ticks alongside. They are the most logical measures taken to govern the most rudimentary principle of the maritime industry – ensuring safety at all times. Source: Wärtsilä Oyj. January 20<sup>th</sup> 2022

http://www.bunkerportsnews.com/News.aspx?ElementId=6ef57ea4-9191-430b-bec1-f1e191845371

**Green Flash:** The green flash, or green ray, is the sparkling green colouring, startlingly sudden and brilliant, of the last speck of the sun as it sinks in cloudless and exceptionally clear air, below a distant, sharply defined horizon. The conditions necessary for its observation are most likely to be fulfilled on the ocean, and sailors no doubt see the green flash more frequently than do landlubbers.

At the actual moment of sunset the top sliver of the sun's disc occasionally seems to shoot upwards like a little tongue of green flame. More rarely a similar display is seen at sunrise. It is believed that the ancient





Egyptians were familiar with this phenomenon; it is further reasoned that this is why they assigned the colours green and blue to their semi-circular symbol of the rising and setting sun.



The production of the green flash comes about in the following fashion. Light from the sun is bent a little, or refracted, as it passes through the atmosphere. White light is made up of several colours, of which the human eye can clearly distinguish at least the red, orange, yellow, green, blue and violet. When the atmosphere refracts the light, the red rays are bent least, the orange next least, then the yellow and so on to the violet. Therefore, if the air were perfectly transparent the last tip of the setting sun would lose first the red portion of its light, then the orange and continue in sequence through the rest of the colours, and finally

disappear as a violet star, all in the matter of only a few seconds.

The reason for the appearance of the green ray only at the last moment of the sun's setting is that, when more than a slender rim of the sun is visible, rays coming from different parts of the disc blend in such a way that no separation of colours is noticeable.

The green flash is seldom seen because of the impurities in the air. It is always too dusty to let through from a low sun much of either the violet or the blue light as these colours are weakened most by transmission through the atmosphere. Therefore, the violet flash, or ray, is unknown. Usually the air is so filled with dust and moisture that the disappearing sun, even to the last speck, is reddish, since red is the colour least affected by the air's impurities.

However, when the air to westward is especially clear and dry, and rain therefore unlikely for at least 24 hours, a good deal of green light also comes through from the setting sun. Conditions are then very favourable for the observation of the green flash by a watchful individual.

Thus, a comparatively reliable couplet tells us that: -

Glimpse you e're the green ray, Count the morrow a fine day.

See the green flash at sunset: https://www.youtube.com/watch?v=lwus2nqU0SY

**From the booklet, "Weather and Why"** (Price 15 cents) by R.A. Hornstein, Meteorologist-in-charge, Dominion Public Weather Office, Halifax, N.S. (If you wish to contact him, his phone number is 3-8314).

### **Electric Vehicles and Maritime Transportation - Fire Hazards Identified**

(Note: This article was originally written and submitted to gCaptain prior to the Felicity Ace fire\*\*, the cause of which is not yet known. It has been updated to include commentary on this event and the emerging Grimaldi/Euroferry fire off Corfu in the Mediterranean.)

\*\* Felicity Ace: Read the sad conclusion to its story - <a href="https://gcaptain.com/felicity-ace-sinks-in-atlantic-ocean/?subscriber=true&goal=0">https://gcaptain.com/felicity-ace-sinks-in-atlantic-ocean/?subscriber=true&goal=0</a> f50174ef03-7495b2e134-169937937&mc cid=7495b2e134&mc eid=35ccf165ad

Fire onboard a ship can be catastrophic. Many types of fires have standard firefighting procedures, but innovative installations onboard or different cargoes lead to new risks. One of those emerging risks is in the carriage of electric vehicles (EV) onboard roll-on/roll-off (ro-ro) vessels in particular.

As far back as 2013, the German Federal Ministry of Transport, Building and Urban Development had commissioned a <u>study</u> to determine if the carriage of electric vehicles on ro-pax or ro-ro vessels increased the risk of fire onboard. The conclusion was that the carriage of electrically powered vehicles (BEV and HEV) results in an increased risk of fire. The study additionally addressed fire protection and firefighting procedures including a discussion of additional firefighting measures onboard ro-pax and ro-ro vessels.

"In the event of a lithium ion battery catching fire, it is important to note that such a fire reaches very high temperatures, produces toxic gases and is inextinguishable."





The recommendations from the German BMVBS included:

BEV/HEV and FC vehicles should be transported in special areas (equipped with appropriate detectors, fire-extinguishing equipment and fire-extinguishing agents). In the case of a fire, possibly separation of such vehicles by means of a water wall or mobile partitions (roller blinds).

The awareness of fire-fighting teams should be raised with regard to the dangers arising from BEV/HEV and FC vehicles and their training should be extended accordingly.

In 2016, DNV-GL released a report addressing fires on ro-ro cargo decks. It was not focused on electric vehicles and addressed all factors regarding ro-ro cargo fires in eighteen incidents. The recommendations included:

Quick release of the fixed fire-extinguishing system is important, in particular for open Ro-Ro decks where the window of opportunity may be less than 10 to 15 minutes.

Shift of cargo represents a risk. At least for cargo Ro-Ro and vehicle carriers, improved cargo securing and weather routing should be considered.

A policy on how to handle alternative-fuel vehicles should be developed, if applicable (know-how on correct firefighting strategy/challenges), although this is not identified as a major risk (it is an unknown risk).

DNV-GL's identification of "shift of cargo represents a risk" is particularly pertinent to the carriage of electric vehicles. The diagram above from the Journal of The Electrochemical Society looks at four conditions that can lead to lithium ion battery (LIB) thermal runaway – one of which is mechanical abuse. In other words, simply having lashings fail in a seaway with a cargo of EV shifting could lead to a thermal runaway and ensuing fire.

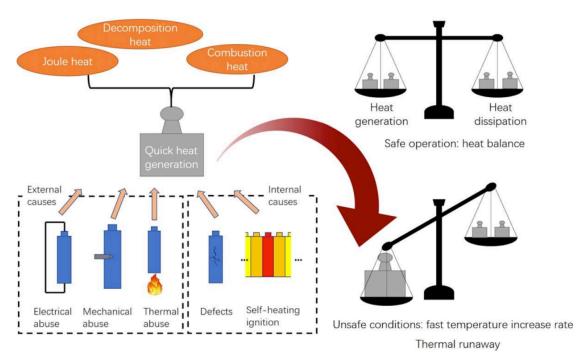


Figure 1. The 4 known abuse conditions that can lead to LIB thermal runaway and the imbalance between heat generation and heat dissipation.

As EV become more common, they are increasingly being carried by ocean transportation. While not specifically implicated in a number of recent ro-ro fires, the hazards of batteries in general have been identified by the U.S. Coast Guard in Marine Safety Alert 06-20 Recognizing Fire Hazards & Proper Cargo Stowage on RO-RO Vessels and various protection and indemnity organizations including the Britannia and UK P&I clubs.

The source of the USCG MSA and the P&I club articles are mainly accident reports from fires that have occurred. Much like the DNV-GL report of 2016, recent accident reports are used to gain insights as to how similar incidents might be prevented. Unfortunately, access to these reports is not a guarantee as it is at the discretion of the flag state investigating. As noted in the main picture above, the accident report for *Sincerity Ace* was submitted to IMO a year ago, yet is not publicly available from the flag state – Panama. It has been surmised that this ro-ro cargo fire – along with five fatalities – might be EV-related.









Closely parked car stowage on a PCC.

Other information on how EV and LIB fires might be fought can be found by going outside the maritime industry. The National Fire Protection Association (NFPA) has produced an Electric Vehicle Emergency Field Guide that addresses EV emergency response for first responders ashore. Unfortunately, many of the procedures and recommendations might not be applicable at sea due to stowage and space.

There is continued interest in EV and LIB fires in transportation. The U.S. Transportation Research Board has funded a study for 2022 noting, "Lithium-ion battery fire risks are currently undermanaged in transit operations." More immediately, the Ship Operations Cooperative Program (SOCP) hosted a presentation by Captain Jim Staples of Ocean River LLC, "Understanding the Risk when Carrying Electric Vehicles on a Vessel," on February 17th.

- General construction of lithium-ion batteries
- Hazards of construction whether exclusively electric or hybrid vehicles
- Overview of recent ro-ro fires and challenges of EV firefighting
- Identified quick reference for emergency response to EV fires from manufacturers and NFPA
- Current best practices including thermal cameras for early identification of thermal runaway and appropriate PPE for shipboard first responders Captain Staples also called for the release of the accident report from Sincerity Ace, opining that the incident might have been related to an EV fire. Meanwhile, Felicity Ace continues to burn in the Atlantic Ocean to the Southwest of the Azores. The Portuguese Navy is standing by after rescuing the crew of Felicity Ace and salvors

are said to be enroute. If salvors are able to contain the fire and bring the vessel to port, we can hope there are lessons learned that will be made public.

Another ongoing ro-ro fire is on a Grimaldi/Euroferry vessel operating between the Greek port of Igoumenitsa to Brindisi, in eastern Italy. Catching fire at 9:30 PM (EST) on 17 February, one crewmember has been sent ashore with injuries, two persons are reported trapped on the car deck, with all other passengers and crew reported as safe. Initial word is that the fire started on the cargo decks and the video below shows extensive damage to trucks stowed on the upper

Grimaldi is no stranger to fires onboard ro-ros with Grande Europa having a fire onboard in the Mediterranean in 2019 and Grande America burning and then sinking in the Bay of Biscay in 2020. After these two events, Grimaldi stated, ....with reference to rolling freight, the Grimaldi Group requests that there be more controls on car batteries, which often cause short-circuits on board vessels, as well as in port terminals."

Let's be safe out there!

https://gcaptain.com/electric-vehicles-and-maritime-transportation-fire-hazardsidentified/?subscriber=true&goal=0 f50174ef03-9897a835e6-139824785&mc cid=9897a835e6&mc eid=d64cebee38

Hyundai Glovis Enhances Fire Safety for Car Carriers Addressing EVs: Hyundai Glovis, one of the largest operators of car carriers, reports that it is taking several pre-emptive steps to increase fire safety and the fire fighting capacity aboard its vessels in response to emerging trends in the vehicle transport industry. The company is adding equipment to its vessels as well as the current monitoring and fire suppression systems, along with training protocols to address the risks including the growth of electric

Electric vehicles are widely recognized as a growing challenge for vehicle transporters. While the cause of the recent fire aboard a competitor's vessel the Felicity Ace is unknown, experts believed the quantity of electric vehicles likely contributed to the fire that resulted in the loss of the vessel as well an estimated \$400 million in vehicles. At the time, the fire fighting teams highlighted the need for special equipment due to the presence of electric vehicles.

Operating a fleet of 90 ships, Hyundai Glovis estimated that it transported about 250,000 electric vehicles last year with that number expected to continue to grow. They highlight that an electrical vehicle is heavier than other vehicles. They have decided that electric vehicles will be loaded on the lower decks of the ship as much as possible. They note that these areas on the vessels have the most consistent temperature and that the safety of the vessel can be enhanced while contributing to the efficiency of fire suppression.

The company developed a specialized fire response and prevention system working with Korea Register of Shipping. The research focused on the specialized management for vehicle fires recognizing that the volume of finished vehicles and especially electric vehicles is increasing. The plan includes pre-emptive





measures as well as the introduction of new equipment that will be added to all the line's vessels within this vear.

Hyundai Glovis recognizes that one of the biggest dangers is chain ignition when the vehicles are packed closely aboard a car carrier. Further, if an electric vehicle catches fire appropriate equipment is required due to the differences in the vehicles and the steps required to suppress the fire versus internal combustion

engine vehicles.

Developed in Norway in 2014, fire covers have proven to be effective in preventing the spread of fire between vehicles even when the vehicles are close to each other in confined spaces such as the deck of a car carrier. The covers are a non-combustible material made of specially coated fire-resistant fibres

Among the measures being taken is a specially coated fire cover that can be pulled over a vehicle to limit oxygen inflow and stop the spread

The cover is spread over a burning vehicle to prevent oxygen inflow helping to smother the fire while also blocking heat and smoke. Recognizing the varying size of vehicles loaded aboard its vessels, Hyundai

Glovis reports it will be deploying fire extinguisher covers that can cover even a large SUV.

Fire crews are also being equipped with a water mist lance with a metal frame. The device has a long nozzle that can spray water or chemicals directly onto a fire and can penetrate enclosed spaces including for example doors. The tube, which is more than a metre in length, can be inserted into a car or used to reach under a vehicle.

The vessels are also fitted with CCTV on each deck of the cargo hold to check on the condition of loaded vehicles and heat and smoke detectors. Systems monitor temperature throughout the cargo areas. Fire crews are also outfitted with flame-retardant, heat-resistant fire evacuation masks that have filters that can purify toxic gases.

An "Accident, Fire Prevention, and Emergency" manual was also prepared. Compulsory response training will be conducted at least twice a year. Hyundai Glovis says that it believes these pre-emptive measures will prepare the operations to address the changes taking place in the industry and ensure the safety of seafarers.

PUBLISHED APR 1, 2022 BY THE MARITIME EXECUTIVE

https://www.maritime-executive.com/article/hyundai-glovis-enhances-fire-safety-for-car-carriers-addressing-evs

<u>Not the smoothest of handovers</u> – As a number of P&O Ferries vessels remain under detention Michael Grey explains why the process of changing crews has proved considerably more difficult than management seemed to anticipate.

The tanker was sitting in a Caribbean repair yard, but was more or less ready for sea. The owner had been enthused by the blandishments of a crewing manager and was replacing the tried and tested complement aboard the ship with a new and rather more economic crew. It was not a complicated ship and no problems were anticipated.

Ten days later and the ship was still lying alongside, as the Technical Superintendent attempted, with extreme difficulties, to instruct the new crew in their duties. They appeared to speak no known language, could not understand any of the manuals or any of the ship's signage. They had taken days to start the main engine, but the Superintendent, he reported, had no confidence that they would ever be able to stop it again, once they had taken the ship to sea. They were bewildered by the ship's piping and pumping arrangements and it did not take a great deal of imagination to imagine the nightmare of huge pollution claims.

The owner, after several long and increasingly fraught telephone calls, had decided that enough was enough, sent the new crew packing and despatched a planeload of competent people from his usual source. His lesson, he confided to me some time later, had been learned, but it had been a painful and expensive exercise.

Related: P&O Ferries cancel Dover - Calais services over Easter weekend





This event was some years ago, but it swam back into the memory when reading about the problems P&O Ferries are having in convincing the UK Maritime & Coastguard Agency regulators that their ships should be permitted to begin trading after the company elected to replace 800 of their regular employees with cheaper contract staff. Nobody ought to be surprised at this situation; it is one thing to affect a smooth handover of a

few crewmembers aboard a relatively standard sort of ship – it is something else to replace almost the whole crew of large, complex and sophisticated ro-pax ferries.

Related: Update: Second P&O ferry detained in UK

The regulators, both those from the ships' flag states and the UK's port state control, have quite clear responsibilities to ensure that the crews are capable of safely operating the ships and their systems. These are vessels designed to carry large numbers of passengers across busy sealanes and much attention will be paid to the crews' ability



to cope with every sort of emergency that might arise. The inspectors will need to be satisfied of the crew's speed of reaction and their familiarity with fire safety, life saving and other emergency systems, some of which will not be "standard" fittings as might be used elsewhere.

There will be two crews appointed to each of the large ferries, along with their reliefs, all of whom must demonstrate their competency. And while Deck Officers and Engineers must be able to demonstrate their specialist skills and familiarity with their ship's equipment, large hotel staffs must be able to show that they can properly react to emergencies, with crowd control and facility with LSA equipment, with a reasonable degree of interoperability. In short, it is a big deal and one that ought not to be rushed, despite the urgency doubtless being expressed by those pointing to the huge queues of holiday and commercial traffic converging on the ferry ports. It is also worth repeating the fact that the problems now being experienced by the company are self-inflicted. One might think that somebody in the decision-making chain within the ferry company might have realised that on legal, political and practical grounds, there was going to be no smooth handover, but the start of something of a regulatory obstacle course.

The world has moved on from the days when a ship's crew could be signed on in the shipping office and take the vessel to sea a few hours later. Maybe somebody, living in the past, had assured the bean-counters that it was no more complex an exercise than changing a crew by helicopter off the Cape, with a half-hour handover (and that caused the odd problem). But big, passenger carrying ferries and their precious cargoes deserve something different and a less cavalier approach to

crewing. P&O Ferries seem to be learning this, the hard way, as the regulators fulfil their considerable duties.

Seatrade Maritime News

Michael Grey | Apr 19, 2022. https://www.seatrade-maritime.com/opinions-analysis/not-smoothest-handover

**The origin of seafaring words:** Now let us look at some of the things below decks that have to do with creature comforts. Can you imagine wedging yourself into a wobbly hammock for the night? The hammock is said to have been introduced on to ships by Columbus, who saw that natives in the Caribbean slung them between trees.

So the word comes from the Caribbean 'hamorca' via Spanish. Dutch and German speakers tried to make it sound sensible in their languages and came up with the equivalent of 'hanging mat' (hangmat or hangematte), which is quite clever.

Hammocks were hung only 14 inches apart. When ladies used to join sailors on board, the officer rousing the men in the morning would shout, "show a leg". If the leg was hairy the owner had to get up and work. The call remained in use even after 1840, at which time all women were banned.

The next thing is to inspect the mess. The word itself actually means a dish or a course of a meal, as in the biblical story of Esau who sold his inheritance to his brother Jacob for a mess of potage. Then it came to mean a set of four people who were served together at a feast. Shakespeare used it just to mean a set of four things. Now it isn't so much the people but the place.

All this may not sound very posh. 'Posh' of course is supposed to come from the initial letters of 'Port Out Starboard Home', meaning that the cabins on the shady side of the ship on its journey to and from the east would be cooler and hence more expensive.

Now experts have ruined our innocent pleasure in this notion by saying there is no evidence for it, but have not put forward any better theory.

Fairplay Magazine. March 7<sup>th</sup> 1991.





Richard Smith submitted the following in response to the February 2022 article in Seatimes about the dredger *Corozal*: In contrast to the *Corozal*, this is the *D'Artagnan* that was used during the dredging operations for the recent canal expansion.

D'Artagnan has а 6,000-kilowatt cutter, which is recognized as most powerful in the world. The dredger has a 28,200-kilowatt total installed power, which is enough to supply energy to 40,000 housing units.



### How big are oil tankers in the Salish Sea?

Summary highlight of Clear Seas' Vessel Traffic in Canada's Pacific Region analysis

Average Small Tanker 180 m and 40,000 DWT



Tankers smaller than 50,000 DWT are currently the most common tankers calling at Canadian ports.

Aframax Tanker 245 m and 120,000 DWT



Aframax tankers are the largest tankers allowed in Burrard Inlet.

Suezmax Tanker 287 m and 193,000 DWT



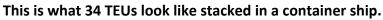
The largest tankers entering the Salish Sea are Suezmax vessels bringing oil from Alaska to refineries in Puget Sound.

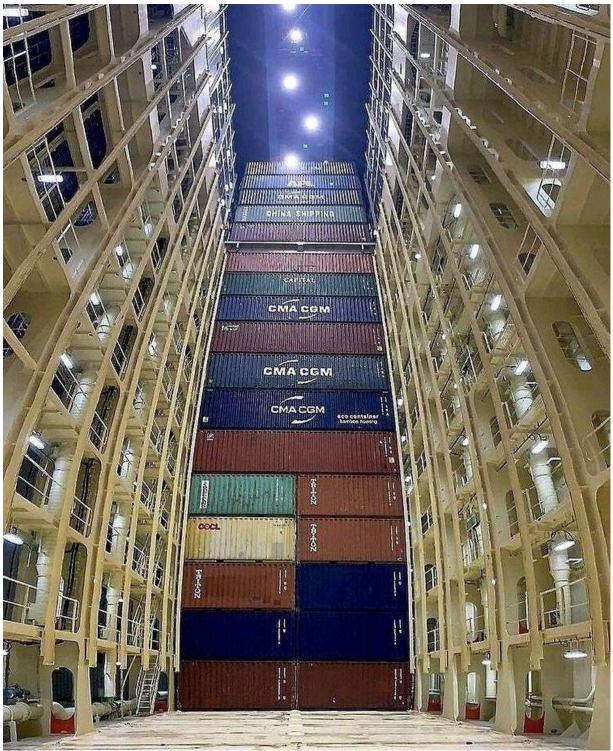
New Guide demystifying the rules about the management and disposal of ship waste

https://mailchi.mp/clearseas.org/microsite-ssw-announcement-en?e=106d68328a









It's an impressive picture but what catches my attention is the lighting. On my first ship, we had to turn off the funnel floodlights if the Master wanted to use his kettle. They shared the same fuse.





**Backing for nuclear-powered ships grows:** Support is growing for Mikal Bøe-led Core Power, a high profile developer of nuclear propulsion for merchant ships.

First launched in 2018, Core Power today can boast 49 shipping companies as backers of the UK firm, a grouping made up of owners, operators and managers who, combined, control more than 4,000 ships.

James Marshall-led <u>Berge Bulk</u> and Tim Hartnoll-chaired <u>X-Press Feeders</u> are among the owners *Splash* has been able to confirm as backers for the project, which has made plenty of headlines over the past year.

Core Power, together with Bill Gates-chaired TerraPower, Southern Company and French atomic group Orano, is developing a modular molten salt reactor to propel ships and provide energy for manufacturing synthetic green fuels from hydrogen. The first prototype reactor is due to start trials in 2025. The Maritime and Coastguard Agency (MCA) in the UK published a consultation document last August seeking views on the proposed Merchant Shipping (Nuclear Ships) Regulations. These regulations would transpose chapter VIII in the annex to the International



Convention for Safety of Life at Sea, 1974 (SOLAS) into UK law. A total of 11 of the 14 submissions now support nuclear powered ships.

In light of the responses received, the UK government does not intend to significantly amend the prepared draft legislation, which has been drafted to transpose SOLAS Chapter VIII into UK law. It is intended to make the regulations and bring them into force by the autumn of this year.

"There is an appetite for nuclear ships over the next 10 years with growing interest for nuclear propulsion for large ocean-going vessels," the government-controlled MCA stated in an update on its website this month, with the UK increasingly looking to position itself as a centre of expertise for atomic propulsion.

The UK will face strong competition from the US and Asia in the development of nuclear-powered merchant ships. There is strong lobbying in Washington DC to bring America's existing navy knowledge of nuclear power to merchant shipping, with US climate envoy John Kerry among fans of this technology.

In South Korea shipbuilding major Samsung Heavy Industries has teamed up with the Korea Atomic Energy Research Institute while Seaborg Technologies in Denmark is building floating power barges, and the Canadians are working with NuScale to develop marine power stations.

The Russians, meanwhile, already have the market domestically and are now touting a huge new next generation nuclear-powered icebreaker as further proof of their maritime atomic expertise. Not to be left out, Chinese scientists are developing their own atomic propulsion technologies for both merchant marine and offshore facilities.

https://splash247.com/backing-for-nuclear-powered-ships-grows/ March 28th 2022

# Foss, TOTE, NorthStar Energy gift \$500,000 to new Maritime High School. The money will support start-up costs for the first four years of the school and allow the school to grow to 400 students by



**2025:** Saltchuk companies Foss Maritime, TOTE, and NorthStar Energy have together pledged \$500,000 to support the launch and ongoing sustainability of Maritime High School, an innovative, project-based learning school within the Highline Public School District. In addition, Saltchuk company co-founder Mike Garvey pledged an additional \$50,000.

Maritime High School opened its doors this fall to a class of 35 students. The money will support start-up costs for the first four years of the school and allow the school to grow to 400 students by 2025. Graduates will be equally prepared to enter the maritime workforce or continue their education at a two or four-year college.

"It is critical that we begin to pivot our attention, as an industry, to developing the next generation of workers," said <u>Jason</u> Childs, President & CEO of Saltchuk Marine. "For me as a





leader, I'm a strong believer that education and awareness are key to young people creating their futures. I'm from Minnesota. I didn't even see the ocean until I was 16 or 17. We have kids here who have never been out on the water, who don't understand how crucial logistics are to our country and our economy—especially here on the West Coast. Maritime is core. It's our hope that students develop a passion for maritime and an understanding of the excellent career opportunities that are available at Saltchuk Marine companies and in the maritime industry."

Saltchuk's strong endorsement of the high school mirrors its belief that exposure and education work to address workforce shortages, the aging population of the workforce, and increasing overall diversity in maritime, as its sister school, Highline's Aviation High School, works to address similar challenges in the aviation industry.

"I think that today, many students are given a binary choice: go to college and have a successful career, or don't go to college and be a failure—that's a false choice," Childs said. "There are a variety of jobs that don't require a college degree that pay six figures. So, it's exciting to show students a path to an exciting life out on the water that also pays well, a career path you can work your way up, and where there are a lot of opportunities for people who don't necessarily view themselves as lifelong students."

And those students are thriving, explained Jake Beattie, executive director at the Northwest Maritime Center.

"Beyond the powerful education, support from pillars of the industry like Saltchuk and Lake Union Drydock Company are bellwether signs to the current and future students—and families—of Maritime High School that their learning is seen and valued by the industry waiting to welcome them as they graduate."

"Saltchuk as a company really values people," Childs concluded. "We're investing in the next generation of employees. Whether they want to work for us or other employers, we're excited to support kids who want to excel in this industry." Maritime High School, a public school for students with maritime interests, is currently accepting applications from incoming ninth and tenth graders for the 2022-23 school year. While the school is located within the Highline Public School District, admission is open to all students in Washington State. Additional information about Maritime High School, including details on how to apply, can be found here.

https://gcaptain.com/foss-tote-northstar-energy-gift-500000-to-new-maritime-high-school/?subscriber=true&goal=0\_f50174ef03-4f99602839-169937937&mc\_cid=4f99602839&mc\_eid=35ccf165ad

Watch on YouTube https://www.youtube.com/watch?v=7okGl80Lo-w

#### Can you Imagine Marine? New report reveals biggest barriers to recruiting Next Gen workforce to Canadian

marine sector: A new survey of Canadian youth confirms that the biggest barrier to recruit new candidates is a lack of knowledge of the diversity of jobs available in the marine sector — with 67% of those in the millennial and Gen Z generations believing the industry is hard to get into and 60% saying they can only think of a few types of jobs.

The findings of the National Youth Report: Marine and the Next Generation, which was commissioned by the

Canadian Marine Industry Foundation (CMIF) and conducted by Abacus Data, reinforce the need for the public and private sector to accelerate awareness efforts in the face of a looming labour and skills crisis.

Canada's marine sector includes over 1.000 employers both in the private and public sectors — and employs more than 100,000 skilled workers and professionals across Canada. The diverse sector offers job seekers exciting opportunities in everything from shipping and logistics to ports to marine services to infrastructure to government

However, maritime workforce recruitment and retention has

become an increasing challenge with positions going unfilled both on ships and ashore — a problem expected to only get worse.

Transport Canada estimates that 43% of the marine transportation workforce (onboard commercial vessels and ferries) is expected to retire over the next 10 years. There is also the need to replace workers who voluntarily leave the marine sector or who move to shore-based positions. It is projected that there will be a need to hire approximately 19,000 new seafarers over the next 10 years. And that doesn't include marine-related job opportunities in the public sector or in ports or other shore-based marine operations.

A first of its kind, the CMIF's National Youth Report details the current landscape of marine sector career awareness and value in young people (aged 14 to 29) – serving as a baseline to track against over time. The report also indicates:

1. Overall, the marine industry is in a good starting position. Many young people think highly of the industry, especially when it comes to aligning with their own values.





- 2. Just under half of young people are open to considering a career in the marine industry, 20% have thought about a career in the industry before today and are at least open to pursuing this interest.
- 3. Compared to other industries, 69% of respondents believe that the marine industry provides interesting and fulfilling work; 67% believe it offers good pay and benefits; 56% believe that it values corporate/environmental responsibility; and 57% believe there are lots of opportunities to advance.
- 4. Millennials and those in Generation Z place a lot of importance on pay and stability. But pay and security are not their only priorities. Young people are also concerned about flexibility and finding a job that affords them a life that includes more than work. They want a job that affords a work-life balance every day, not just generous vacations, and they want a job that seamlessly fits into their goals, values, and interests.
- 5. The biggest barrier for the sector is a lack of knowledge on the diversity of jobs offered in the marine sector. 40% of respondents had "never heard anything about it." However, among this 40%, a third still say they would consider a career in the industry.

The National Youth Report research, which was sponsored by the Chamber of Marine Commerce, is part of the CMIF's Imagine Marine communication campaign. Through this campaign, the CMIF combines dynamic storytelling and targeted outreach to deliver marine's substantial career offerings to students, young adults and other new candidates. The CMIF's efforts address the marine sector's near- and long-term talent development objectives by creating campaigns to grow awareness and providing information and resources necessary to those interested in taking the first steps toward a rewarding future in marine.

#### To view the complete report, please click here.

#### Quotes

"Labour shortages are a critical problem for many of our members. While today's report confirms that we have a lot of work to do as a sector to boost youth awareness of the wide variety of exciting and well-paying careers on offer — I'm personally encouraged by the positive perceptions young Canadians have of the marine sector as being both economically important and environmentally and socially responsible. This is an important first step to appeal to a generation that cares deeply about its ability to make a difference, and wants to feel challenged and fulfilled while on the job."

Bruce Burrows, President and CEO, Chamber of Marine Commerce

"The Canadian Coast Guard shares many of its goals and core values with this survey's young respondents from protecting our environment, to enabling the economy, ensuring our health and safety, and representing our society and culture within our workforce. The findings in this report underscore the importance of conveying that the Coast Guard is an inclusive organization, that offers a vast range of challenging and rewarding careers — ready to help develop future maritime teams and leaders."

Mario Pelletier, Commissioner, Canadian Coast Guard

"Excellent employment conditions, cutting-edge technology, an environment of life-long learning – all ensure that choosing a livelihood in the marine Industry is a satisfying and rewarding career choice. Educational institutions pave the way to success in all marine industry career paths. Awareness, as this report shows, is our biggest challenge as well as our biggest opportunity. The results in this report will help us communicate better, grow awareness, and be better able to provide information and resources to young Canadians through the CMIF's Imagine Marine campaign. Educational Institutions, like Georgian College, are proud to support the next generation of Canadians seeking a rewarding career in the marine industry."

Thomas Aulinger, Chair of the CMIF and Director, Centre for Marine Training and Research at Georgian College

About the Canadian Marine Industry Foundation (CMIF)

The Canadian Marine Industry Foundation (CMIF) brings together private sector employers, unions, educational institutions, as well as key public sector partners with maritime responsibilities, to jointly promote careers in Canada's marine sector. Through its Imagine Marine campaign, the CMIF is reaching out to deliver the message of job opportunities in the marine sector for young people, second career seekers, new citizens and equity-deserving groups. Imagine Marine is present on social media and has a dedicated website which serves as a career resource to inform, direct and support future employees with academic, financial aid and career information. imagine-marine.ca <a href="https://gcaptain.com/can-you-imagine-marine-new-report-reveals-biggest-barriers-to-recruiting-next-gen-workforce-to-canadian-marine-sector/?subscriber=true&goal=0\_f50174ef03-6be832381e-169937937&mc\_cid=6be832381e&mc\_eid=35ccf165ad</a> April 7<sup>th</sup> 2022





# HIGH SCHOOL MARITIME EDUCATION -LAWHILL NEWSLETTER – TERM1/22

SOMMSA (The Society of Master Mariners of South Africa) and a number of its members remain active supporters of high school maritime education via their involvement in the STS Lawhill Maritime Centre (www.lawhill.org), which provides three maritime subjects at Grade 10 to Grade 12 level.

#### Please take a moment to read Lawhill's latest newsletter on the link posted below.

The Lawhill programme is currently calling for applications for high potential Grade 9 students from across South Africa to join the programme next year. Please help them spread the word by making schools and youth organisations in your area aware of this life-changing opportunity.

Lawhill is also looking for additional bursary sponsors for a number of its current Grade 10s and Will Welcome support from SOMMSA members who can help it invest in a future maritime generation. 18A Tax Certificates will be provided in return for sponsorships.

### RECORD BREAKING RESULTS ... AND A NEW GROUP OF GRADE 10s JOIN OUR PROGRAMME

Our Matric Class of 2021 beat the odds and two years' of disrupted schooling to deliver impressive academic results, including a record number of 58 subject distinctions. Congratulations to all our students, as well as their sponsors and mentors who helped make these achievements possible! Seventeen of our 21 full-time boarders achieved distinctions, as did a number of our non-boarding maritime students.

Our top achiever was Enkosi Ntame, a Sean Day Scholar and SAMSA bursary holder. He achieved nine subject distinctions and is currently studying Medicine at UCT. Another top achiever was Aviwe March, a SAMSA bursary holder, who achieved six distinctions. Bagging four distinctions each were Siphosethu Bistol (SAMSA bursary holder) and Namport students, Lendicha Kuvare and Terthu Malumani. All the aforementioned students, as well as nine other students, are currently enrolled at university, while several others are completing learnerships with leading shipping companies (including Maersk Line, MSC, Ocean Network Express and Sturrock Grindrod Maritime).

#### Read the entire newsletter here:

https://mailchi.mp/0251339d44fd/newsletter-record-breaking-results-new-maritime-talent-and-more

Breakbulk ships to ease coffee shipping bottlenecks. Following in the footsteps of The Coca-Cola Company and likes of Walmart, Home Depot and Ikea, the coffee industry has turned to breakbulk vessels to ship supplies to the United States. As Bloomberg reports, a breakbulk vessel named Eagle has set off from Lampung in Sumatra and is heading for New Orleans.

According to the vessel's AIS data, it is sailing in the North Atlantic Ocean after winding its way through the Mediterranean, and is just off the coast of The Bahamas. The vessel is transporting robusta coffee bags stacked in its holds for supply-starved roasters in the United States. The experiment has come about as coffee producers, roasters and traders are looking to bridge the global container shortage that is causing a major backlog.

Speaking to Bloomberg, Manish Dhawan, senior vice president for coffee trading company Olam Food Ingredients, said, "At the point when we were seeing shipments getting delayed, customers really struggling to get their supplies in time and getting access to coffee, that's when we started to look at it." Olam Food Ingredients is the company that chartered the *Eagle* for its delivery.

However, it is not the first time such a shipment has been done. Dhawan noted that it has been carried out in the late 80s or early 90s, but the latest shipment is certainly a new frontier for the company. Several factors, including the high price or limited availability of containers for coffee shipping, have pushed industry players to turn to old school shipping without containers. Eagle has already completed a similar delivery of arabica coffee from Brazil to Bremen in Germany.





And the Santos Port in Brazil is dispatching a number of other breakbulk vessels to Europe. World's top arabica cooperative Cooxupe has already shipped 108,000 bags of coffee to Europe on a vessel in early December. The company's commercial director Lucio Dias told Bloomberg two more similar shipments are scheduled for January.

"We made an experiment as some clients have been adjusting to this new shipping modality to solve shipments bottlenecks," Dias said in a telephone interview. "But it's a complex operation."

Dias added that shipping coffee the old-school way comes with its set of challenges, as some ports are equipped to lift bags from vessel's hold while others are not. Cooxupe's first loading operation was extended to five days from the planned two due to rain and such delays can also affect costs of these shipments.

With Dias expecting the logistic bottlenecks to continue at least in the first six months of the year, many are looking to breakbulk vessels as a means to alleviate the bottlenecks in regions such as Vietnam, the biggest producer of robusta coffee.

Dec 28 2021

https://www.projectcargojournal.com/shipping/2021/12/28/breakbulk-ships-to-ease-coffee-shipping-bottlenecks/?gdpr=accept





The Maritime and Port Authority of Singapore just commissioned a Comic to promote awareness of the maritime sector to the youth of Singapore. It is called "The little wonders of Maritime Singapore"

https://cckcomic2022.blogspot.com/2022/04/welcome-to-little-known-wonders-of.html?m=1

https://www.mpa.gov.sg/web/portal/home

Your Society. Do you wish to make a financial contribution to the Society? Is it time for you to renew your membership? The Annual Membership Fee remains at \$40.00 but any amount that you can donate will be greatly appreciated.

Please make your cheque payable to the NPESC and mail it to: -

Nautical Professional Education Society of Canada, 3648 Glenview Crescent, North Vancouver, B.C. V7R 3E8

### Thank you.

Contributions to the NPESC are tax deductible. Charitable Registration # 1039049-20



Articles or comments for inclusion in future editions of Seatimes can be sent to me at whitknit@telus.net David Whitaker FNI

