CONFEDERATION OF EUROPEAN SHIPMASTERS' ASSOCIATIONS

CESMA NEWS

MARCH 2024

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2024 NEW CHALLENGES FOR CAPTAINS

2024 came with unpresedented stress on all seafarers sailing on board commercial ships. The attacks on ships in the Red Sea and Gulf of Aden and returned back pirate attacks, the war in Ukraine and uncertainities in the Black Sea together with climate change and extraordinary meteorological events made the life of board the ships challenging. Some of shipping companies started avoiding transit of Suez Canal while the others continued passing with guards on board the ships and military escort. UN expressed political will to resolve the problems arisen but are the international organizations able to take real steps in calming down the situation when there are areas in the world where paramilitary forces control entire states. European Union was the most suffering region as the war is in Europe and the most important supply chain from Far East to Europe was distorted. The Union sent war ships together with some partners from NATO in an attempt to mitigate the dangers but the results are far from expected. The new situations requires new risk assessment, increased security measures and new approaches in seafarers' education, training and qualification. The ship masters are as usual on the hot potatoes. As humans they are afraid as the rest of the crew from the newly arised dangers the shios are facing. From the other side they have to take hard decisions daily. This time the difficulties come from the political situation. The attacks on ships are coming from parties with political issues. They are not recognized internationally and negotiations with them if any are not reliable.

What the captains have to do if ordered to proceed to dangerous areas and some ot the crew refuse to remain on board? The ship owners have to insist on international measures to stops attacks of merchant ships. At the same time they have to ensure as much as possible defence of the ships from attacks endangering life of seafarers. It is necessary the crew subject to attacks and transiting the dangerous areas to receive proper assistance and mental support and medical treatment when necessary to recover from stress. CESMA as professional organization raised the matter in EU institutions and will remain vigilant on the situation. As usual we will continue advising our members about safety and security measures to be taken when transitind dangerous areas and the same time we will keep close contact with European and international institutions and organizations aiming improvement of the conditions on board in connection with the new challenges.

Capt. Dimitar Dimitrov, PHD, FNI, CESMA President

CESMA BOARD MEETING

On 22nd February, Board members met for a Board Meeting, by video. All Board Members were present, Capt. Dimitar DIMITROV, President, Capt. Giorgio RIBARIC, Deputy President, Capt. Mariano BADELL, Vice President, Capt. Hubert ARDILLON, Secretary General, Capt. Hans AMMERLAAN, and Capt. Leendert Van Den ENDE, President of NVKK, who was invited in order to present and to confirm the organization of the next Council and AGA which are scheduled at Rotterdam in May. Only Capt. Damir LAKOS, CESMA Webmaster was unable to be present, on a vessel at that time and date.

On the agenda:

Financial matters: 2023 ended positively, we were able to transfer thousands of Euros on our Quarterly Saving Account. Two fees were not received for 2023, one from 2021 included. Concerning 2024 already ten (10) associations made the transfer, two have informed of same, but due to delay between banks, associated fees did not yet appear on the account in the morning.

RIJEKA Association (Kralijca Mora) application: the item will be put as first item for next Council. Application for associated CESMA membership has been received end of December 2023. Statutes (dated 14 April 2011 with amendments dated 13 March 2014) have been sent to CESMA

Secretary General. After discussion, it is decided by the Board that Application form and Statutes including Amendments will be distributed to all Council Members before the Council Meeting in order to ensure the vote to be done quickly. It is also noted that due to the fact application is for "associated member", the split for vote between different Croatian Associations in CESMA is postponed till RIJEKA Association will ask to be full member of CESMA.

CESMA website, newsletter, and logbook: the Board thanks Webmaster Capt. Damir LAKOS for the job to keep website up to date. Subject newsletters, Secretary General reiterate his wish to receive from Members a report (even small) with pictures each time they organize or participate to a meeting, colloquium, etc.

Situation in Red Sea – CESMA actions: Two letters were sent to EU Commission. For the next seminar before the AGA, NVKK will contact the Netherland Ministry of Defense in order to obtain one representative to present actions European Countries made for solving the situation. At least the subject would be an important topic of next AGA.

Board renewal: actual Board was elected three years ago. For all Board Members, it was the first mandate in the position. All Board Members are candidate for a new mandate in same position. However, Secretary General will require to all CESMA Members if they would like to have one own candidate. Such proposition should be done at least one month before Council. Secretary General has already sent a message in December to all Members on the subject, it will be resent.

Next Council and AGA: Capts. Van den ENDE and AMMERLAAN give some news on the organization of next Council and AGA. Locations are choose, SS Rotterdam for the Council and Maritime Museum of Rotterdam for the AGA. Presentations for the 2nd day morning before the AGA need to be finalized. At least, Red Sea issues, and e-vehicles fire and safety issues would be on topics. Secretary General requires NVKK to provide details for places and hotels in order for him to inform all Members to be able to program their coming to Rotterdam. As Rotterdam is close to Brussels where the EU Commission is, it is proposed to contact with the Commission to try to have a presentation from it.

Resolutions: Secretary General is in charge to prepare draft resolutions for Red Sea and e-vehicles issues which will be discussed and finalized during Council and AGA

Next attendances scheduled before AGA: President will attend EMPA General Assembly, Secretary General will attend a chemical risk day at sea in Paris and a congress on psychological issues at sea.

Board members are really hopping that Associations will be represented by at least one member at Council and AGA.

Hubert ARDILLON
CESMA Secretary General

RED SEA AND GULF OF ADEN
SIMPLE TROUBLES OR WAR?

Preamble: The following is current at the time of writing (mid-March). On the other hand, things evolve quite quickly, and consequently, it is not impossible that the text appears to the reader to be somewhat obsolete.

Since October 2023, Yemen's Houthi rebels have attacked commercial ships in the southern Red Sea, as well as in the Gulf of Aden.

On November 19, there was an act of piracy against the car carrier Galaxy Leader, sorry for

the picky jurists but I don't see any other words to designate this act, following an invasion of the ship by armed people who came from helicopter. The ship was hijacked, the crew members taken hostage. A successful operation, especially on the media side, because the attack was filmed as well as if it had been a staging for a very realistic action film.

In response, CESMA, under the leadership of its president, sent a letter to the European Transport Commission to ask that everything possible be done so that crews transiting the Red Sea are not confronted with such abuses. For their part, IFSMA and ICS made a joint declaration to the IMO on the same subject. CESMA letter appeared in the latest issue of CESMA Newsletter dated December 2023.

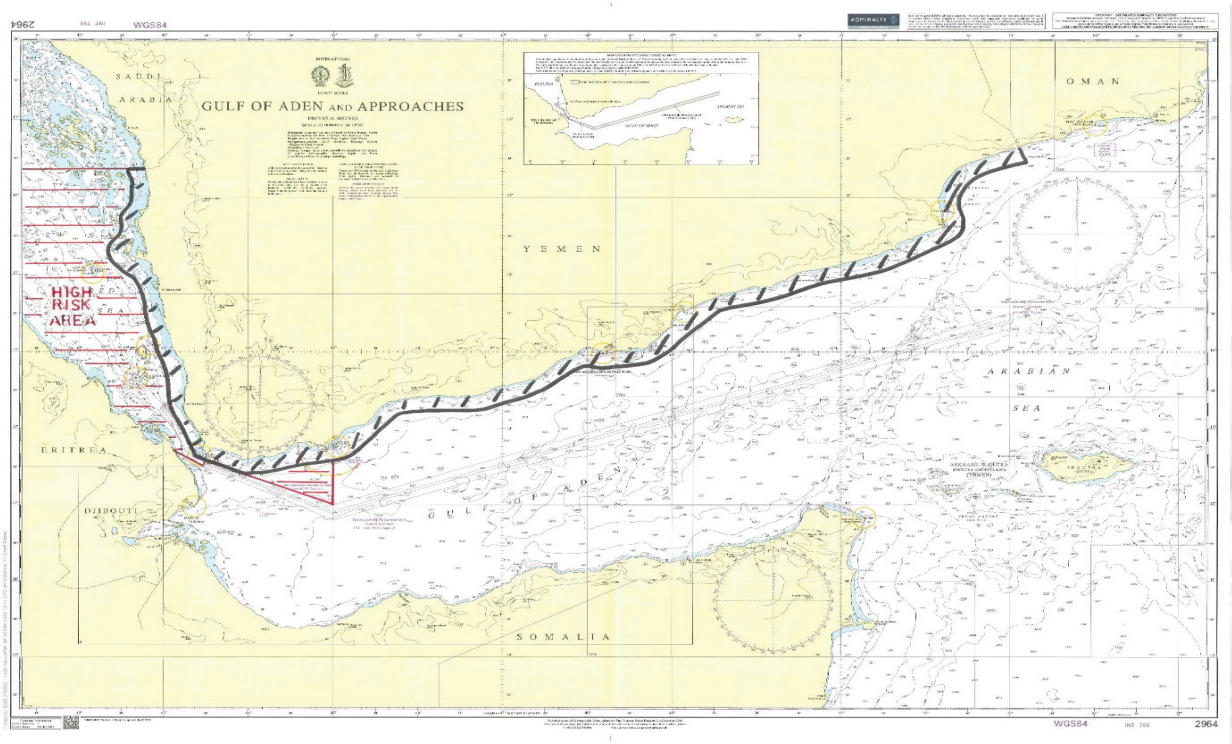
On February 19, 2024, three months after the hacking of the Galaxy Leader, the 25 crew members were still held hostage. A crew made up of Bulgarians, Romanians, Mexicans, Ukrainians and 17 Filipinos who are only innocent collateral victims of this conflict which bears no name. Or how we go back a few years to the prosperous era of Somali pirates.

Then, quite quickly, it was the turn of commercial ships to be attacked by drones and/or missiles. First of all, if the ship had, directly or indirectly, any connection with Israeli interests, then quickly, in retaliation for firing on the land bases carried out by the US and Great Britain, all it took was a lien with US or British interests, the flag of the ship having no influence on the attack. Since then, and up to this day, not two days go by without a new attack (or several) being reported.

Of course some States have dispatched part of their war fleet, USA, United Kingdom, France and others, under the label of European task force or not.

This is to protect commercial ships of all flags under attack.

Finally, crisis (?) meetings made it possible to finalize the Red Sea and Gulf of Aden zones as war zones or high-risk zones with certain treatment conditions concerning seafarers transiting through these zones. The figure below shows how the zones in these regions were then evaluated.



dated 22nd December 2023

The black hatched area represents the so-called war zone corresponding to 12 nautical miles of the Yemeni coast, i.e. Yemeni territorial waters, therefore without passage except for ships having to call at a Yemeni port. We can also possibly ask the question of the Hannish Islands, are they part of the territory of Yemen or not?

It is also reasonable to wonder what the high risk zone (hatched red) to the east of Bab el Mandeb is doing, when the rest of the Gulf of Aden is not even considered a high risk zone!

Differences in treatment of seafarers:

1. ITF Warlike Operations Area – *12 nm. off the mainland Yemeni Coast, including all ports, excluding Recommended Security Corridor (RSC) in the Red Sea*

- **bonus equal to basic wage, payable for 5 days minimum + per day if longer;**
- **doubled compensation for death and disability;**
- **right to refuse sailing, with repatriation at company's cost and compensation equal to 2 month's basic wage**
- **Mandatory requirement to increase security arrangements equivalent to ISPS Level 3**

2. ITF High Risk Area – *Commencing from the ITF Warlike Area above in the Red Sea, stretching across to the Eritrea coast and down to the Bab El Mandeb Strait excluding the excluding Recommended Security Corridor (RSC)*

- **bonus equal to basic wage, payable for the actual duration of stay / transit;**
- **doubled compensation for death and disability;**
- **mandatory requirement to increase security arrangements equivalent to ISPS Level 3**

The most important difference, the other being after all only a matter of days of double pay, is the right to refuse to sail in the war zone, and the fact that the sailor can request disembarkation at the expense of the shipowner or manager of the ship. On the other hand, I don't really see where the relief could take place, knowing that if a seafarer signs off upon own request, another one should sign on at the same position on crew list, being previously explained the risks to sign on and acceptance, as he/her is at home on land in a region that is calmer.

Then, CESMA again wrote to European Commission of Transports, with copy to IFSMA, ETF, and Nautical Institute, as well as all Associations being CESMA Members. Associations were suggested, if they wished, to send this letter, possibly translated into the national language, to the Maritime Authorities of the countries concerned.

It must be admitted that the letter did not generate many responses, even acknowledgements

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February, 2nd 2024

To: EU Commission for Transports

Subject: Warlike and High Risk Areas in Red Sea and Gulf of Aden

Dear Madam, dear Sir,

As you know, the situation of navigation in the Red Sea and the Gulf of Aden is very worrying, from a commercial point of view certainly, but also from a human point of view.

Indeed, several commercial ships have been attacked in recent days, attacks carried out by drone and/or missile.

Fortunately, to date, there have been no casualties among the commercial seafarers on these ships. There are no physical victims, of course, but the psychological damage is indeed present for these seafarers.

This is despite the fact that in recent years there has been increasing concern for the well-being of seafarers as well as the desire to attract young people to this profession.

We deplore the fact that the southern Red Sea has been divided into two zones: a warlike risk area extending up to 12 nautical miles from the Yemeni coast (i.e. the territorial sea zone), and a high risk area covering the rest of the geographical area up to the Eritrean coast and Bab el Mandeb Strait.

Similarly, the Gulf of Aden has a warlike risk area extending 12 miles from the Yemeni coast, as well as a very small high risk area south of the Bab el Mandeb Strait.

The conditions of insurance coverage for ships and crews are obviously not the same depending on whether the ship is in a warlike area or a high risk area.

However, the attacks carried out recently show that the ships attacked were at distances well beyond 12 miles from the Yemeni coast, whether in the Red Sea or the Gulf of Aden, thus making obsolete the differentiation of the areas.

Accordingly, we ask you to kindly work to have the part of the Red Sea south of the latitude of the Saudi Arabia/Yemen border, and in the Gulf of Aden west of the meridian of the Oman/Yemen border recognized as warlike areas. Obviously excluding the territorial seas of Eritrea, Djibouti and Somalia.

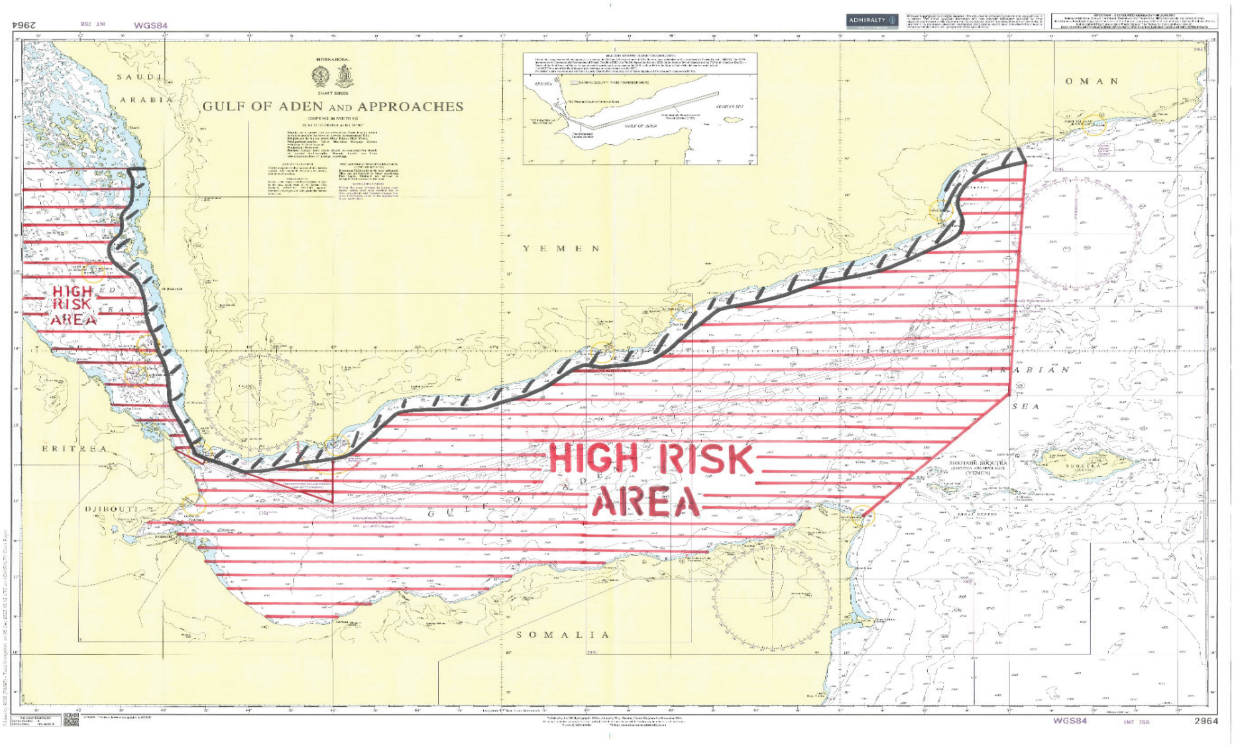
Yours Very Truly

Capt. Dimitar Dimitrov, PHD, FNI
CESMA President

Capt. Hubert Ardillon
CESMA Secretary General

Copy to: ETF

On February 16, 2024, almost two months after the first agreement, a second one comes into force. The Red Sea / Gulf of Aden area is evolving as follows:



dated 16th February 2024

As for the differences in treatment of seafarers, it also evolves as follows:

1. IBF Warlike Operations Area – *12 nm. off the mainland Yemeni Coast, including all ports and excluding the Maritime Security Transit Corridor (MSTC) in its entirety*

• bonus equal to basic wage, payable for 5 days minimum + per day if longer;

• doubled compensation for death and disability;

• right to refuse sailing, with repatriation at company's cost and compensation equal to 2 month's basic wage

• mandatory requirement to increase security arrangements equivalent to ISPS Level 3

2. IBF High Risk Area – *Southern Section of the Red Sea and the Gulf of Aden, boundary commencing from the IBF Warlike Area off the Yemeni coast, stretching across to the Eritrea coast. Area encompassing the Bab El Mandeb Strait including the Maritime Security Transit Corridor (MSTC) in its entirety and the Gulf of Aden*

• bonus equal to basic wage, payable for the actual duration of stay / transit;

• doubled compensation for death and disability;

• mandatory requirement to increase security arrangements equivalent to ISPS Level 3

• right to refuse sailing, with repatriation at company's cost and compensation equal to 2 month's basic wage

So now it becomes possible for any seafarer who wishes to request disembarkation before entering a high-risk zone (Red Sea and Gulf of Aden), which we can call "the glass half full". The remaining difference is just a matter of number of days with double pay.

But we can still note that the war zone is maintained for only the 12 nautical miles from the Yemeni coast, what we can call "the glass half empty".

While ships have been hit by missiles 60 nautical miles from Aden, and not along the Yemeni coast!

So it's only a story of big money, certainly not the subject that we're talking about more at the moment, namely the well-being of seafarers. Because psychologically, finding yourself under the threat of a drone armed or with a missile, even if it does not necessarily cause physical damage among the crew, it necessarily does it in the head. I have not forgotten that following the attack suffered by the Limburg in 2002, almost 50% of the crew members stopped sailing, either long-term or completely. This represents a psychological trauma suffered.

Until February 22, there was only material damage. This is already very traumatic for the crew, especially if the result of the attack, the shock turns into a fire on board. This is also what happened that day when the Islander ship was attacked by two missiles, about 70 nautical miles southeast of Aden (not really 12-mile territorial waters!). This time, the attack caused "minor damage" to the ship which still caused a fire, and the attack above all left its first (light) crew member injured.

It is also reported that several ships, with the laudable aim of not being attacked, indicate on their AIS that the ship has a Muslim crew, without any connection with Israel, etc. Not sure this is enough.

In the meantime, other ships, such as the bulk carrier Rubymar, have been abandoned by their crew due to leaks or uncontrolled fires.

Since February 24, events have not really evolved favorably for ships and sailors in this Red Sea and Gulf of Aden area.

On the morning of March 6, the Liberia-flagged bulk carrier True Confidence was attacked 54 miles southwest of Aden, not far from Bab el Mandeb, by an anti-ship ballistic missile fire. Three sailors were killed: two Filipinos and a Vietnamese, and several others were injured, three of them in critical condition. Personally and perhaps because I don't spend my time listening to the news, I learned about it from the specialized press, mainly English-speaking, nothing, at least for me, in the French media, apart from the maritime press.

Small digression, "True Confidence", you really had to have such confidence to navigate these areas with peace of mind.

The bulk carrier Rubymar, hit by two missiles on February 18, as reported above, was wrecked. And there, the processing of information is astonishing. Even if this attack did not cause any casualties among the crew, what is remembered from the sinking is that by sinking, or with its anchors which is still to be determined exactly, the Rubymar seriously damaged probably three submarine communications cables. Several radio and television commentators have deplored the fact that this attack has jeopardized world trade, with internet connections with India and East African countries being made more difficult. This is certainly true. But I would have liked to hear comments, even less passionate, on the attack on True Confidence which, as mentioned above, saw the first civilian (and innocent) victims of this conflict which does not bear its name. Note, however, that there is also pollution caused by the Rubymar attack, and that it was also reported and commented, which is normal. But the aim was above all to emphasize the difference in treatment between human life and international trade.

In 2004, the ISPS code was implemented on ships – including the obligation of AIS on board – and in ports (even if it took a little longer for them to be in compliance). So this year we are going to "celebrate" twenty years of the ISPS code. And we can note that it is not forgotten to specify in the agreements that the ship must shift to ISPS level 3 in high-risk areas, and war zones of course. This gives us a nice leg!

Think about. A drone or missile approaching. But the vessel is at ISPS level 3. The drone or

missile just needs to behave, on board the fire hoses are connected and under pressure. We're not going to let this happen! Watch out for the response...

It's sad, but it gives the impression that the seafarer doesn't care. On the other hand, the price of the container, since certain big companies decided, wisely in my humble opinion, to go around Africa rather than transiting through the Suez Canal, has increased six fold.

Always and again a story of money.

But we, captains, are also a little responsible or irresponsible as you wish: a captain, whose name and nationality I will not mention but who is nonetheless European, reported in a newspaper:

We were constantly tense and under an unpleasant feeling. We had imagined different scenarios, and we were well prepared and mentally trained. American and allied ships provide security in the Gulf. Another option, the tour of Africa, would be a much longer route and much more expensive for the companies. So the company took a risk. All vessels that were at that location at the time were well secured by armed security guards boarding the vessel prior to passage. At the most critical moment, the security guards kept their weapons ready... Today we escaped danger. The ship is a bulk cargo ship, and is now awaiting transit of the Suez Canal and the Mediterranean Sea. The crew considers they are safe for the remainder of the navigation in the Red Sea.

Unless the said armed guards are on board with anti-missile missiles, I fail to understand how they can repel air or sea attacks from armed (and suicidal, so to speak) drones. Guards are good for pirates, Somalis or others, even armed (and still not all the time), but there... We can spare a thought for this crew, and others in the same situation. They and their families must ask themselves a lot of questions and probably have a feeling not unpleasant but terrified about what they are being forced to live through.

So circling around the Cape of Good Hope (what a lovely name), the Houthi rebels found supporters. Indeed, even if the route from Good Hope to Cape Palmas passes far offshore, it seems that the pirates of the Gulf of Guinea are seriously thinking about expanding their area of activity...

To conclude, and coming back to the title of this mood post, there is not really a war in the Red Sea or in the Gulf of Aden, just a few skirmishes against commercial ships whose financial interests do not correspond to the political ideas of the Houthi rebels. When you are on a ship with no links to the enemies US, UK and Israel, you can think you are quite calm, provided that the database on commercial ships is up to date, as ships change easily ownership and so easily financial and flag interests. Let's trust the internet.

After all, it's not that bad. By not being attacked, you just need to avoid becoming a statistic.

Cdt Hubert ARDILLON
Secrétaire Général CESMA

RISKS ASSOCIATED WITH THE TRANSPORT OF ELECTRICAL VEHICLES (EVs) AND/OR BATTERIES

Six months before the fire on board the car carrier Freemantle Highway, AFCAN published some thoughts from one of its member, also member of AFEXMAR (French Association of Maritime Experts) and IIMS (International Institute of Marine Surveying). And 4 months before the same incident, the CINS (Cargo Incident Notification System) and Insurers have published guidance on safely carrying lithium-ion batteries in containers. Then it was the story of Fremantle Highway.

The following does not purport to answer or resolve the question. This is a summary of the latest facts relating to this subject. And we cannot exclude that the IMO will end up regulating the transport of electric vehicles as well as Lithium-Ion batteries. It will take time. But why not to hope?

A- Expert thoughts

Transport of electric vehicles

Electric cars are increasingly common on the roads and also on ferries (we exceed 20% today) although there are currently no international regulations concerning their transport with their passengers.

In our time, regulation, unfortunately, too often follows innovation with a sometimes worrying lag.

We transport electric vehicles (EVs), today cars and soon coaches and trucks.

The batteries used on these vehicles are currently lithium-ion (Li-Ion) batteries which have existed for some time and are installed on other various land vehicles including city buses but also on ships as an important source of energy and no longer only as a “buffer” (Car-ferry Color Hybrid, future E-Flexer from Brittany Ferries).

Li-Ion batteries have so far won the battle for power available with a single charge, with great success, although the problems initially detected, such as the spontaneous fire of the battery pack cells, are still far from over to be completely resolved.

The danger of combustion of Li-Ion batteries

The insurers were the first to sound the alarm (a consequence of the huge recent losses of car carriers). The classification societies have woken up. Some car manufacturers have come forward in the user guide for their electric vehicles (TESLA), but the others are remaining silent for the moment. EMSA (European Maritime Safety Agency) has published the first volume of its FIRESAFE study. Li-Ion battery manufacturers continue their search for equivalent batteries that do not combust spontaneously. Some authorities such as the USCG or the MCA are asking questions

and recommend caution (no recharging on board, no transport of used batteries or damaged EVs). Insurers even go so far as to refuse to cover the ship due to very low cost battery installations, while land firefighters equip themselves with new intervention and suitable protection equipment.

The Nautical Institute; which is often the reference for ship captains, states: "Although it is not really clear that EVs are more likely than common motor vehicles to catch fire (rate around 0.08%) it is certain that the consequences are potentially more disastrous and more difficult to manage," based on case studies of recent fires on car carriers vessels.

Michael GREY, former editor of Lloyd List and now an independent journalist, questions the fires of the "Felicity Ace" and the "Euroferry Olympic" and even goes so far as to suggest that the dangers of EVs are partly or totally hidden in the current offers from manufacturers.

At the IMO, for which this is the responsibility at the global level, we are apparently active.

But the stakes are enormous, are we going to wait for a disaster on a ferry the day after tomorrow to react better?

Study of risks by the first requirement of an SMS

The anxiety of the blank page does not exist in ISM. Indeed, the emergency plan is included in the company's SMS, and the IMO has provided the framework (Resolution 1072) where risk assessment appears first and foremost. The meaning of the SMS is simple: Evaluate the risks identified with the danger of ferry transport of current or future vehicles, taking into account that unlike cars, ferries are built for a minimum of 25 years.

• Determine possible preventive risk reduction measures: immediate, short/medium/long term measures

• Take into account the consequences in the event of failure of prevention

• Apply immediate intervention measures on board as quickly as possible and call emergency services on land.

• Apply instant global feedback to further reduce risk

1. Danger of EVsS

Current knowledge about EV fires is as follows:

• Battery fires are not or only slightly spontaneous

• This is a malfunction in the charge or discharge regulation which is signaled by the vehicle's on-board computer

• Recent vehicles (new cars) are in principle less prone to malfunctions than passenger cars on car ferries

• A malfunction begins with a fairly significant rise in temperature (70°)

• Smoke may emerge from the battery location (bottom of the passenger compartment)

• A thermal runaway can occur with intense heat communicating to other cells and risk of catching fire from neighboring vehicles, electric or not.

• Electrolyte splashes are likely and this liquid is toxic to humans (inhalation and contact with the body/eyes/skin)

2. Risk Reduction: Possible Corresponding Means of Prevention

• Recognition of electric vehicles before boarding

• Declaration by the motorist at check-in regarding the absence of a battery system malfunction alarm

• Placement on board favoring easy passage of an intervention team on both sides of the vehicle (dedicated deck, materialized gap between vehicle lines)

• Continuous video surveillance of all car decks with transmission of images/alarm on bridge and/or permanently armed security PC

• Organization of permanent patrols on all decks by pre-equipped fire crews equipped with thermal cameras

• Water cannon installations every 15 m on both sides of the ship on the car decks

• Increase the flow rate of fire pumps

• Increase drainage of decks using dedicated evacuation pumps

• Special VE training (amendment to the STCW module) for all fire officers and crews with on-board training 3 times a week and annual revalidation of the certificate

• Given that the vessel can only partially control such a fire, evacuation must immediately be considered; it is up to the ship's master to initiate the assembly of passengers as soon as possible

• Regional cooperation/rescue plans must be amended taking into account the probable impossibility of extinguishing the fire even with close and rapid assistance, transfer of passengers for example via a large helicopter to another vessel (the example of the "Normandy/MCA" exercise on the cross-Channel should be taken into account)

3. Reduction of Consequences: Possible Means of Intervention

• Team of specialized on-board firefighters (at least 3) on alert for 12 hours: permanent rounds and interventions only (i.e. crew off watch)

• Firefighter clothing suitable for high voltage products and toxic chemicals due to electrolyte splashes

• Equipment cabinets at each car-deck level: fire equipment/hazardous products and SCBA (3 + spare bottles) + air compressor

• Special high-efficiency fire lances for battery-powered vehicles (with or without punch) also working for other vehicles

• Set of rigid fire covers to protect adjacent vehicles (stored at numerous points on the car-decks)

• Universal locking socket for electric motors of the vehicle on fire

• Implementation of the local rescue plan

4. Notifications in Case of EV Fire

• Immediate information to the company crisis unit

• Information from the company to land teams as soon as detection is confirmed and route to the nearest port equipped to fight against EV fires (list of ports to be updated monthly)

• Special information to passengers upon confirmation of the VE fire and 7 short blasts and one long blast, passenger assembly alarm in application of the corresponding (new) decision support sheet

• After agreement from the authorities (MRCC in charge) confirmation of route to the indicated port

5. Feedback

• After returning to normal situation, mandatory internal investigation, different from that of MAIB or equivalent)

• Independent accident investigators will have to focus solely on the facts with a search for responsibility in a culture of no blame. This survey remains confidential and must not be communicated to third parties (including MAIB) unless subject to legal constraints.

• The aim is to seek improvements on the part of the company both in the equipment and in the procedure for responding to the emergency situation. Communication of results to other companies is recommended

IMO

1. Regulatory Development

Even if this new danger is taken into account at the IMO, the question goes through the appropriate working groups.

Then to develop an amendment to SOLAS concerning the construction or equipment of the ships in question, it takes approximately 5 years between the studies of the Subcommittees and the passage to the Marine Safety Committee then the ratifications of the members representing the majority of the world fleet. 5 years is both long and short for structural modifications, for example, which impact the ship for its entire life, the host ports and their means of intervention.

And the modifications will then only concern new ships which will be built after the date of entry into force of the amendments.

So the grandfather clause will be used systematically for existing ships already in service and this is normal.

Although the additional firefighter equipment and associated training sessions will comply with possible new regulations, essentially it will only be 100% effective for a long time, at a time when EVs will likely be 100% of all 600 cars loaded onto an ordinary 2,000-passenger ferry. There is therefore a serious problem which can only be resolved by the effective application of circular MSC 1 - Circ. 765 (1996), further amending it if possible.

But, let's not be too pessimistic, the ferry companies do not want to disappear in the event of an EV fire. A special circular for those vessels would perhaps be the best idea.

2. Practical Development of EV Transport through Specific Recommendations from Now

Firstly, it is about sorting EVs

a. Easy identification of the EV when loading/boarding

Before passengers' personal vehicles are all electric, it would be good to distinguish them from non-electric ones now. Recognition must be rapid and secure. Vehicle check-in is already quite complicated, especially when more and more identification documents are required per individual (see the numerous already existing stickers to be placed on windshields depending on the items transported or the passenger requests). Already equipped with the boarding pass attached to the interior rearview mirror, for the number of people in the vehicle, the crossing code, the destination, plus a sticker for the presence of a person with reduced mobility, with or without a wheelchair, or if there is an animal on board etc. you will need to add the fluorescent yellow VE sticker.

Unlike the boarding pass, this notice must be visible from a distance at all times and on both sides of the vehicle. Many solutions:

• Recommend to EV drivers in general (on the reservation site for example) not to board with batteries that are too low or too high and report at check-in any information about battery malfunctions reported by the vehicle's computer. It's doable

• Ask the manufacturers to have all the external mirrors in fluorescent yellow (surely impossible), or equip the check-in booths with large fluorescent yellow stickers to stick on the 2 mirrors or, more simply, perhaps a fluorescent yellow paper pendant on the 2 mirrors, but with the risk that passengers do not install them, so staff will need to check the presence of this pendant somewhere during the loading process. It's doable

• Ask the driver, at check-in (online or at the port), if the on-board computer has reported an anomaly in battery charging. It's doable

• Inform the driver that their EV will perhaps be loaded on a special car deck with the other EVs, for safety reasons. It's doable

b. EV Charging

• Prefer to gather EVs on dedicated car-decks for special concentrated surveillance reasons: location of thermal cameras, spaces between car lines, cabinets for special EV fire-fighting equipment, accessibility and importance of drainage. Hybrid vehicles should be considered EVs

• For crew members during loading/boarding: on EV car decks, if possible, prefer comfortable loading, i.e. with the possibility of passing between cars at the front or rear to facilitate the intervention of the firefighters. But the capacity of the car deck may be modified. Then it will be necessary to have an instruction from the company or the captain to apply comfort disposition.

3. Additional Fire Training for VE Crews

Both the general public and car ferry passengers are often unaware that fire safety is ensured by the ship's crew. Those crew members were trained according to a reference established by the STCW code in which the skills acquired are clearly identified for the members of the teams and for the officers who lead them. This minimal training exists and is generally well carried out taking into account that it is almost certain that the seafarer will see at least one fire on board in his career.

Fighting fire on board a ship is never easy, even if you have plenty of water at hand, knowing all the same that the ship is a float and that dumping a lot of water on a fire on board is a negative factor which can become dangerous such as a loss of stability due to free surface, if care is not taken. But if it takes a lot of water to put out an EV fire, it will also need large pumps to evacuate it into the sea just as quickly.

IMO member countries are responsible for training carried out on their country or on their behalf and also for their content, which must at least comply with the code. Model courses have been published by the IMO to help emerging countries, above all, to comply with the standards. These model courses are used more and more but remain a minimum.

Currently, vehicle fires (typical course 2.03) are assimilated to fires of dangerous materials but up to now the particularity of thermal runaway of batteries seems to not be yet included.

Additional training on EV lights already exists here and there, but is not all realistic and above all does not take into account this excitement which can change everything. Current efforts are therefore being made on the early intervention which will be guaranteed thanks to initial thermal detection and an ability to provide a large quantity of water to avoid or limit thermal runaway.

The problem today lies in the current capabilities of our crews to put out an EV fire for reasons of means certainly but also and above all of training.

We hope that the training centers providing five-yearly revalidations will prepare to provide an upgrade in the coming months. This will already be a timid first step, because for the recommended upgrade of equipment and even loading procedures which all reduce the risk; the famous grandfather clause will drag all this out once again. All that will remain for the captain, always fully responsible, is to write to his owner reminding him of the conditions of his boat and to count on luck.

Conclusion

The current situation is as follows:

• We cannot visually sort electric vehicles which are more dangerous than those with combustion engines, because they all look the same: visible marking is therefore required

• Accessibility of EVs is necessary, so the capacity of the vessel will change

• Speed of intervention is essential: the detection of heating of the battery pack is the first signal that must be captured at all costs by numerous fixed thermal cameras and by portable ones of the guards.

• Continuous patrols are necessary and should be carried out by specially trained off-watch seafarers/firefighters. There is therefore an increase in Safe Manning Certificate

• The risk of non-control is great, a call for help from shore firefighters is required and the ship's destination towards the nearest equipped port is to be decided quickly

• Information and gathering of passengers from the start of the fire are recommended and evacuation already planned

• The firefighting equipment should be adapted during the last technical dry-dock or technical stop of the vessel and seafarers in addition to the usual number should be trained in a center recently approved for this new training

• Round and fire alarm procedures should have been amended and new exercises scheduled

• The success of prevention measures depends largely on the speed of the crew's reaction: off-watch firefighters and adequate equipment are essential

• The prospects are impressive, the cost of modifications is significant and recovery sleep for captains/crew will be even more difficult. In the same time, research on dry batteries (without electrolyte) or batteries that do not burn or are not subject to thermal runaway continues. Unless one finds equally efficient but safe batteries, and used to equip all new cars to replace those in existing cars.

A full load of EVs on a ferry is possible, but taking the number of measures above…

Cdt Bertrand APPERRY

AFCAN, HYDROS, AFEXMAR, IIMS.

B- Guidelines published by the Cargo Incident Notification System (CINS) and insurers on safely carrying lithium-ion batteries in containers.

The first in a series of documents on safely carrying lithium-ion batteries covers how the batteries operate, their regulatory classification as cargo, the risk of and causes of thermal runaway which can lead to fires, and the toxicity hazards associated with the battery chemistry.

The document goes on to give an overview of factors involved in choosing a container for lithium-ion batteries, the effect of a battery's charge state on packing considerations, stowage on container ships, detecting and dealing with lithium-ion fires on container ships, and loss mitigation measures.

The guidelines were developed by CINS, an initiative launched by container lines in 2011 to reduce cargo incidents, alongside the International Group of P&I Clubs, the TT Club and the International Cargo Handling Coordination Association (ICHCA).

"We strongly urge all stakeholders in the production, supply, transport, handling and sale of lithium-ion batteries whether as individual components or integrated into an electronic device, vehicle or other product to recognise their responsibilities in maximising safety when in transit," said Dirk Van de Velde, Deputy Chair of CINS and board member of ICHCA.

"Our Guidelines will create greater awareness of the possibilities of the damaging and life-threatening incidents, which have already occurred, and instil more urgent motivation to act before more catastrophic disasters result."

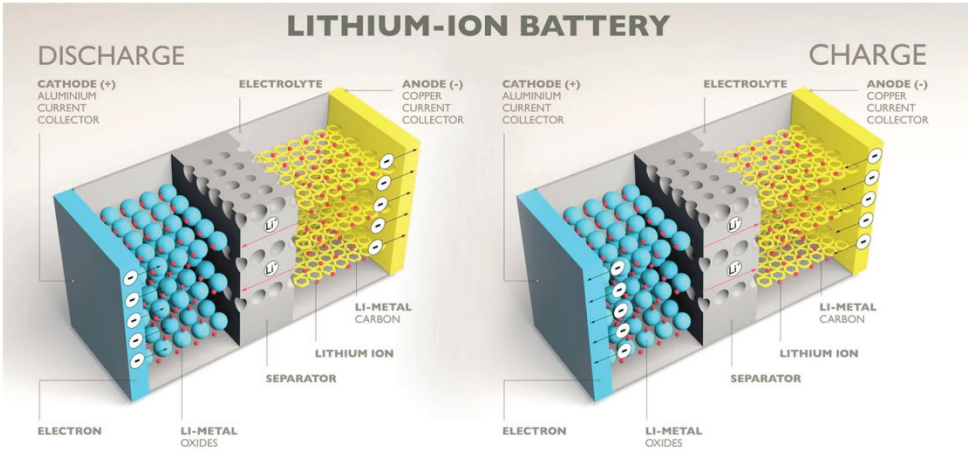
The initial publication will be followed by three further documents – regulatory compliance checklists, risk assessment and emergency response, and training and educational awareness.

"As our experience of transporting lithium-ion batteries widens and the technology surrounding their chemical composition, production and application rapidly evolves, risk controls and loss prevention measures need to keep pace. The work encapsulated in these Guidelines will, of necessity, continue and be undertaken in collaboration with all relevant stakeholders to increase our knowledge and understanding of the risks posed by carriage of lithium-ion batteries in containers by sea. This publication follows on from a very successful one day Conference held by the IG P&I Clubs, CINS, TT Club to bring all parties together to discuss such risks and to share knowledge and experience of carriage across the logistics supply chain" said Mark Smith, Loss Prevention Executive North Standard.

Peregrine Storrs-Fox, Risk Management Director at freight transport insurer TT Club added:

"As the pressure on all forms of economic activity for decarbonisation increases, the use of these batteries will inevitably escalate at rates we have previously not experienced. Air transport has been heavily restricted already and it is clear that surface modes will be called upon to transport these goods. As an adaptable unit, the container will remain a focal point for safe transport, including for EVs alongside other vehicle carriers. The intermodal nature of containers means more actors other than shipping lines, be they manufacturers, packers, forwarders, logistics operators, warehouses and cargo handlers must all be cognizant of the safety issues we are addressing and play their part in ensuring the risks are properly managed."

Lithium-Ion Batteries in Containers Guidelines is available to download from the CINS website.



Extract form the Guidelines

As part of the Guidelines, beyond all chapters of great interest, are:

Hazards identified for Li-Ion batteries fires:

Fire and explosion, chemical, environmental concerns, electrical, stranded energy, physical, structural (especially after the fire and/or explosion)

The gases given off during a fire may include, but limited to:

Carbon monoxide, hydrogen, nitrogen dioxide, hydrogen chloride, hydrogen fluoride, hydrogen cyanide, benzene, toluene, methane.

Fire Suppresion:

Water – water-based extinguishants can provide an effective method to fight Li-Ion battery fires. Water is an excellent cooling medium due to its high heat capacity and latent heat of vaporization and may be able to mitigate or halt the propagation of thermal runaway to surrounding batteries. Water is generally available for fighting container fires. Water spray mist could be used

for fire-suppression and cooling when a container is in a suitable location, particularly on deck.

Foam – foan is a medium that is being investigated by car manufacturers at present. It can be used but to be effective the foam must encapsulate the container, the Li-Ion battery, and the cells. This is unlikely to be effective on a single 20 or 40 foot container.

Powder – powder extinguishants work by chemical interrupting the fire reactions. However, they do not provide cooling and re-ignition may occur.

Carbon dioxide – CO2 is not an ideal extinguishing agent for Li-Ion battery fires due its down cooling capacity, but it will reduce the availability of oxygen considerably, which can slow down the fire process and reduce the reaction time and directly related heat flux.

Keep in mind that the fire is suppressed, the thermal propagation is not stopped and the hazard switches from fire to explosion.

This can happen when using aerosols, dry powder, gaseous suppression, fire blankets to extinguish the fire.

C- Fremantle Highway Fire

Around midnight on 2023, July 25, the Dutch coastguard received a report that a major fire broke out on the Fremantle Highway car carrier. The vessel had 23 crew members onboard and, at the time, was sailing 27 kilometres north of Ameland.

The crew initially attempted to extinguish the fire themselves but unsuccessfully. The fire continued to spread, prompting an evacuation. The crew members were evacuated by helicopters and lifeboats. Several members of the crew had to jump into the water to save them from the fire.

According to the Dutch coastguard, one crew member died, and several were injured. The evacuated crew was evacuated by lifeboats and helicopter to Lauwersoog and Eelde airport. Sixteen injured people were then taken by ambulance to nearby hospitals, all with breathing problems.

Reports claim that the fire erupted on the cargo deck and then probably spread to other decks.

Fremantle Highway was then located near the Wadden Islands which are a World Heritage area.

She left Bremerhaven at around 14:30 UTC on July 25, bound for Egypt. The fire erupted at around 21:30 UTC. The car carrier was carrying 2,857 cars on board, 25 of which were EVs.

Reports have come out that the fire could have started in one of the EVs which is a major issue. The EVs on board are a serious fire accelerant since its lithium-ion batteries when on fire can reach temperatures of more than 2,700 degrees Celsius, even if officially the cause of the fire remained unknown.

The Dutch Coastguard said that the Fremantle Highway was still on fire and that a recovery vessel named Hunter had attached a line to the ship to hold it in a controlled position. A number of parties including salvage companies were studying how to limit the damage as much as possible.

On July 27, the Dutch coastguard said that it was not yet possible for salvors to board the stricken vessel and that using water to try and extinguish the fire could lead to stability problems

for the Fremantle Highway, even if the situation was described as being “stable”.

A statement said: “The owners are currently trying to extinguish the fire in cooperation with local authorities and concerned parties and they will continue to endeavour to extinguish the fire and recover the situation as soon as possible.”

According to same coastguards, there is a possibility that the fire could last for days, with many of the cars onboard expected to be destroyed. They reported that an emergency line was attached to the vessel to hold it in place while fire boats have been working to cool the ship. Pictures however show the fire spreading through the ship. The Coast Guard said it is impossible to board the vessel or to put the fire out, and instead all they can do is to cool the ship and wait for the fire to burn itself out. They were also concerned that the water being pumped on to the ship could cause stability problems.

On July, 28 we learned from the charterer also that Fremantle Highway was carrying nearly 500 electric vehicles on the 3,782 vehicles on board, significantly more than the 25 initially reported by the coastguard.

Then late on same date, with the intensity of the fire aboard the car carrier continuing to dissipate, Dutch authorities announced that they are preparing to reposition the ship in the first of a series of steps that they anticipate will ultimately bring the wreck to a still to be determined port.

“Rijkswaterstaat and the salvage companies have now started preparations for towing the freighter to an area further east than its current position,” the Ministry of Infrastructure and Water announced shortly before midnight on July 28.

The timing of the movement of the hulk will depended on several factors, including the level of smoke coming from the ship and weather conditions. The goal was to bring the ship from its current position approximately 14 miles north of Terschelling to a new position approximately 10 miles north of Schiermonnikoog. It will be a move of about 35 miles to the east that it is anticipate to take between 12 and 14 hours to complete.

As soon as the situation aboard the ship will allow for a safe tow into port, Dutch maritime authorities would like to bring it alongside a pier to complete salvage operations.

Based on photos provided by the first responders, the Fremantle Highway has taken on a slight list to starboard. The patterns of paint burn-off cover most of the port side and half of the starboard side, indicating that the fire swept through most of the ship’s car decks above the main deck level, from bow to stern. Photos taken on July, 29 showed heavy smoke pouring from the aft-most upper decks, but the paint largely intact; by July, 30 afternoon, the paint in this location was gone, indicating that the fire continued to burn at high temperature.

On July 31, the salvage team working with the Dutch authorities was preparing to board the Fremantle Highway to develop the next phase of the salvage plan. This comes as the fire appeared to have largely died out and they were able to complete the move of the hulk to a more sheltered area away from the main shipping lanes.

The hulk of the Fremantle Highway was then positioned approximately 10 miles north of Schiermonnikoog and Ameland on the North Sea. The Ministry of Water and Infrastructure cautioned that a final port was not yet known saying that this was a temporary holding position where the vessel can be anchored.

As soon as possible, they said a team from the recovery operation will go aboard the vessel to carry out an inspection. Depending on the situation on board the ship, the expected weather conditions, and an available port with the right facilities, a decision will be made on what to do with the hulk.

They were able to move the ship approximately 40 miles to the east starting on Sunday afternoon. With more favorable weather and tide conditions, they reached the location late morning on July, 31 soon than originally anticipated. They emphasized that the ship remained attached to two tugs with tow lines and the oil recovery ship continued to stand by.

Smoke from the ship also remained minimal during the tow which they reported as a favorable development and a further sign the fire has dissipated.

They reported the temperature aboard the Fremantle Highway had dropped indicating the fire was subsiding. Pictures however show increased blistering on the exterior of the ship giving a sense of how extensively the fire spread through the car carrier.

Then on August 3, the Fremantle Highway was to be towed to the port of Eemshaven in The Netherlands. Eemshaven was chosen as it is short distance of 64 km from the Fremantle Highway's current location, having the facilities required, combined with deteriorating weather conditions. The vessel's condition is described as stable and the fire would appear to have been extinguished. During the tow to Eemshaven, experts were onboard the Fremantle Highway to monitor the vessel's status.

On August 4, the Fremantle Highway was successfully towed into port.

Boskalis CEO, the company handling the salvage operations said that the fire started in some of the top decks. Probably the eighth deck, that is in a very poor state, part of it completely collapsed and heavily, heavily destructed. He continued saying that some of the ship's decks remain intact with cars located there undamaged. He added that the source of the fire is not known but that all experts with any knowledge on this topic agree that the transportation of electric vehicles introduces additional risks.

Of course, the cause of the fire will be determined after an investigation at the port. It was expected a "couple of weeks" to unload a large part of the cargo at the Eemshaven port. After that, the vessel will likely be moved to either a yard for repair or to be decommissioned.

On August 30, while unloading Fremantle Highway, a car caught fire. While moving an electric car with water damage, a reaction arose in the battery, causing a fire, reported salvage company Smit Salvage.

About two weeks ago, recovery crews started disembarking cars from the ship.

More than 2,700 vehicles that were on the upper decks were lost in the fire and were still on the ship. The cars on the lower four decks were still reasonably intact after the fire and have all been disembarked.

The car that caught fire this day was one of the last cars on the lower decks. The fire was quickly out. The fire brigade of the salvage companies was already on site. When the car was removed from the ship, flames came out from under it and the vehicle was immediately hoisted into a container with water.

D- Marine Insurers Recommendations

The International Union of Marine Insurance (IUMI) has published new recommendations on the safe carriage of electric vehicles (EVs) amid growing concerns within the shipping community, including from marine underwriters, about fires breaking out on car carriers and roll-on/roll-off (RoRo) vessels.

Extract form the Recommendations

Battery electric vehicles are usually fitted with a lithium-ion traction battery which is encapsulated and shielded by the vehicle's body. The battery pack consists of various battery modules which in turn are comprised of several battery cells. The battery system is usually placed in the vehicle floor or undercarriage where it is protected from damage by an anti-crash frame.

Electric vehicles have extensive safety systems that will automatically shut down the power and isolate the battery pack when a collision or a short circuit is detected. An important safety feature of EV battery packs are in-built battery management systems (BMS). The BMS monitors and controls the battery and is a crucial factor in ensuring EV safety. It safeguards both the user and the battery by ensuring that the cell operates within its safe operating parameters. It monitors the state of a cell as represented by parameters such as:

• Voltage - indicates a cell's total voltage, the battery's combined voltage, maximum and minimum cell voltages.

• Temperature - displays the average cell temperature, coolant intake and output temperatures, and the overall battery temperature.

• The state of charge of the cell to show the battery's charge level.

• The cell's state of health - shows the remaining battery capacity as a percentage of the original capacity.

• The cell's state of power - shows the amount of power available for a certain duration given the current usage, temperature, and other factors.

• The cell's state of safety - determined by overseeing all parameters and determining if using the cell poses any danger.

State of charge (SoC) is an electrical cell or battery's charge level compared to the total capacity of the cell or battery. Batteries at high SOCs have been shown to experience more violent reactions during thermal runaway. Testing has indicated that high SoC cells produce higher heat release rates, maximum temperatures, and concentrations of flammable and toxic gases during thermal runway events. However, while the SoC does affect the growth and peak heat release, it does not affect the total heat release.

Thermal runaway

Despite this inherently safe design thermal runaway may occur if a cell is abused, e.g. by heat, mechanical damage or overcharge. Thermal runaway can also occur as a con-sequence of a cell or battery manufacturing error.

When thermal runaway occurs, the cell is undergoing an unstable chemical reaction that is difficult to bring under control.

Probability of fire in EVs

It is often said that EVs burn more often than internal combustion engine vehicles (ICEVs). However, as statistics continue to be gathered, they currently estimate that, in general, there are fewer fires from EVs compared with fires from conventional vehicles when driven over the same distance. Current statistics from Sweden indicate that the probability of an EV fire is lower than that of a fire in an ICEV relative to the total number of vehicles.

Fire intensity

EV fires have often been claimed to be more intense than ICEV fires. In this regard, heat re-lease rates (HRR) from full-scale fire tests performed in recent years with modern vehicles, including both ICEVs and EVs were reviewed. The data compiled showed a minor difference in the total energy released during the fire (total heat release) between ICEVs and EVs. In this context it is important to emphasize that the SoC affects the growth and peak heat release, but it does not increase the total heat released.

Despite the potential for thermal runaway, studies by the Danish Institute of Fire and Security Technology and NFPA have determined that EV fires, once established, are largely fuelled by the car body and interior parts made from plastic materials and that the fire load is similar to that of internal combustion engine (ICE) vehicles.

Fire fighting

It is often stated that EV fires are impossible to extinguish. A thermal runaway in a Lithium-Ion battery is indeed difficult to extinguish unless the firefighting agents are injected directly into the battery to enable efficient cooling. If a fire breaks out in an EV (and in an ICEV also), activities in support of early detection and verification/confirmation, early fire suppression and boundary cooling are critical actions to stop the spread of the fire to the battery and to adjacent vehicles.

A particularity of EVs is the risk of re-ignition which tends to be higher for a longer period than for ICEVs. Precautionary measures to avoid re-ignition of the traction battery must therefore be taken for an extended period after a fire has been extinguished.

Toxic gases

Another aspect is related to gases from EV fires which are perceived as being extremely toxic. Hydrofluoric gases which are highly poisonous are indeed emitted from Lithium-Ion battery fires. In this context it is however important to consider that combustion gases from all types of vehicle fires are highly toxic and can cause incapacitation. Carbon monoxide and hydrogen cyanide are common causes of death when smoke has been inhaled in a fire accident. Staying out of the smoke plume and wearing adequate personal protective equipment when dealing with burning or burnt vehicles is crucially important for all fires regardless of the energy source of the vehicle.

Recommendations and best practice

Loading process and loading condition of cars

In light of the safety systems incorporated into EVs, new cars present a lower risk as compared to used vehicles. There are currently no documented cases of factory-new electric vehicles causing a fire on board. In contrast, used cars may have had accidents causing mechanical damages which may negatively impact the intactness of the battery pack.

A clear policy on the cargo which is accepted/rejected for roro spaces should be in place. Vehicles should be screened, and used/second-hand vehicles in particular should be carefully checked before being allowed on board. If there is suspicion that the battery of an EV is damaged or defective they should only be allowed if their battery is removed and if they are free from leakages.

Charging on board

Charging on board ro-ro passenger ships can be permitted if the ship operator conducts a comprehensive risk assessment and approves and implements appropriate risk control measures.

Research indicates that charging an EV on board is the safer option as inbuilt safety mechanisms are activated during charging.

Detection & confirmation/verification

Detection and verification/confirmation of a fire is key to enable successful firefighting operations. These two steps should not be considered as separate but as one step. Time between detection and confirmation/verification must be reduced to the shortest possible time. The installation of technologies which enhance early detection are therefore supported. Options include gas detection systems, thermal imaging cameras, and AI powered systems.

Firefighting

• Roros: The EU's LASHFIRE project has shown that drencher systems are effective to fight fires on board roro and ropax vessels. Full scale tests show that a drencher system has the same impact on the fire regardless of the source of the fire being an ICEV or an EV. Drencher systems are thus effective to manage and control EV fires.

This is reflected in the revised requirements developed by the IMO's Sub-Committee on Ship Systems and Equipment (SSE). The amendments to SOLAS and the Fire Safety Systems (FSS) Code will mainly apply to new passenger ships and include, inter alia, requirements for a fixed fire detection and fire alarm system to be provided for the area on the weather deck intended for the carriage of vehicles; an effective video monitoring system; and a fixed water-based fire-extinguishing system based on monitor(s) to be installed in order to cover weather decks intended for the carriage of vehicles.

• PCTCs: CO2 extinguishing systems if applied quickly after the detection and verification/confirmation of a fire have worked successfully to fight fires on board PCTCs. To further improve the usefulness, the CO2 capacity should be doubled on board PCTCs. Research projects are ongoing to methodically assess and evaluate the effectiveness of the CO2 extinguishing systems.

Research indicates that while high-expansion foam fire extinguishing systems were unable to stop thermal runaway (like any other fixed systems), it hindered the ignition of flammable gas, including gaseous electrolyte from the batteries. The system effectively prevented heat transmission from a vehicle on fire as long as it was submerged in the foam. This suggests the potential effectiveness of high-expansion foam fire extinguishing systems.

Early detection, confirmation/verification and a short response time are crucial to fight a fire successfully. The fixed firefighting systems should be applied first rather than manual firefighting by the crew.

Overarching approach

Different design, resources, equipment and circumstances have to be considered for each vessel. Individual risk assessments and tactics are essential to ensure an effective response in case of a fire on board.

E- Solutions?

Cars in containers

Lack of capacity and congestion in the car carrier sector has driven some freight forwarders and manufacturers to move cars in containers rather than delay exports until space becomes available.

"The cost of moving cars in containers is on a par with roro because although the freight is cheaper the cost of loading and unloading containers is greater."

As the automotive sector transitions to electric vehicles (EV) there have been growing concerns about the carriage of these vehicles with some high-profile accidents having been blamed on EVs, the connection of the outbreak of fires on board roro vessels.

As an example, it is pointed out that CMA CGM had a policy of shipping EVs in reefer containers, a policy that has now been reversed. Now it is the responsibility of the shipper to decide whether to put an EV into a dry or reefer container.

CMA CGM is particularly concerned about older EVs, cars with batteries older than seven years old will not be accepted for carriage, but older vehicles with a certificate showing that the battery pack is less than seven years old will be handled.

In addition, the French carrier will prevent containers with dangerous cargoes being stored in direct sunlight, but it is pointed out that it is the shipper's responsibility to decide whether are car is safe to be shipped, as they know the cargo, while the line cannot monitor where the containers are stored at the port.

Those concerns are shared by some in the shipping industry, with the threat considered very real to the well being of crews, firefighters, vessels and the environment.

Eva Mckiernan, a technical director and senior investigator at Jensen Hughes, told the Lithium-ion Batteries in the Logistics Supply Chain conference in London in March that lithium-ion batteries burn at around 1,200 degs centigrade, while combustion happens within seconds. The heat generated can cause thermal runaway, which occurs when the heat and chemical reactions reach a certain level, the fire becomes self-sustaining and very difficult to extinguish.

This view is at odds with the IUMI study (see above), which was published on 1 September, referencing the EU Lashfire project IUMI said: "Several misconceptions regarding battery electric vehicle fires circulate publicly and lead to uncertainty. Fires in battery electric vehicles are not more dangerous than fires in conventional vehicles and are currently not more frequent." According to the IUMI report it said research proves there are only minor differences between the energy released by an EV fire and a fire in an internal combustion engine vehicle (ICEV), which means that IUMI's research had reached different conclusions to those reached by a broad church of industry opinion.

Essentially there are a number of issues that need to be clarified and the industry needs to embrace a new regime. Industry needs to understand and manage the risks. That there is no evidence that the number of fires in EVs is greater than in ICEVs is agreed, but that IUMI's research findings that the heat generated from lithium-ion battery fires is not excessive, burns longer and can easily reignite, these views could look complacent.

Containerised Batteries – A Major Maritime Innovation

Containerised batteries are set to be a major innovation for shipping according to marine battery manufacturer AYK Energy as it plans to expand production at new factory in China.

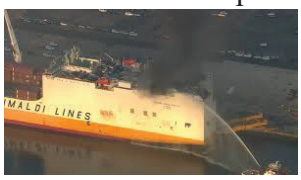
Following AYK Energy founder Chris Kruger, the new AYK Energy factory will seriously disrupt the marine battery market. From here we can build the highest quality, safest and lowest cost class approved batteries in the world. The new factory will see AYK Energy expand its production of containerised batteries which will be one of the biggest innovations in the maritime industries for the next five to 10 years. Containerised batteries have multiple benefits. They can be installed easily on deck without taking space below deck and incurring complex battery room safety requirements. Furthermore, the retrofit process is simple and does not require the vessel to be out of service for very long.

Once operational containerised batteries can be swapped out with another unit that has already been fully charged onshore.

F- Fremantle Highway was not the first fire on a car carrier with EVs onboard (or not)

The fire on the car carrier Fremantle Highway in the North Sea is just the latest in a long and ever-growing list of fires involving vehicles on roll-on/roll-off (RoRo) vessels.

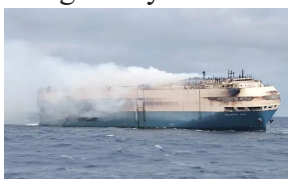
As of now the cause of the fire is unknown, but there are reports that the fire started in the battery of an electric car. The incident recalls several previous fires involving stowed vehicles on roll-on/roll-off ships in recent years:



Grande Costa D'Avorio

The Italian-flagged Grande Costa D'Avorio, a combination roll-on/roll-off (ConRo) ship caught fire on July 5, 2023, while loading used vehicles for export at Port Newark, New Jersey. Tragically, two firefighters were killed in the initial response and six others were injured. The fire continued to burn for about six days before it was extinguished.

The ship's operator, Grimaldi Deep Sea, part of Italy-based Grimaldi Group, said the ship was carrying around 1,200 vehicles and 157 containers, but supposedly no electric vehicles or hazardous cargo was on board. The investigation into the root causes and contributing factors is being led by the U.S. Coast Guard along with the National Transportation Safety Board (NTSB).



Felicity Ace

The Panama-flagged Felicity Ace, operated by Mitsui O.S.K. Lines (MOL), caught fire on February 16, 2022, approximately 90 nautical miles southwest of the Azores as the ship was underway from Embden, Germany to the U.S. East Coast. All 22 crew members abandoned ship safely.

The ship was reportedly carrying some 4,000 vehicles, including some electric vehicles and luxury brands like Porsches, Bentleys, and Lamborghinis, along with VW and Audis. The fire continued to burn until the ship sank about two weeks later on March 1, 2022.

Höegh Xiamen

Grimaldi's Höegh Xiamen was carrying 2,420 used vehicles on board when it caught fire in Jacksonville, Florida, on June 4, 2020. Nine firefighters were injured in the response and the fire took over a week to extinguish, resulting in the total loss of the vessel and cargo. The NTSB investigation revealed the fire started due to an electrical fault from an improperly disconnected battery in a used vehicle.

Grande Europa

The fire on board the Grimaldi vessel Grande Europa started on May 15, 2019, while the vessel was underway about 25 miles off Palma de Mallorca, Spain. Its cargo consisted of 1,687 vehicles, including cars, vans, trucks, and excavators, the majority of which were new. There were

also 49 containers containing mainly food products.

The initial fire started on vehicle deck 3, but was extinguished by the ship's crew in about 45 minutes. A few hours later, however, a second fire started on a separate deck and spread from there. Grimaldi's preliminary investigation into the incident suggested that the two fires started from two different new vehicles stowed on board and then spread to the other vehicles nearby. The day after the incident, Grimaldi issued a press release calling for more controls on car batteries.

Grande America

The Grimaldi ConRo Grande America sank in the Bay of Biscay back on March 12, 2019, two days a cargo fire broke out on a voyage from Hamburg, Germany to Casablanca, Morocco. The ship was carrying around 860 tons of dangerous goods and about 2,100 new and used vehicles.

Similar to the Felicity Ace, Italian authorities have submitted final reports to the IMO, but they are not yet publicly available. However, the NTSB says investigators were unable to determine a definite origin and cause of the fire, or fires, other than that fire teams found sparks coming from a truck on a vehicle deck. The fire was fought with dry chemical extinguishers, and later the vessel's fixed CO2 system. The ship eventually lost power, and the fire spread to or started separately in a cargo container.

Sincerity Ace

The 650-foot Sincerity Ace, with 21 crew members on board, caught fire December 31, 2018, while in the middle of the Pacific Ocean about 1,800 nautical miles from Oahu, forcing the master to order the vessel abandoned. Due to its distance to land, nearby commercial ships were the first to arrive on scene, helping to rescue 16 crew members. Tragically, five crew members lost their lives in the incident.

The Panama-flagged ship, operated by MOL, was reportedly carrying 3,800 Nissan vehicles, but the exact cause of the fire is still unknown. The fire continued to burn for several days and the ship was eventually towed back to Japan.

Honor

On February 24, 2017, the 623-foot-long US-flagged car carrier Honor, operated by U.S.-based ARC, was en route from Southampton, England, to Baltimore, Maryland, when a fire broke out in the upper vehicle deck. The fire was extinguished by the crew using the vessel's fixed CO2 firefighting system. The accident resulted in extensive damage to the Honor's hold as well as its cargo of about 5,000 vehicles. The Honor operated between various ports in the U.S and Europe, carrying new production vehicles, military vehicles, and personally owned used vehicles for military and government personnel, as well as household goods shipments.

The NTSB determined that the probable cause of the fire was a fault in the starter motor solenoid in one of the personally owned vehicles being transported in the vessel's cargo space. One injury was attributed to the firefighting efforts.

 Courage

On June 2, 2015, another ARC car carrier, Courage, suffered a fire in its cargo hold during a voyage from Bremerhaven, Germany, to Southampton, United Kingdom. The US-flagged vessel carried new production vehicles (Mercedes-Benz and BMW), military vehicles, personally-owned used vehicles for military and government personnel, and household goods shipments. The accident resulted in extensive damage to the vessel's cargo hold as well as the vehicles and household goods. As a result of the damage, estimated at $40 million total, the vessel's owners scrapped the vessel.

The NTSB determined that the probable cause of the fire was electrical arcing in the automatic braking system module of a vehicle carried on board.

 Arc Independence and  Höegh Transporter

In 2020, the U.S. Coast Guard investigated two car carrier fires in addition to the Höegh Xiamen fire. The Arc Independence, a US-flagged vessel, experienced a cargo hold fire while underway on August 30, 2020, about 180 miles offshore of Jacksonville. The fire was detected by the ship's detection system and contained to a single vehicle thanks to efforts by the crew using fire extinguishers.

A few months later, on November 17, 2020, the Norwegian-flagged Höegh Transporter experienced a fire while being fumigated at Blount Island's Pier 20 in Jacksonville before setting sail. The fire was reported to have started in a new vehicle after cargo operations were complete. The fire was extinguished without further damage.

G- Li-Ion Batteries Fires

Cruise Ship Iona

Fire erupted on cruise ship IONA on Oct 21 2023, in, as reported, central hub area, where vehicles for water activities are kept. It is said, that lithium battery of water scooter self-ignited, sparking a rather small fire. The ship was berthed at Southampton, fire was quickly extinguished by fire fighting system, and understood, passengers who were in atrium were evacuated, without leaving the ship.

 Tanker S Trust

While there has been a lot of attention to the dangers of transporting batterypowered vehicles and lithium-ion batteries and devices as cargo, the National Transportation Safety Board is now warning crews about the dangers of unsupervised charging of lithium-ion batteries. The NTSB working with the U.S. Coast Guard and the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) determined that a fire that destroyed the bridge of a tanker docked in Louisiana last year was caused by a lithium-ion battery-powered radio that exploded while charging on an unattended bridge.

The investigation narrowed the case of the fire aboard the oil tanker S Trust(106,000 dwt) to the batteries and specifically the batteries for a handheld radio that had been left in a charger. Docked at the Genesis Port Allen Terminal, the vessel was offloading and the bridge was unattended when the fire began. By the time the captain became aware of the fire, it had already spread and ultimately destroyed the navigation, communication, and alarm systems.

The S Trust, registered in Liberia and with a crew of 23, docked at the terminal on November 11, 2022, and was offloading high-sulfur fuel oil. At about 1530 on November 13, the master of the vessel working in his office one deck below the bridge noticed that the closed-circuit camera feed from the bridge was not showing and went to investigate. It was only then that they discovered a fire on the bridge.

The report notes that as a control station, SOLAS does not require the bridge to have fire or smoke detectors.

The master recounted to the investigators that he believed the fire was coming from the communications table but the smoke was too thick for him to enter the bridge. He ordered the fuel operations suspended and electric power turned off to the bridge. Fire crews fought the fire from both bridge wings and at 1550 the fire was declared out. No one was injured and the damage was contained to the bridge.

Sequence of images captured from the bridge camera shows the explosion and a burning object landing on the deck (NTSB). The investigators reviewed video footage from the bridge and determined at 1527 there was an orange flash followed by smoke coming from the communications table. The smoke quickly increased and two minutes later there was a second orange flash and an object flew from the area landing on the deck and continuing to burn. By 1536, nine minutes after the first flash, ash and the heat from the fire prevented further images from the camera on the bridge.

The subsequent investigation found the ship had 20 UHF handheld radios, including 14 batteries with lithium-ion cells and another 13 with nickel-metal hydride cells. There were also 16 chargers on the ship. Shifting the debris, investigators found the remains of a lithium-ion battery in a charger but its two cells were not found. The analysis rules out the other electronic devices or batteries as the cause of the fire.

Housing in France

On February 17, 2024, a fire broke out in a factory housing 900 tons of lithium batteries in the south of France. An event which raises questions about pollution and the real danger of these batteries, which are increasingly used in the automotive world.

The fire, forcing forcing the population to confine themselves, is contained and no risk of toxicity has been reported by the prefecture.

Is lithium battery harmful?

You've probably already seen electric bikes; scooters or cars explode in the street. The fault is a battery fault in some cases. Because yes, the lithium battery has become the economic model of the mobility market in recent years. Except that risks exist. If a battery explodes, one or more cells inside the battery may be damaged. A short circuit occurs, causes overheating and causes a fire. This is why batteries are normally stored in an explosion-proof safe.

Fire management: major problem

While the European Council adopted a regulation on batteries and battery waste in the summer of 2023 aimed at accelerating the recycling and replacement of batteries, environmental responsibility is at the center of the debates. Indeed, after this fire, it is the management of the

fire which poses a real question. While electric vehicle fires are rare, a factory that stores tons of batteries requires more monitoring. For example, a gasoline vehicle burns at 815 degrees while an electric vehicle burns at around 2,700 degrees. If it generally takes 7.5 cubic meters of water to put out a fire in a gasoline vehicle, it would take 10 times more water in the case of an EV.

The fire in Aveyron calls into question the handling and storage of such a product near homes. Last year, the first gigafactory dedicated to battery production was inaugurated in the north of France: a site of more than 60,000 m2 which will ultimately produce more than 300,000 batteries per year. With the development of electric cars and the Government's desire to produce French products, have the risks increased?

Some residents have had batteries thrown into their gardens and are not reassured.

The alarm bells have already been sounded!

Over the past 10 years, acceleration in battery fires has been noted. In some cases, the situation was controlled directly by employees, but in other cases, injuries were noted. The latest event dates back to October 2023. An electric car exploded in the parking lot of an university near Nimes, causing the evacuation of students.

European Commission – Press release (13 February 2024)
Provisional Agreement Modernizing Maritime Accident Investigations

The Commission welcomes the political agreement reached today between the European Parliament and the Council on the investigation of maritime accidents, modernising a 2009 Directive. The Directive applies only to maritime transport vessels to which the international conventions apply or to fishing vessels.

Although maritime safety in EU waters is very high, with few fatalities and no recent major oil spills, more than 2,000 marine accidents and incidents are still reported every year.

Among key new measures, the co-legislators agreed to bring the most serious accidents involving smaller fishing vessels (less than 15 metres) within the scope of the Directive. The European Maritime Safety Agency (EMSA) will provide operational support and training to national investigative authorities on their request, while respecting their operational independence. The revised directive also aligns EU law with the most up-to-date international provisions adopted by the International Maritime Organization and requires that Member State accident investigation authorities engage in a peer review process to improve, to learn from each other and improve their procedures and outputs.

Next steps

The political agreement reached today must now be adopted formally. Once this process is completed by the European Parliament and the Council, the new rules will be published in the Official Journal of the European Union and enter into force 20 days later. Member States will have 30 months to transpose the Directive into national law.

Background

This legislation was presented by the Commission in June 2023 as part of the maritime safety package. As laid out in the EU Green Deal, the Smart and Sustainable Mobility Strategy and the Zero Pollution Action Plan, the Commission has a vision to set shipping on a path towards zero emissions, pollution and accidents.

"Although maritime safety in EU waters is very high, every accident is one too many, and we need to learn from them. Today's agreement will help operators and regulators to take the right measures to reduce their occurence, ultimately preventing the loss of human life and environmental pollution.", said Adina Vălean, Commissioner for Transport.

FROM THE EDITOR

0. Crew

ICS Sets out Industry Principles to Combat Harassment and Bullying

Published Feb 22, 2024 by **Splash**

The International Chamber of Shipping (ICS) has published a guide to combat and eliminate harassment and bullying in the maritime sector.

The free industry guidance sets out five high level and eight detailed principles to address the issue.

ICS submitted the principles to shipping's global UN regulators, the International Labour Organization (ILO) and the International Maritime Organization (IMO), ahead of a joint meeting alongside governments, shipowners and unions.

Among the new suite of principles are the needs for individual companies to clearly define and communicate what harassment and bullying means for them, including examples of behaviors that constitute these actions. The principles also emphasize the value of establishing clear and unambiguous company complaints management procedures that cover the shore side and all shipboard departments with a dedicated complaints manager assigned as investigator to each of these groups.

In a separate paper to be considered at the upcoming ILO/IMO meeting, ICS emphasizes that company policies and initiatives alone will not suffice to address the issue, adding that the maritime sector's ability to successfully combat harassment and bullying also depends highly on the effectiveness of collaboration between governments, shipowners' and seafarers' representatives (unions), including to promote positive cultures on board.

"While shipowners are responsible for implementing shipboard policies and complementary measures to eliminate harassment and bullying from ships, national governments and seafarers' unions also have important roles to play. Unions can raise awareness and set expectations for their members, including appropriate deterrents, while all states should review their national civil and criminal codes to verify consistency with requirements of ILO's Maritime Labour Convention and Violence and Harassment Convention, both of which apply to the maritime secto," commented Tim Springett, chair of the ICS labour affairs committee.

IMO and ILO Team Up to Write Ante-Harassment Rules Into Martime Law

Published Mar 7, 2024 by **The Maritime Executive**

The International Labor Organization (ILO) and the IMO have released a new set of recommendations for reducing the impact of sexual assault and harassment at sea.

"We remain steadfast in our commitment to creating a safe and respectful working environment on board. Recognizing that this is not only a moral imperative but also a practical necessity for the industry's sustainable growth, we are committed to preventing and combatting bullying and harassment in the maritime sector," said Arsenio Dominguez, IMO's Secretary-General.

IMO and ILO are recommending new mandatory trainings for seafarers, new guidance for shipowners, and amendments to the Maritime Labor Convention (MLC). The objective is to bring the MLC in line with the ILO Violence and Harassment Convention, which applies to employment on land. Member states will have the opportunity to submit proposals for updating the MLC until September 2024, and these potential solutions will be discussed at the next joint meeting of the ILO and IMO next year.

"We urgently need to ensure that seafarers have a safe working and living environment. I welcome the recommended action, in particular the possible amendments to the MLC," ILO Director-General Gilbert F. Houngbo said. "This will strengthen the protection against violence and harassment ... to ensure seafarers' right to decent work and increase the attractiveness of the industry."

Bullying is deeply integrated into the historical tradition of seafaring, and the nickname "bully" was once synonymous with "sailor." In modern times, the prevalence of harassment varies with the behavioral standards and company culture of each vessel operator. A widely-cited review carried out by researchers at the Kalmar Maritime Academy found that about 8-25 percent of today's seafarers report experiencing some form of bullying, rising to more than half of female seafarers, who make up about one percent of the workforce on cargo vessels. A more recent survey by the Danish Maritime Authority found that reports of harassment were more concentrated among the ranks of younger seafarers, and were more likely to be motivated by race than by other factors.

These numbers are likely an undercount of the reality on board, according to the Kalmar Maritime Academy study. "The underreporting of bullying and harassment is well documented in previous research, especially in workplace cultures where incidents are trivialized," noted authors Cecilia Österman and Magnus Boström.

War and Piracy Risks Add to Continuing Decline in Seafarer Happiness

Published Jan 30, 2024 by **The Maritime Executive**

Fears over escalating piracy and war risk threats are contributing to a continuing decline in seafarer happiness according to the most recent update of a quarterly welfare study. The welfare organization The Mission to Seafarers which oversees the survey says the results are "raising serious concerns over the conditions for all those working at sea."

They note that this is the fourth consecutive quarter to show a decline in seafarer happiness. The survey measures the well-being of seafarers through ten key questions about their work and life, designed to gauge sentiment about their experiences on board. The latest report for the fourth quarter of 2023 shows an overall fall in seafarer happiness to 6.36 out of 10, following a consistent pattern from 7.1 in the first quarter to 6.77 and 6.6 in the next two quarters, and now a further decline, which the organizers terms as "considerable" over the year.

"Following the uptick in seafarer happiness in late 2022 after the lifting of COVID restrictions, it is very disappointing to see the downward trend in happiness over the course of 2023," commented Revd Canon Andrew Wright, Secretary General of The Mission to Seafarers. "Seafarers often feel the world's crises first and hardest," he notes saying that the current escalating piracy and war risk threats are adding to the perennial concerns over an unsustainable workload, insufficient shore leave, limited rest hours, financial concerns, and the burden of separation from family."

"The increase in international conflicts and heightened tensions inevitably manifested a degree of anxiety and uncertainty for those at sea," said Yves Vandenborn, Head of Loss Prevention Asia-Pacific at NorthStandard which is one of the sponsors of the survey. "With a global workforce, the maritime industry must be conscious of how easily changes in international relationships have a bearing on the wellbeing of seafarers."

The current decline they reported is driven by a decrease in sentiment across most areas of life on board covered by the survey. Seafarers, they said, show a wide range of reasons for the downward trend, but common causes for concern expressed by seafarers taking part in the survey include feeling overburdened, underappreciated, and disconnected, as well as concerns over a lack of shore leave and an inability to contact family. Financial concerns are displayed by comments over stagnating wages.

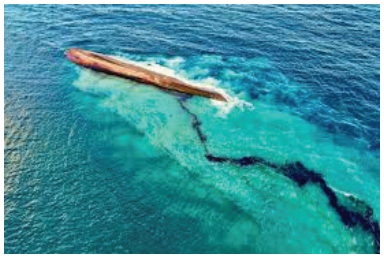
Thom Herbert, Senior Marine Surveyor and Crew Welfare Advocate at Idwal, the other sponsor for the survey, called the newest results "disappointing." He comments, "We see a continuing negative trend throughout 2023, following some apparent improvements in 2022 as the world emerged from the pandemic."

The one area that showed improvement in the results related to onboard connectivity. The shipping companies' investments in satellite links and other forms of communication are having an impact, although seafarers also talked about the inconsistency in vessel connectivity.

The Mission for Seafarer points to issues that they believe the shipping companies can address including the lack of social interaction and a growing sense of isolation among crewmembers. They call for efforts to build a sense of togetherness and a team ethos onboard,

The organization continues to work with the shipping companies to tackle the issues that continue to affect the well-being of seafarers. They provide direct support to seafarers through ship visits and also have digital solutions to help address some of the concerns.

1. Environment



Mystery Shipwreck Leaking Oil in Trinidad and Tobago

Published Feb 12, 2024 by **The Maritime Executive**

Trinidad and Tobago is currently dealing with a significant oil spill from a mystery ship that ran aground last week.

The country's Prime Minister, Keith Rowley, stated on Sunday that the spill is yet to be brought under control and described the situation as a "national emergency."

The unidentified vessel capsized last Wednesday, February 7, without sending a distress signal, no known crew members, and no clear indication of ownership. The incident has resulted in a significant oil spill that has impacted nearly 10 miles of coastline.

Prime Minister Rowley has said that cleanup and restoration efforts can only begin once the spill is under control. However, despite their efforts, divers have been unsuccessful in stopping the leak.

Hundreds of volunteers are working to manage the spread of the oil.

The spill's impact has reached the village of Lambeau, located on the southeast coast of Tobago Island, where residents have been advised to wear masks or relocate temporarily.

The mysterious vessel, bearing the name "Gulfstream," is suspected to have been involved in illicit activities, according to Rowley.

Despite the ongoing investigation and cleanup efforts, much about the ship remains unknown, including its origins and contents. Divers have been working to find additional markings to help identify the overturned vessel. Officials suspect it may have been under tow.

The country's Office of Disaster Preparedness and Management (ODPM) has provided equipment aid the Tobago Emergency Management Agency (TEMA) in response to the oil spill. The Trinidad and Tobago Defence Force (TTDF) has providing additional provisions for the response, including Tyvek suits, hazmat bins, and shovels, which will be crucial for clean-up and containment efforts.

The disaster unfortunately coincides with the peak of Carnival, a critical season for the country's tourism industry.

Published Feb 16, 2024 by **Splash**

After reviewing much material the coast guard, on February 14, was able to confirm the vessel was an unpowered fuel barge that was being towed to Guyana by a Tanzania-registered, 1976-built tug called Solo Creed. The name of the 48-year-old barge, according to Bellingcat, a Dutch data journalism organisation, is Gulfstream. The tug and barge are owned by Panamanian interests and have a history of moving Venezuelan oil with TankerTrackers.com able to confirm that the tug and barge loaded as much as 35,000 barrels of oil from Venezuela at the end of last month bound for Guyana before running into difficulty off Tobago.

The whereabouts and ownership of the tug remain unknown, while oil continues to spill from the barge, and the slick is extending overseas, now some 170 km long and in Grenada's territorial waters and likely to enter Venezuelan waters shortly despite extensive booms being put in place around the wreck.

"We are unable to plug the leak and unless we have information on how much fuel is in the barge or what exactly it contains we cannot move forward, except containment and skimming," Farley Augustine, the chief secretary of the Tobago House of Assembly told reporters yesterday.

The announcement came hours after the website Bellingcat which represents independent researchers released an extensive analysis identifying the barge. They pointed out unique elements such as "pigeonhole ladders on the side of the hull," which they noted are only found on this type of unpowered barge. They concluded it was a 60,000 bbl double-hulled barge, although noted that because of the lack of detailed registrations for barges, it is difficult to track.

The authorities also released new images showing progress with the onshore cleanup while reporting that the satellite images from today, February 14, showed the slick spreading. Winds up to 14 knots and currents are driving the slick but also keeping it offshore. They estimated the slick measures 78 nautical miles and has traveled up to 63 nautical miles including nearly 20 miles outside the Trinidad and Tobago EEZ.

In addition to receiving help from volunteers, companies operating in the country are contributing resources. BP is reported to have provided equipment including remotely operated vehicles to help in the cleanup. Booms also continue to be deployed in an attempt to prevent the oil from reaching shore.

2. Technical

First Transatlantic Crossing for Canopée With its Oceanwings Wings

Published Nov 8, 2023 by **Mer et Marine**

The sail cargo ship Canopée has just completed its first crossing across the Atlantic using its four Oceanwings wings designed and manufactured by Ayro. The ship arrived at the port of Kourou, Guyana, on November 3.

On board were components for the inaugural flight of Ariane 6 which were unloaded immediately: upper part of the launcher, including the fairing, as well as components for the boosters. This flight should take place in 2024, four years late, while Europe has lost autonomous access to space.

Canopée was designed by the French architectural office VPLP and built on behalf of ArianeGroup. Operated by Alizés, a joint venture of Jifmar Offshore Services and Zéphyr & Borée, it was delivered in December 2022 by the Dutch shipyard Neptune after subcontracting the construction of the hull to the Partner Shipyard in Jasienicka, Poland.

But the wings could not be installed immediately and it began to sail with its diesel machines, ensuring a first transatlantic journey between Saint-Nazaire and the Kourou space center, from December 2022. The wings assembled in the Caen d'Ayro plant were installed during the summer of 2023. They should enable the ship to achieve fuel savings of around 30%.

121 meters long and 22 meters wide, the ship has a large garage deck of 3,500 m². It is designed specifically to accommodate the sections of the new Ariane 6, which is due to enter service in 2024 and whose elements are more imposing than those of its predecessor, Ariane 5.

First Fixed Suction Sails Deployed on Roro Chartered to Airbus

Published Mar 4, 2024 by **The Maritime Executive**

As interest continues to grow in wind-assisted propulsion, Spanish manufacturer Bound4blue reports it has achieved another milestone with the first fixed suction sails deployed on a RoRo. The vessels owned by Louis Dreyfus Armateurs and operating for Airbus departed Saint Nazaire in France on March 3 on its first Atlantic voyage with the eSAILs.

The 5,200-dwt Ville de Bordeaux, built in 2004, is fitted with three 72-foot tall (22-meter) fixed suction sails. The bases for the sails were installed in Poland in November 2023, and the verticalization maneuver and connection of the suction sails was completed in less than two days last week while the vessel was in Vigo, Spain. Used to transport A320 components from Europe for final assembly at the aircraft manufacturer's U.S. factory in Mobile, Alabama, the vessel is expected to arrive on March 19 completing the first trip with the sails.

"This installation is our fourth ship project and the first of a fixed suction sail on a ro-ro vessel," explained David Ferrer, CTO of Bound4blue. "It proves that suction sails can be fitted on ships with a high weather deck and large windage area meeting all required stability criteria."

The installation of the eSAILs is part of the group's efforts to reduce emissions and is a critical test for the technology. According to Bound4blue, each sail will generate six to seven times more lift than a conventional sail thanks to an electric-powered air suction system that helps the airflow to re-adhere to the sail. All this force allows for the reduction of the load on the ship's main engines.

"The sails look fantastic, and we look forward to seeing them in action," said Mathieu Muzeau, Transport & Logistic General Manager at LDA.

The two companies have demonstrated their interest in wind-assisted propulsion. They participated in the validation tests of the kite system which was recently acquired by Japan's "K" Line developed by rival Airseas. The two companies also announced they have placed an order in China to build three larger RoRos that will be fitted with Norsepower wind rotors. It was the largest order to date for rotors.

Note

It could seem really funny that these two French "sail ships", or more exactly "wind assisted ships" are chartered one to Ariane Space and the other one to Airbus Industry, both companies not really known for being small users of environmentally-free fuel.

CESMA LOGBOOK (2024-1)

We were represented at the following occasions:

15/FEBRUARY	**MARITIME LAW STUDENTS' COLLOQUUM, LE HAVRE, FRANCE (SG)**
22/FEBRUARY	**CESMA BOARD MEETING, VIDEO**
20/MARCH	**FRENCH MARITIME BUREAU OF INVESTIGATION MEETING, PARIS (SG)**
21/MARCH	**CHIMICAL RISKS AT SEA COLLOQUUM, PARIS (SG)**

On the front page:

Bulk Carrier TRUE CONFIDENCE, hit by missile in Gulf of Aden – European Task Force in Red Sea and Gulf of Aden – Lithium-ion Batteries in Electrical Vehicles – SS ROTTERDAM, where CESMA Council will be hold on May 23rd

(abridged)

AIMS OF THE ORGANISATION

- **TO WORLDWIDE PROTECT THE PROFESSIONAL INTERESTS AND STATUS OF EUROPEAN SEAGOING SHIPMASTERS.**
- **TO PROMOTE MARITIME SAFETY AND PROTECT THE MARINE ENVIRONMENT.**
- **TO PROMOTE ESTABLISHMENT OF EFFECTIVE RULES WHICH PROVIDE HIGH PROFESSIONAL MARITIME STANDARDS AND PROPER MANNING SCALES FOR VESSELS UNDER AN EUROPEAN NATION FLAG.**
- **TO INFORM THE PUBLIC IN THE EU ABOUT DEVELOPMENTS IN THE EUROPEAN MARITIME INDUSTRY AND THOSE CONCERNING SHIPMASTERS IN PARTICULAR.**
- **TO CO-OPERATE WITH OTHER INTERNATIONAL MARITIME ORGANISATIONS.**
- **TO RETAIN AND DEVELOP THE HIGHEST MARITIME KNOWLEDGE AND EXPERIENCE IN EUROPE.**
- **TO BE INVOLVED IN RESEARCH CONCERNING MARITIME MATTERS IF APPLICABLE IN CO- OPERATION WITH OTHER EUROPEAN INSTITUTIONS AND/OR ORGANISATIONS.**
- **TO ASSIST MEMBER SHIPMASTERS WHO ENCOUNTER DIFFICULTIES IN PORTS WITHIN THE REACH OF NATIONS REPRESENTED BY CESMA MEMBER ASSOCIATIONS**
- **TO PROMOTE THE SEAFARING PROFESSION IN EU MEMBER STATES**

ANNUAL SUBSCRIPTION:

EURO 16.00 PER SEAGOING MASTER (WITH A MINIMUM OF 25)

EURO 8.00 PER SEAGOING MASTER FOR ASSOCIATED MEMBER ASSOCIATIONS (WITH A MINIMUM OF 25)

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