



# SEATIMES

The Newsletter of the Nautical Professional Education Society of Canada  
(Society founded in 1995 by the British Columbia Branch of The Nautical Institute)



May 2021

## Captain what do you do?

*When asked the ultimate question by a charming lady during a dinner party in Malta, Captain Kinghorn explained that his ship had brought this butter they were eating from New Zealand. But the question made him think – what exactly does a Captain do?*

From Ships Monthly June 2002 <https://shipsmonthly.com/>

The simple answer is that the Master of a ship, who in a merchant ship is also the Captain, must do everything he possibly can to keep his ship properly afloat and out of trouble. This includes keeping the vessel sufficiently provided with men, victuals, fuel and stores. A ship's Master is the vessel owner's representative. He is charged with full responsibility for the vessel in his command along with the crew, passenger, cargo and everything else in her. As the Marine Superintendent promoting me to Master in 1971 advised: "Anybody can get into trouble – it is the smart fellow who gets his ship out of it!"

**Steering an even course:** Safe navigation at sea is the prime consideration. Before Global Positioning Systems (GPS) came into general use 20 years ago, providing continuous latitude and longitude, speed, courses to steer and even your Estimated Time of Arrival (ETA), it was necessary to establish a daily regime of taking sights. These included stars at dawn and dusk, sun in the forenoon for longitude, then at noon for latitude, as well as the moon and planets when available, all depending on a clear horizon of course. The prudent Master does not neglect the taking of sights even today, if only to keep himself or herself, and the ship's officers, in practice should the electronics ever fail.

Good navigation consists not only of keeping the vessel on the course the Master and Second Mate have plotted, but also includes keeping well clear of rocks, reefs, shoals, hidden hazards and other shipping. The 'rule of the road' at sea has been well established for over 100 years, yet it is amazing how often it is carelessly ignored. Avoiding collisions at sea depends on keeping a good lookout all round at all times. It is no good a lookout only staring straight ahead out of the wheelhouse windows when a fast container ship, with her deck stacked high with boxes, comes hurtling up from astern. More collisions at sea occur during overtaking than any other way. Often this is because those on the bridge of the overtaking ship do not appreciate how fast they are overtaking the ship ahead.

Embarking and disembarking a pilot presents its own dangers. Before approaching the area where the pilot embarks, the ship will have reduced speed and contact will have been established with him by VHF telephone. With the pilot ladder safely rigged over the lee side, the Master on the bridge will be watching the pilot's launch bob over the waves towards the ladder. Taking care not to get too close to those fishing boats, or that outbound tanker approaching the pilot vessel from fine on your starboard bow, the Master conns his ship into a position where wind and waves are coming from the other side, making a patch of calm water at the foot of the ladder.

In today's meagre manning the Master will now be alone on the bridge with the wheelman until the pilot and the officer come puffing up the steep ladders. At this point it is all too easy to relax vigilance, but a good Master must remember that the pilot has not yet had time to check his bearings and may be unfamiliar with this type of ship. The pilot will then ask the Master to write the vessel's draught, length, breadth and tonnage, as well as the name of the ship's agent, in his book. This information allows the pilot to eventually collect his fee.

**The Greatest Hazard at Sea:** A fire can start so easily, the result of an electrical fault, a carelessly dropped cigarette, a spark from the funnel or even the spontaneous combustion of cargo can be the cause. Some

types of New Zealand wool are liable to spontaneous combustion. Cotton is particularly prone to self-ignition, as is coal. On seeing the first wisp of smoke it is essential to raise the alarm, then bring all available fire extinguishing appliances to bear to extinguish the blaze. Time is of the essence here, perhaps more than at any other time on board a ship. The loss by fire of the troopship *Empire Windrush*\* was attributed to the fact that all the fire pumps were in the engine room, which was the seat of the blaze. Nowadays an emergency fire pump situated outside the engine room is required.

\* See: <https://www.wrecksite.eu/wreck.aspx?58372> and <https://www.youtube.com/watch?v=CNzO1UTGYcY>

**Realistic Lifeboat Drills:** To familiarize the crew with the potential dangers of fire and give them practice in dealing with those perils, it is essential to conduct regular, realistic drills, using the emergency pump as the sole means of pumping seawater to extinguish the "fire". It is usual to combine such drills with Boat Drill. This is so that the ship may be safely abandoned if all attempts at firefighting fail. The Boat Drill signal, given on alarm bells and siren, musters the crew to their stations, wearing properly tied life jackets. A roll call is made as quickly as possible and the lifeboats are lowered to the deck and the forward-leading rope painters have been run out and secured tight and the boats plugs checked that they are in. The ship's engines have been put on stand-by in case speed reduction is necessary. The Master will have put a man on the ship's wheel and the autopilot will have been turned off.

As this is only an exercise there is plenty of time. The Chief Officer goes round the ship to ensure everyone knows how to set off the various types of fire extinguisher and launch the inflatable liferafts as well as the lifeboats. It is ever came to the real thing, on a dark, wet, stormy night with the ship on fire from stem to stern and rolling in a heavy sea, we hope the same calm efficiency would prevail. Practice does indeed make perfect, instilling skill and self-confidence in an ability to preserve the ship, her cargo and lives. When there are lifeboats on each side of the ship, a spirit of friendly rivalry to complete the exercise is no bad thing. With the modern free-fall lifeboat angled over the stern, a boat drill is more theoretical than practical.

During the occasional spells at anchor off a port waiting to be called in to berth, opportunity may be taken to lower a lifeboat and take it for a spin, using oars and sails when carried, as well as the engine. This makes for an even more realistic practice. A good idea at such times is to position a man aft holding a lifebuoy with a long line attached, ready to float it downtide to a boat whose engine has mysteriously conked out. All good practice!

**Master's Inspection:** After those 'Board of Trade' sports, a Master would conduct Master's Inspection. Here the Captain and Chief Officer, and Chief Engineer if he wishes or can spare the time, inspects accommodation and storerooms from top to bottom, flashlight in hand, spectacles at the ready. Dirt is



LEFT: A cartoon by the author depicting the inspection of the ship's store rooms and what can be sometimes be encountered crawling out of rice sacks!

looked for in unlikely places, especially in washrooms and galleys. On a well-run, well-disciplined ship, everything is usually presented for such inspections in immaculate condition. The cook will show the Master round the storerooms and they even discuss the provisions required at the next port. If a sack of rice is found to contain weevils, it must be dumped outside and a note made in the Official Logbook. One Chinese cook I knew hated to dump anything and considered a few weevils as 'extra protein sir, no problem!'

After such inspection, we would usually adjourn to

the Chief Engineer's cabin to discuss the job over a beer.

A ship's Master also has a certain amount of paperwork to do. In the past this would have been the ship's Purser's responsibility, but now the Captain does it. No great hardship as this is sometimes interesting work. A profusion of Port Papers must be completed to satisfy the bureaucratic needs of the officials who will be meeting the ship at her next port. One authority in the Far East still requires the old fashioned declaration of – 'How many monkeys aboard?' – 'How many barrels of gunpowder for self defence?' – 'Names of ships you have spoken to on passage?'

**Dealing with Radio Messages:** Calculating wages for all hands towards the end of the month is another job, as is attending to any radio messages Sparks has placed on my desk. Unlike many Masters these days, I was fortunate never to have to sail without a Radio Officer. Every three days I composed a message for Sparks to transmit to head office. They needed to know the ship's noon position, average speed, fuel

consumption and how much fuel and fresh water was still on board, along with our ETA at the next destination. In some ports the Master must accept that the shore authorities will do all they can to make him break the rules. They will sometimes offer bribes or resort to threats when bribes prove in vain. All this effort is to feather their personal nests at the expense of the vessel's owners. The honest ship's Master must keep one step ahead to outwit these villains.

Right: The author and his Second Officer take a midday sight from the *Golden Wonder's* bridge wing.

It is an international offence to overload a ship. The Master is held to blame and fined heavily if this happens. The ship's officers must keep a careful check on the draught when the vessel is loading a full deadweight cargo. On one occasion in Auckland, I was the Chief Officer when we were loading a large cargo for the eastern United States. Frozen meat provided most of the deadweight but a lot of general cargo had to be loaded as well. This extra cargo, which consisted of bales of sheepskins, wool, drums of tallow and so on, had the Third Mate and me climbing down and up the rope ladders rigged overside port and starboard amidships to measure the distance remaining between the waterline and the loadline on the ship's side. This was to check how much more cargo could be safely brought aboard the ship.



All this sounds pretty routine, even boring, but a Master can have some scary moments when commanding a ship. Vessels approaching the port of Colombo are usually ordered by the pilot office on VHF to approach no closer than one mile off the southern entrance, where a pilot will board. However, in a southwest monsoon, with a heavy swell rolling in at night with rain, spray and mist causing poor visibility, a ship is sometimes asked to approach closer to make the pilot's boarding less hazardous.

**A Near Miss at Colombo:** One wild, wet June night in 1992, when approaching Colombo in *Golden Bear*, I was asked by the pilot office to come closer to the port's entrance. Half a mile off the breakwater we spotted the pilot boat through binoculars. Her red sidelight and white-over-red masthead light were visible through the light rain a couple of cables off. Suddenly the wind changed direction and backed round 180 degrees as dense fog descended. The by-now invisible pilot asked over the VHF for our ladder to be transferred to the other side. Glancing at the radar I realised with horror that, with the engines stopped, we were being swept towards the breakwater at great speed and we were now only a cable's length off.

"Half astern – No – Full astern", I ordered, suddenly weak at the knees as the lighthouse, silhouetted under its beaming lantern, loomed ahead frighteningly huge and close. Down below, the Chief Engineer responded magnificently and in no time the six-cylinder engine was thrusting astern at maximum revolutions, checking and then revering our headlong rush towards disaster. To my intense relief the lighthouse faded into the gloom just as the pilot cutter reappeared, clearly amazed to see us hurtling past him, going full astern. The VHF crackled life and a very shocked Pilot asked, "Captain, what do you DO?"

**Ships**  
MONTHLY

To learn more about the history of the *Empire Windrush* see: -

[http://www.stbenedicts.cheshire.sch.uk/uploads/6/7/9/2/6792245/t2-h-4940-the-windrush-reading-comprehension-activity-\\_ver\\_3.pdf](http://www.stbenedicts.cheshire.sch.uk/uploads/6/7/9/2/6792245/t2-h-4940-the-windrush-reading-comprehension-activity-_ver_3.pdf)

**The Mask of Cassandra (Forum):** Nearly a year into the wretched pandemic and it is difficult to determine any real cheer amid the winter snow. Some fifty odd flag states have queued up to declare their allegiance to the Neptune concord that defines seafarers as "key workers" but it is clearly a lot easier to sign the bit of paper than to implement its provisions and let these essential folk freely come and go. We perhaps should feel a bit happier that we now live in a PDT (post Donald Trump) era, but as I read President Biden's prescription for mandatory mask wearing aboard all commercial vessels, it didn't seem that an age of sweetness and light had dawned. It seemed an odd thing to be decreeing, so very early in his presidency, beset with so many national and international problems, with the US Coast Guard now tasked to ensure compliance. But then, fear of disease being imported from over the seas has pretty well become internationally entrenched and largely accounts for the less than charitable treatment of seafarers during this past miserable year. So we shouldn't necessarily suggest that the US is being any more prescriptive, now that mask refusnik Trump is out of the way, than any other country.

**Maritime**  
Magazine



From the accounts of pilots and others who board ships regularly, seafarers have been disciplined wearers of Covid-protective clothing when they are encountered. At the same time one should not forget that for a seafarer a ship is his or her home away from home and the authorities maybe ought not to be too intrusive about the wearing of masks, once the ship is free from the land. That is especially the case when they find it so hard to get to their real homes and have to overstay their contracts by weeks or months. You would like to think that they could remove them to eat or drink, and sleep unencumbered. I would hope this might be made clear in the small print of the President's requirements and the Coast Guard's more detailed prescriptions.



Mind you, as the pandemic progresses and the variants become more various, the protocols become more bizarre. Just today I was reading some scientist was suggesting to counter a new especially virulent strain, we should wear two masks at once. Even if this prevents the bugs either coming or going, surely it would gradually bend one's ears forward, so that after another year of this nonsense, the whole population would be bat-winged. And would two masks be enough, as the fast-mutating virus procreates?

There was an article by a working pilot describing how the pleasure of his working day was diminished by all this mask-wearing and lack of human contact. A smile and a handshake on boarding and leaving a ship, along with an offer of a cup of coffee – all things of the past, but how much to be regretted. It's the same for everyone, but mumbling through a mask and trying

to transmit expression with one's eyes is a measure of our misery, as we obey our governments' dictates and recall our lost freedoms.

Perhaps most depressing is the way that the slightest prospect of better things ahead is so immediately and firmly sat on by the scientists who have been grotesquely empowered by the pandemic to rule our lives. Some cheerful news about the "roll-out" of vaccines is instantly refuted by some laboratory rat who bustles forward in his white coat to tell us that our misery must continue regardless, probably for years ahead, according to some gloom relishing scientific Cassandra on the radio the other day.

You must take your amusement where you can find it. Mine is in observing the degree of "social distancing" that is observed on our pavements when taking our permitted dose of daily exercise. Of an age, and carrying a stick, I find that there are those who will leap into the gutter or even cross the road rather than invade my two metre "separation zone". One exceptionally zealous mask-wearer jumped into the road with such alacrity that he was nearly flattened by a truck. Had the driver been less alert, he would have been able to comfort himself, with his dying breath, that his Covid precautions had been obeyed to the last.



Michael Grey

- Formerly Editor of Lloyd's List, Michael Grey is widely regarded as the senior statesman of world shipping journalism. This most recent pithy commentary on a maritime theme is published with the kind permission of Maritime Advocate Online.

Photo: Captain Jean Cloutier. Feb 17 2021. <https://maritimemag.com/en/the-mask-of-cassandra-forum/>

**Recently I saw reference to a "Kamsarmax" vessel.** I had never seen that before so I had to Google it. Up came a site for a financial institution – **Yieldstreet** – that begins: -

***The most common types of cargo ships, explained:*** According to the International Maritime Organization (IMO), 90% of the world's cargo is transported by sea. Transporting goods via cargo ships is generally considered to be the most cost-effective method with ships carrying everything from food to electronics to oil, and is a critical aspect of international trade finance.



*Marine finance is a subset of equipment finance, while Yieldstreet's marine offerings comprise a wide array of dry bulk, tanker, and container vessels with varied carrying capacities measured in what is known as Deadweight Tonnage (DWT). Let's take a closer look at the different types of vessels and sizes.*

It then defines: Dry Bulk carriers, Handysize, Handymax, Supramax, Ultramax, Panamax, Kamsarmax, Post-Panamax, Capesize, Handysize, MR (Medium Range), LR1 (Long Range 1), Aframax, Suezmax and VLCC (Very Large Crude Carriers). It then described four categories of container vessels: Feeder, Intermediate, Neo-Panamax and Post Panamax.

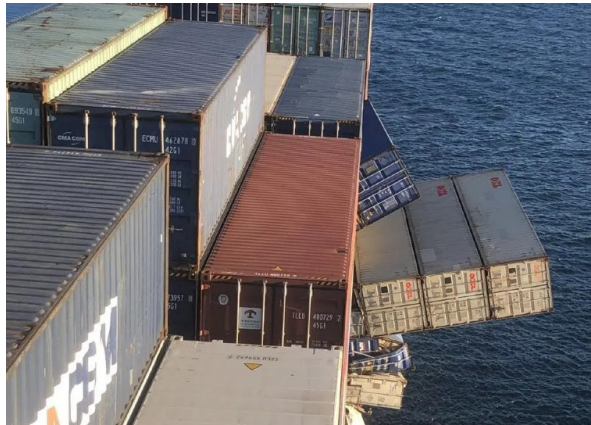
You can read all of those definitions at: <https://www.yieldstreet.com/resources/article/types-of-cargo-ships>

**So, what is a Kamsarmax?** These vessels are medium-sized with a carrying capacity between 80,000 and 85,000 DWT. These are specialized in that they designed to fit both through the Panama Canal, as well as fit within Port Kamsar in West Africa.

**That prompted another question – where is Port Kamsar?** It is in Guinea, West Africa, on the east bank of the Rio Nunez in the northern portion of the country's coastline. The port is approx. 7 n.m. from open sea. Formerly known as Kakande, Port Kamsar serves a number of bauxite mines in the region. It looks like a busy place.  
<https://www.findaport.com/port-of-port-kamsar>



**Questions for the carriers:** What is going on in the North Pacific, as scarcely a week goes by without stacks of containers hurling themselves into the sea as ships roll extravagantly in the heavy weather they seem to be encountering? Is the weather any worse than might be expected during the winter season in this notoriously fickle route between Asia and North America?



It doesn't take much for those who incline to climate activism to attribute the current spate of accidents to what they believe is increasingly violent weather, but it might be that there are more prosaic causes. Could there be something of an "operational" reason, in that there is increased pressure for Masters to maintain their schedules, with diversions well clear of threatening weather disapproved of by management?

In such a climate, Masters will maintain their course and speed and press on, when prudence might suggest otherwise. It could be that external weather routing agencies hired to give advice to ships also feel pressure upon them not to be "too cautious" in their recommendations.

We know, for instance, that the general reduction of speed on passage, designed to save fuel (and the environment), has increased the pressure to speed up the processes elsewhere,

such as in port waters and at terminals, to make up what has been lost. This, of course has not been helped by the advent of the latest very large ships, with their huge container exchange demands, upon the terminals. Operators and charterers "squeeze where they can," and no Master can be unaware of such pressure.

It would be a very bold commentator who would suggest that the pressure to get a ship off the berth and away to sea in the shortest possible time, accommodating late deliveries of urgent boxes, does not contribute to short cuts in the lashing regime. Masters who know what they are talking about have commented on the pressures in final load ports playing fast and loose with cargo plans, with heavier boxes ending up higher than they ought to be.

It also seems obvious that with ships carrying far more on deck than under deck, with stack heights ever higher, the stresses upon the lashing arrangements are going to be far greater. It might be suggested that lashing arrangements have been properly verified by class and the authorities, but do these really take into account the sorts of forces that will arise, should there be an almost instantaneous loss of stability in the event of a parametric rolling event? And has there ever been a proper investigation of the forces acting upon the container stack of such extreme heights in a seaway – in real terms – rather than those estimated in a computer program?

It might be asked that if a certain arrangement is deemed safe and practical when containers are six high on deck, what additional arrangements are put in place when the stack is ten high? Are the lashing rods and turnbuckles suitably strengthened for such increased forces that may act on a stack? The answer, one might suggest, is that the equipment is already as heavy as a well-muscled lashing operative can reasonably lift and cannot, at a reasonable cost, be made any stronger.

It is, fundamentally, the same sort of equipment that was fashioned half a century ago to deal with far smaller deck loads. **It is also worth noting that ships' crews, who might have been available to check on the lashing tensions during the passage, have halved in number while the ships have quadrupled and more in capacity.**

It is notable that there is something of a dichotomy in the attitudes of different carriers to the use of lashing bridges, which, of course are part of the ship structure. Some carriers now carry lashing bridges on their largest and newest ships, to enable containers six high to be secured in this fashion, leaving only three or four to be fastened on top with

twistlocks. Others make do with bridges that are considerably lower, several of the ships that have experienced serious losses being of this type.

**It may not be a coincidence that the period in which we have seen the most spectacular stack collapses has been one in which the carriers have been struggling to meet demand for eastbound trans-Pacific slots.**

Following the onset of the pandemic, trade fell away and sailings were cancelled, but for the last several months, it has sharply rebounded and loadings have been arguably heavier than ever. If a stack is going to collapse for whatever reasons (and there are many of them) it is more likely to happen if the boxes are heavier, than if they are more lightly loaded.

The suggestion that ships ought to be less heavily laden in areas of expected heavy weather on a seasonal basis might seem to be common sense, but is unlikely to commend itself to those who operate these monsters. They will continue to point out the statistical likelihood of such incidents when compared with the numbers of boxes carried. It is an argument that may well resonate rather less if the accidents continue, or, in the worst possible case, a ship is lost.

<https://www.bairdmaritime.com/ship-world/boxship-world/column-questions-for-the-carriers-grey-power/>

By **Michael Grey** - February 24, 2021



**ISSC 2020 Bursary Awarded to Gurkirat Mangat:** The International Sailors' Society Canada's 2020 Bursary Award has been presented to Gurkirat Mangat, a student entering his second year as a Nautical Sciences Cadet at BCIT Marine Campus. He is a competitive rower who competes at regional and provincial level and is a keen member of the 2277 Seaforth Highlanders Army Cadets having attained the rank of Master Warrant Officer and actively participating in ceremonial military events and fundraisers. During his first sea phase he had a placement onboard the ice class Canadian ship M.V. *Arctic*, which is active in supplying northern communities. During this sea phase he made two voyages to the Arctic including visits to Deception Bay and the opportunity to navigate through ice. His goal is to obtain his Master Mariner certification and to serve on deep-sea ships. The ISSC is glad to be able to provide financial assistance to Gurkirat in achieving his goals and we look forward to hearing about his journey towards his Master Mariner certificate.



**COS Weekly Newsletter - Friday, 5 March 2021**

<https://shippingmatters.ca/issc-2020-bursary-awarded-to-gurkirat-mangat/>



International Sailors' Society Canada  
Supporting services for seafarers away from home



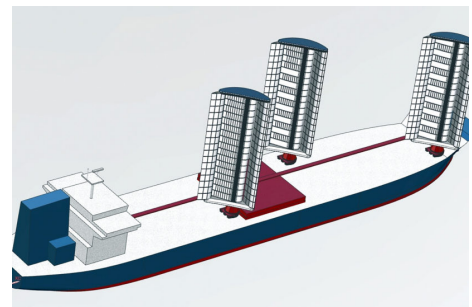
For information about the ISSC go to: <https://intl.sailorssociety.ca/>

### Cargill considering using sails for bulk carriers:

Cargill, one of the world's largest charterers of bulk ships, has partnered with naval architect Deltamarin and engineering specialist BAR Technologies to develop wing sails that could be fitted to the decks of vessels to help reduce fuel usage and CO2 emissions.

The sails under consideration are wing sails made of solid composite material and, although standing as high as 45m (148ft), would be collapsible to navigate cranes or bridges.

The Minnesota-based company, which usually has some 600 vessels under charter at any one time, would like to have the first ship fitted with sails by 2022.



**Report by Jim Shaw. Ships Monthly. March 1<sup>st</sup> 2021**





**'Hovering ship' photographed off Cornish coast by walker: Images of what appears to be a hovering ship have been captured as the result of a rare optical illusion off the coast of England.**

David Morris took a photo of the ship near Falmouth, Cornwall. Mr. Morris said he was "stunned" after capturing the picture while looking out to sea from the hamlet of Gillan

BBC meteorologist David Braine said the "superior mirage" occurred because of "special atmospheric conditions that bend light". He said the illusion is common in the Arctic, but can appear "very rarely" in the UK during winter.

Mr. Braine said: "Superior mirages occur because of the weather condition known as a temperature inversion, where cold air lies close to the sea with warmer air above it.



"Since cold air is denser than warm air, it bends light towards the eyes of someone standing on the ground or on the coast, changing how a distant object appears.

"Superior mirages can produce a few different types of images - here a distant ship appears to float high above its actual position, but sometimes an object below the horizon can become visible."

<https://www.bbc.com/news/uk-england-cornwall-56286719> March 5<sup>th</sup> 2021

**Life aboard circa 1970 and 2010:** Forty decades might be the span of an entire sea career, and without a doubt, the last forty years have seen astonishing changes to life aboard ship.

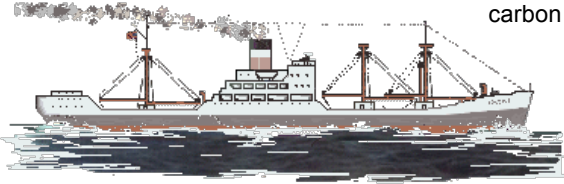
**Where do we start?** In 1970, containerisation was spreading around the world, but there were plenty of general cargo liners still operating. They would have large crews, 60 or 70 in number on a crack, twin engine ship, and their voyages would see them typically spend as long in port as at sea. By comparison, today's container liners are perhaps five or six times more productive, far bigger ships and will have a crew of well under 20. They spend hours, rather than days, alongside.



In 1970, the age of the "supership" had barely started and a large crude oil carrier was about 60-80,000 tons. Then came the Suez Canal closure, a huge demand for oil, and ship sizes rapidly increasing to a quarter million tonnes and above. It is interesting, however, that while the 1970s might have seen a handful of "ultra" large crude carriers of 500,000 tons built, their size made them inflexible and today's big ships in the oil trade are usually less than 300,000 tons. Here again, mechanisation, automation and electronics have reduced the crews of these giants to perhaps one third of those carried forty years ago. The seafarer of 1970 did not have the extraordinary variety of today's ship-types, as vessels of all types were far less specialised than today. Life was perhaps more leisurely aboard ships that were not operated so intensively, and while voyages may have been longer, the larger crews provided for more social life within the confines of a ship. There was far less use of aircraft to speed the crew back home at the end of a tour. In most ships, the crew of 1970 would wait for the voyage itself to end.

In 1970, the deck or seaman officer could trace his technical ancestry back to the days of sail. He (there were very few women at sea) navigated by the sun and stars and on the coast, using visual references and "lead, log and lookout" were

regarded as his prime aids to safe navigation. GPS and integrated electronic navigation lay very much in the future. There was less paperwork, far less communication from the office, less of a regulatory burden. There were no computers and all the electronic assistance of today. Six crew lists meant a lot of sweat and carbon paper!



In the engine room, unmanned machinery spaces were virtually unknown and the air-conditioned and soundproofed engine control rooms of today were still a long way in the future. Engines, it is fair to say, were less reliable.

Crews tended to be sourced from the flag states themselves, and the traditional maritime nations still largely manned their own tonnage with their own countrymen. There were

substantial numbers of seafarers from what we today call the manpower producing nations, but the open registers and multinational manning were far less employed than today. Was it better to be at sea forty years ago? It probably depends who you ask! [https://www.bimco.org/Education/Seascapes/Sea\\_View/Life\\_aboard.aspx](https://www.bimco.org/Education/Seascapes/Sea_View/Life_aboard.aspx)

**How Radar for Merchant Ships Developed. The year was 1942:** Radar technology was developed during the Second World War, but it all took off following a decision that from 1942 all U.S. and British commercial vessels had to be equipped with radar to improve the safety of navigation as well as to enhance the detection of enemy ships.

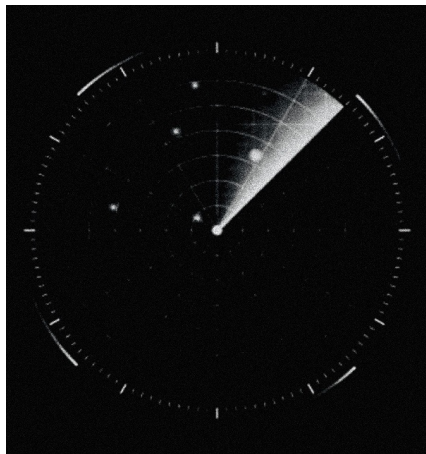
It took quite some time until radar became commonplace on merchant ships of other flags. Radar was expensive and somewhat complicated for navigating officers to use. The presentation was in "relative motion," relative in the way that the targets appeared on the screen, the PPI, to the own vessel, and this was sometimes difficult for the navigators to come to terms with. The officers on watch had to plot other ships with a pen on the PPI or on an accessory, a plotting screen.

To do this, a certain skill was needed because when two ships approached each other the navigators on each ship really had to know what they were doing. The term "radar assisted collision" was coined.

A relative motion radar display was a rather simple device. The coils that provided the sweep and the radar signals were rotating, synchronized with the antenna communicating over slip rings. A micro switch signalled the heading (the course).

The sweep picked up and indicated targets that could be a foreign ship, a lighthouse, a buoy, a mark or just sea clutter. The radars were equipped with electronic tubes, and their logic capacity was limited.

The next step in the development of merchant marine radars was the introduction of "True Motion." In True Motion other ships occur as targets not sailing relative the own ship but instead sailing like the own ship "on a sea chart." To accomplish this, some computer intelligence was needed.



In 1968, Salenrederierna of Sweden purchased its first set of True Motion Radars from Raytheon for installation in the tanker *Sea Sovereign*, the ship that had the first process computer onboard. These radars were equipped with an interesting analog computer that had several servomotors and receivers. This offered a very interesting experience, but its reliability was not very impressive. Once navigators had been trained and got used to the capabilities of "True Motion" it turned out to be a big success.

With fixed coils and some computer intelligence the True Motion Radars became the platform for development of the first "Anti Collision Radars." With fixed coils, vectors could be attached to the targets indicating their course and speed in true motion. This way, the navigator got much better input for decision-making.

Salenrederierna AB as always on the edge of technology acquired the first unit available, also this time from Raytheon and for delivery in 1972.

Automatic plotting had been specified, like rate of turn of targets, but as the antenna rotation was still the standard 25 rotations per minute each target was seen by the radar only every two seconds. Also the antenna beam angle was

the same as in other Raytheon 10cm radars, so the targets appeared rather big. Before digital computer intelligence was available, it was hard to achieve early and accurate detection of foreign targets' course changes.



In the mid-1970s, a project began to examine alternative more advanced screens like those that existed for Air Traffic Control. We at Salenrederierna started a new project, this time also with the Swedish Ship Research Institute. The project was named "Ship Handling," and it covered the layout of the navigation bridge recognizing radar as an essential navigation instrument.

We involved a company specialized in Air Traffic Control, and based on their displays, digital computer technology and experience; we designed the navigation system we wanted to see on our ships. We arranged a ground stabilized picture with lighthouses, buoys, marks and land-based restrictions, and we incorporated a video of the radar picture recorded on a ship sailing through the selected area. We also added fairway restriction lines to appear on the display.

When we were happy with the result, we invited the maritime industry for a demonstration. The reactions were positive, but comments were that "technology is not available at the price you are ready to pay," without thinking that the digital technology at that time was developing at the speed of light.

Soon we got GPS, Electronic Sea charts, ECDIS and finally ECDIS integrated with the radar picture. The layout of the present-day navigation bridge is more advanced than we ever dreamed of in our project 40 years ago.

<https://www.maritime-executive.com/blog/how-radar-for-merchant-ships-developed>

BY LEIF JOHANSSON 02-22-2020 *Leif Johansson was Sr. Project Engineer at Salenrederierna AB 1968-1980.*

The opinions expressed herein are the author's and not necessarily those of **The Maritime Executive**.

### **Chief Customer Officer Cathrine Armour explains how the UKHO has adapted and evolved with the continued digitalisation of the maritime industry:**

The effects of the current world health and economic situation has been undoubtedly challenging for the maritime industry. During this time, building resilience and continuing to deliver for customers and partners across the globe has never been more crucial.

But in the face of such challenges, it has been heartening to see the innovation and creativity fostered by companies to enable them to deliver their essential services with minimal disruption. Playing a central role to this innovation is digitalisation – with new ways of working made possible by digital technology.

For us at the UK Hydrographic Office (UKHO), our essential services include supporting safe navigation for our customers around the world. We do so through our portfolio of ADMIRALTY Maritime Data Solutions, carried on board more than 90% of ships trading internationally, which play a vital role in supporting Safety of Life at Sea (SOLAS). With the transport of goods, materials and resources fundamentally reliant on shipping, enabling the safe passage for crews and cargo throughout the pandemic has been integral to workflows and processes.

But even prior to the current pandemic, the maritime industry has experienced an evolution in technology over the past decade. Digitalisation, in particular, has fundamentally changed the way we operate and deliver information to our customers; similarly, it has transformed the way we support other organisations as they fulfil their own services. We have seen first-hand the benefits of adopting new technology and processes – from greater reliability to improved ways of working – and wholeheartedly welcome the wider adoption and acceleration of digital-first working across the industry.

The benefits of digitalisation can be seen distinctly in the digital transition of navigational charts. For centuries, mariners relied upon paper charts for navigation, but transitioning to digital alternatives has not only improved accuracy, availability and trust, but has also hugely enhanced navigational capabilities. Now, chart users are able to use this same information in new ways, mirroring a trend that is taking place across the entire sector towards smarter, digitised operations.

In line with this, we have adapted our solutions to align with these new ways of working and meet the changing needs of users. As an example, we have evolved our ADMIRALTY Vector Chart Service (AVCS) into a shore-based version: AVCS Online. The platform provides shore-based users and fleet planning teams access to images from more than 16,000 Electronic Navigational Charts (ENCs), updated weekly, to support vessel tracking, voyage planning and for use in accident and emergency incidents.

To ensure our services evolve alongside the industry's needs, we have also developed AVCS Online Web Map Service (WMS), which reflects the demand from shore-based teams for a way to access AVCS from their office. Meeting the needs for navigation-centric, shore-based decision-making, AVCS Online WMS can be developed as a standalone maritime solution or it can be integrated into existing web-based systems as a navigational information layer, optimising on-shore planning and support. The development of web map services utilising marine data, such as AVCS Online WMS, can not only bring greater efficiencies to onshore management, but considerable savings too.

But there is an even wider range of decisions across the industry that can be enabled and informed by marine geospatial data. With the petabytes of data we make available, we believe that this can underpin wider growth and sustainable development of the blue economy. That is why we were proud, at a critical time for our oceans, to be able to convene industry experts to debate on these topics during our [Blue Data Conference last month](#).



Across our sector, we are seeing incredible work being done to promote the use of accurate and trusted marine geospatial data – from key advances in sustainable development and the blue economy, to the steps being taken to enable new data standards and full vessel autonomy. Although diverse in nature, each of these trends reflects the growing acceleration towards harnessing digitalisation in the maritime industry and unlocking the potential of data across wider ocean industries.

By continuing to engage and collaborate with our distributors, partners and the wider maritime community, we believe combining the power of marine geospatial data with technological advancement could be truly transformative for all those that depend on our oceans. As we move forward from the challenges of 2020, and as a new decade dawns, we hope to realise a smarter future for shipping, and safer, more sustainable use of the marine environment.

February 15<sup>th</sup> 2021

<https://gcaptain.com/chief-customer-officer-cathrine-armour-explains-how-the-ukho-has-adapted-and-evolved-with-the-continued-digitalisation-of-the-maritime-industry/>

**Suez Canal blocked by stranded Evergreen boxship:** An ultra large container ship operated by Evergreen ran aground on the Suez Canal, blocking traffic on one of the world's most important waterways.

A picture taken by crew onboard another ship in the canal, the *Maersk Denver*, shows the 2018-built 20,388 teu *Ever Given*, which was en route from Shenzhen to Rotterdam, blocking the canal in both directions after it got stuck near the Red Sea entrance of the canal.



**Most everybody knows about this incident that happened late in March so there is little sense in adding more news here. But I thought you might appreciate the following rhyme. David**

#### EVER DRIVEN

At thirteen knots the vessel moves two hundred thousand tons.  
 Look, look! A sight magnificent! How beautif'ly she runs!  
 The land is on the port side and is on the starboard, too.  
 What distance, then? What is the gap allowed between the two?  
 Why, several hundred feet, Sir! It is wider than the ship!  
 What could go wrong? What query could be on the pilot's lip?  
 What is the room for error? Very little, that's for sure.  
 There's substantial room for terror that she'll end up on the shore.  
 The ship, d'you see, is longer than the gap allowed for passage.  
 Some might suggest some caution, speed reduction and some massage.  
 Some balance of the risks involved. Some due evaluation.  
 Some call for recognition of the laws of navigation.

Stoutly hearted, on she goes! She's slimmer than the gap!  
This needle's eye is useful in the global trading map.  
To question calls of commerce is a question quite banal  
When called upon to navigate a purpose-built canal.  
On, on she goes at thirteen knots, and such a graceful speed.  
Here is mankind's magnificence and lunacy and greed.

On, on she goes and happily. Misfortune then arises.  
Expect the unexpected, as you should, to meet surprises.  
A sudden sheer, for cause unknown, has caught the vessel yet,  
And part of her is stuck and dry which should be clear and wet.  
And how long will it take to free her, grounded at both ends?  
Why, that is for the salvors. What d'you make of it, my friends?

From: The Cachalot (The Newsletter of the Southampton Master Mariners' Club) No. 87. April 2021

### Ever Given and Suez: Why Ships Keep Crashing

<https://www.theatlantic.com/ideas/archive/2021/03/ever-given-and-suez-why-ships-keep-crashing/618436/>

**How Container Ships Got so Big, and Why They're Causing Problems:** The six-day blockage of the Suez Canal by a megaship named *Ever Given* came to an end on March 29 after salvage teams used dredging and tug boats to heave the vessel back into operation.

The capacity of a single vessel to block one of the world's busiest shipping corridors, creating a traffic jam of hundreds of boats, has sparked a debate about the ever-growing size of megaships, with the *Ever Given*'s accident taken as evidence that they've simply become too large.

At 400 metres long, the *Ever Given* is indeed among the largest one percent of the world's fleet. Its high-profile accident will result in a new wave of precautions to make megaships safer, but it will also prompt the shipping industry to reflect on whether such gigantic vessels actually do more harm than good.

**Bigger boats:** Container ships have been increasing in size for decades in order to carry more containers on each voyage. According to analysis from Allianz, the number of 20-foot containers that ships can carry has increased by 1,500 percent over the past 50 years.

One of the most significant size upgrades came when Maersk introduced its E-series in 2006, which can carry around 15,000 containers – doubling the capacity of the previous largest container ships.

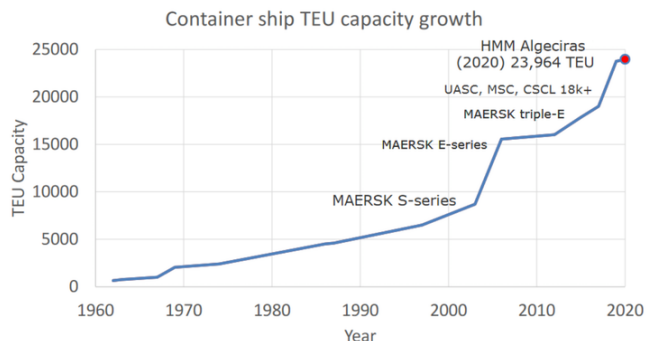
In the 15 years since then, some 133 ships have been launched with a carrying capacity of between 18,000 and 24,000 containers. These are classed as ultra large container vessels – the biggest boats in the world. The *Ever Given* is one such vessel.

**Economies of scale:** Megaships are particularly attractive for international shipping firms because they offer economies of scale: the larger the ship, the more efficient it is at transporting goods.

The *Ever Given* can carry 20,000 containers, while so-called very large container ships can carry a maximum of just 9,000 containers. Using just one vessel instead of two to carry the same load saves fuel, significantly reduces the cost of transportation per container, and reduces the ship's environmental footprint.

When megaships were first introduced, there were doubts about whether they'd actually use their huge carrying capacity. But evidence suggests they do: the *Ever Given* was reportedly carrying more than 18,000 containers when it became wedged in the Suez Canal. Unfortunately, carrying this many containers also has its downsides.

**Megaship downsides:** Operating megaships in confined waterways has already been shown to be difficult. Stacking them high with containers doesn't help: it can lead the vessels to catch the wind and become even harder to control, which may have played a role in the *Ever Given*'s grounding. When caught in a storm on open seas, such ships may





also be more prone to losing containers overboard. According to recent analysis, at least five of the largest class of container ship lost containers during this year's winter storm season in the Pacific. Infrastructure is also struggling to cope with these larger ships. According to a 2015 report, ports, straits and canals require expansion to make way for the new class of megaships. The cost of such projects is immense: the expansion of the Panama Canal in 2016 to accommodate bigger ships ended up costing over \$5 billion. In light of these infrastructural concerns, there may be an economic argument against expanding the number or size of megaships in our seas.



**Size to blame?** An investigation is ongoing into the cause of the *Ever Given's* accident, which should tell us to what extent her size was responsible. Based on previous incidents, strong winds, malfunctioning machinery and even human error could equally be to blame.

My research at the [Maritime Safety Research Centre](#) studies incidents such as this one, trying to understand the hazards and risks that may contribute to maritime accidents. When operational vessels run into trouble, we can learn from them to avoid accidents happening again.

If the *Ever Given's* size was to blame for its accident, you'd expect other megaships, which have been transiting the Suez Canal for years, to have experienced similar difficulties. But a quick check of accident statistics shows that there are only two or three similar incidents involving megaships in the canal per year – out of 19,000 annual crossings.

In most cases, these are minor accidents causing little disruption, and they occur at such a low frequency that the *Ever Given's* accident should not be interpreted as evidence that container ships have become too big.

But seeing as the consequences of the *Ever Given's* accident were so severe, new maritime safety measures will rightly be put in place to avoid a similar incident happening in the future, such as ship design changes, better pilot training, the use of tug boats as canal escorts, autonomous guidance systems, and the widening of waterways.

Regardless of new safety measures, the *Ever Given's* accident may well come to be regarded as a "black swan" event: an unpredictable one-off, rather than a sign of things to come. At present, there's little evidence to suggest that container ships have become too big, or that the downsides of such megaships should result in their being scrapped.

[By Evangelos Boulougouris a professor of naval architecture, ocean and marine engineering at the University of Strathclyde]. This article appears courtesy of "The Conversation".

April 1 2021

<https://www.maritime-executive.com/editorials/op-ed-no-need-to-scrap-megamax-boxships-after-suez-canal-grounding>

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**The Society's First Scholarship Award:** In the year 1999 the Nautical Professional Education Society of Canada endowed some of its funds with the British Columbia Institute of Technology Foundation. The revenue from that was to provide an annual scholarship for New Entrants to the BCIT Marine Campus Programs. Cadets entering that program would make application to the BCIT Foundation who would decide which Cadet, if any, should receive it. The first knowledge we had of the first award was in November of 2001 when we were invited to the Foundation's "Day of Presentations".

So we, Captain Stan Bowles and I, showed up to present the award to Cadet Geoffrey Dunlop. At that time the Foundation's Event Program indicated the value of each award given on that day. Ours was for \$800, which we were pleased to see was higher than the average.

The picture on the right is an extract from an article that Captain Richard Smith submitted to the July 2020 "Seaways".

Subsequently we introduced Geoffrey to the NI at one of the NIBC Board meetings on the ferry. But then we lost track of him because he did not return to BCIT for his second year of the Marine Campus Program. However we learned that he did continue his education at the Marine Institute of Memorial University in St. John's, Newfoundland & Labrador. In the second year of this award, the Foundation determined there was no eligible applicant. In the third year a \$700 Award went to Cadet Megan Sampson but unfortunately she dropped out of the program when she was unable to find employment at sea after her first school year ended.

That was the point where we changed the criteria for the award and made it a "First Year Achievement Award". On the BCIT Foundation website it is listed as follows: -

***BCIT Foundation: Donor Funded Awards (First Year Achievement Awards)***

***NAUTICAL Professional Education Society of Canada Award***

*An endowment was established in 1999 with matching funds from the Government of British Columbia. The annual interest is awarded to a student in the Marine Engineering or Nautical Sciences programs.*

"The program instructors at the Marine Campus select the recipient of this award based upon the student's performance after the first year of the course. The selection is not made until it is known that the student has returned for the second year of the 4-year course".



Changes have been made throughout the years and we now make an annual Award to both a Marine Engineering Cadet and a Nautical Science Cadet. There is insufficient income from that endowment to cover that amount so Society funds are added to provide a respectable grant.

**But we had no knowledge of the progress** made by Geoff Dunlop – until we saw the April 2021 edition of Seaways. In the section "Welcome to New Members" the name Captain Geoffrey Dunlop appeared under the nominations column for Associate Fellow.

The Nautical Institute British Columbia Branch Chairman, Captain Richard Marriott asked Captain Dunlop to contact me, and he did so almost immediately. We then had a reunion, electronically of course, he on his ship, the C.S *I T Intrepid*, somewhere in the Caribbean, and I at home in White Rock, B.C. (During the course of our messaging I learned that it was one of our own, Captain Duke Snider, who had convinced Geoff to attend Memorial University.)

His ship was bound for Florida, and, as I write this on May 2<sup>nd</sup>, they have arrived and are loading cable to repair those broken by the volcano in St. Vincent. And, he sent this photo of himself beside the ship's submersible ROV.

**You can imagine that the Society is well pleased with the success of its First Award Recipient.**

**David Whitaker**



Captain David Whitaker FNI presents Cadet Geoffrey Dunlop with the 2001/2002 BCIT Entrance Award in Nautical Sciences



**NPESC Book Awards have been made recently at Camosun, WMI and BCIT.**  
Photos etc. can be found on the Society's website at <https://npesc.ca/>

**Do you reside in British Columbia?**  
**Are you eligible for the B.C. Recovery Benefit? Did you apply? If not, click on: -**  
<https://www2.gov.bc.ca/gov/content/economic-recovery/recovery-benefit>  
**You have until June 30<sup>th</sup> 2021 to apply**

**The following appeared in the April 1939 edition of "The Cadet",  
"The Official Organ of the HMS Conway School Ship".**

**Bower-Anchoring Demonstration:** On the morning of February 3<sup>rd</sup> 1939 Cadets of Senior 'A' enjoyed a most instructive morning at Vittoria Docks in Liverpool, where Bower anchoring was being practiced aboard the Blue Funnel ship *Tantalus*.



The use of this method has often proved the savings of thousands of pounds in refloating a ship that has run aground. Briefly, the procedure is to run an anchor to seaward and let the strain imposed on the cable by the rising tide haul the ship off.

Aboard the *Tantalus*, the starboard derrick of No.1 hatch was used to lift the 5-ton spare anchor from its place on the fo'c'sle head. The purchase was shackled on to a steel sling passed round the shank of the anchor, and a steadying line was made on to the crown and passed to the drum of the windlass. This line was kept taut until the anchor had been hoisted high enough to clear the after rails; then it was eased gently away until the anchor hung over No.1 hatch. The derrick was then swung round with guy ropes and lowered on to some hatch beams on the starboard side of the fore well deck. Close at hand lay several fathoms of cable and this was shackled on. The Mate unfortunately attempted to hoist the anchor over the side with the purchase still shackled on to the sling round the shank, but quickly realized his mistake and had it shackled to the third link from the anchor ring.



In the water below were two lifeboats, side by side, about two feet apart at the gunwales, across which lay a spar, securely lashed to the thwarts. When the anchor was lowered over the side and immersed until only the ring showed above the surface, the boats were moved up on either side of the cable and the ring was lashed to the spar. When this was done the purchase was slacked away until the boats held the full weight of the anchor, when the block was unshackled.

Beforehand, a light kedge anchor had been run out to seaward and along this line the men in the boats hauled themselves, the cable being paid out from the ship as they went. The Bower anchor was cut away when the desired position was reached and the boats returned to the ship.

Here we had to leave, but if we had stayed we should have seen the cable hauled taut by a winch and made fast, and then as the tide rose, the ship would have been hauled off the imaginary rocks on which she was aground.

We are grateful that such arrangements for us to see these things for ourselves are made, as I am sure we all got a very practical knowledge of the details and difficulties of Bower anchoring, which we would never get in a classroom.

XX

**It is my opinion** that they probably had a copy of "Nicholls Seamanship" beside them, open at Page 333 where Item 5 poses the question, "If aground, how would you carry a bower anchor out?"



The answer is: Between two boats. Lay a kedge and guess warp out in a position suitable for heaving out the boats carrying the bower anchor.

Shackle a good wire on to the spare bower and lower it over the side with one of the forward derricks until the shackle is 3 feet or so above the water. Bring the two boats along, one on each side of it. Make a good spar well fast across the four gunwales about the middle of their length. Lash the shackle of the anchor to the spar making sure that the wire will be *underneath* the spar when the anchor is dropped. Ease the weight gradually from the derrick on to the spar and unhook or unshackle the anchor from the derrick.

Heave the boats out with the guess warp, paying the wire out from on board the ship. When in the right position, cut the lashing and let go the anchor. Heave the boats back with a line paid out from the ship as the boats went away.

This suggests that the *Ever Given* might have been refloated much sooner if: -

- The ship had had a derrick up forward, and
- There had been a copy of Nicholls Seamanship on the bridge, and
- If they had practised this exercise when in port, and
- The ship had not been quite so large.

David

**HL Green completes its maiden voyage:** H Line Shipping's LNG-fuelled bulk carrier, *HL Green*, completed its maiden voyage with the arrival at Port Hedland on Wednesday, 6 January.

*HL Green* is the first LNG-fuelled vessel to dock at the Port of Port Hedland, Pilbara region of Western Australia.

The 180,000-deadweight tonnage is one of two bulk carriers that were built in Korea and launched on 11 December 2020. *HL Green* sets itself apart by the two LNG fuel tanks at the stern that each has a storage capacity of 1,600 cubic metres. It is expected to make about ten round trips annually between Korea and Australia.

As the maritime industry moves to reduce emissions from shipping operations, this event represents another milestone in Pilbara Ports Authority's support of the transfer to LNG fuel. Transitioning iron ore exports from heavy fuel oil vessels to LNG-fuelled vessels will result in reduction of sulphur and particulate matter by 95 per cent and nitrogen emissions by 85 per cent.

January 8, 2021, by Sanja Pekic.

<https://www.offshore-energy.biz/hl-green-completes-its-maiden-voyage/>

The world's first LNG-powered bulk carrier *HL GREEN*. It is 292m long, 45m wide, and has a deck height of 24.8m



**Seafarer heads home, ending four years on abandoned ship:** Seafarer Mohammad Aisha boarded an airplane last night to return to his native Syria, ending a four-year battle where he was forced to live on an abandoned ship in the Suez Canal while the vessel waited to be sold.

Aisha was the Chief Officer onboard the Bahraini-flagged *Aman* for just two months before the vessel was detained by Egyptian authorities due to expired safety equipment certificates.

When the owner abandoned the ship an Egyptian court designated Aisha the vessel's legal guardian – preventing him from leaving the *Aman* until the ship was sold or a replacement guardian found.

The vessel had no power and was covered in insects and rodents. Aisha had to [swim ashore to charge his phone, and for food and water](#).

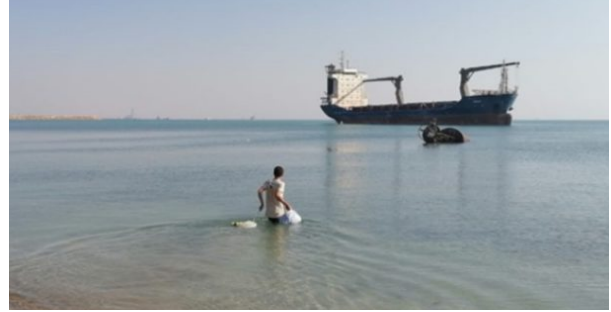
The International Transport Workers' Federation (ITF) sealed the seafarer's freedom last week, after he had become the subject of many mainstream news profiles. The ITF offered an Egyptian court to have one of its union representatives in Egypt take Aisha's place and become the legal guardian of the vessel.

“So much has changed in the last four years. Mohamed’s home in Syria could be unrecognisable. Some of his family died years ago. The delays mean he will never see his mother again, and that is terribly sad. Mohammad has lost four years of his life,” commented ITF Arab World and Iran network coordinator Mohamed Arrachedi.

Arrachedi said Aisha’s case had put an important spotlight on Egypt’s problematic system of legal guardianship in cases of seafarer abandonment, something the ITF is now demanding changes.

Aisha’s case is similar to that of Vehbi Kara, a Turkish Master who was trapped aboard a ship in the Suez Canal for months when an Egyptian court made him legal guardian of the abandoned *Kenan Mete*. ITF advocacy saw Kara released to a nearby hotel, but he remains unable to leave Egypt.

Sam Chambers April 23, 2021 <https://splash247.com/seafarer-heads-home-ending-four-years-on-abandoned-ship/>



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**Here’s an interesting question – and the video reply is even more interesting!**

The UK’s Royal National Lifeboat Institution asks, “Why are lifeboats orange?” It’s a colour that’s



provided reassurance, relief and rescue to countless people over the decades. But our lifesaving fleet wasn’t always the signature shade of orange we know and love today. So what convinced us to change our palette? When did it happen? And what colours have our boats been before? Let’s find out. <https://www.youtube.com/watch?v=3UOOmUjYGLIE>

**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,  
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**Thank you.**

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David Whitaker FNI

