



Fire on vessel "Freemantle Highway" near Ameland, 25 Jul 23

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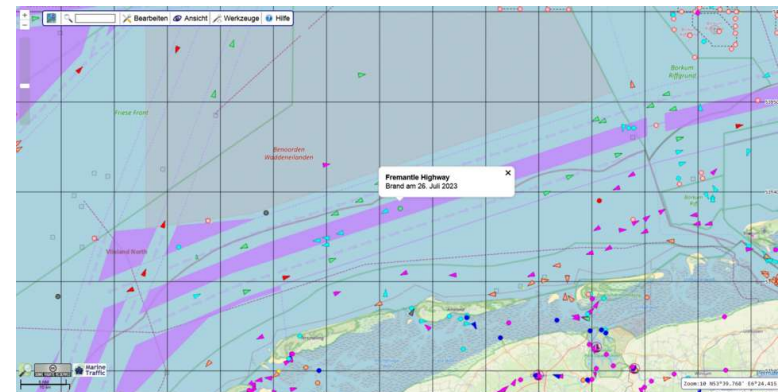
Narrative (I)

- During the night of 25 to 26 July 2023, a fire broke out on board the ship
- The ship was sailing north of Ameland (an island north of the Netherlands) during the fire.
- As a result of the fire, one crew member died and several people were injured.



Narrative (II)

- The ship was on its way from Bremerhaven to Singapore via the Suez Canal on 25 July 2023.
- The freighter had 3,783 cars (mostly new cars) on board, including 498 vehicles with electric drives.
- The cargo also included trucks and so-called 'high & heavy' cargo such as construction and agricultural machinery.
- The ship's tanks contained 1,600 t of heavy fuel oil and a further 200 t of marine diesel oil as ship fuels.





Narrative (III)

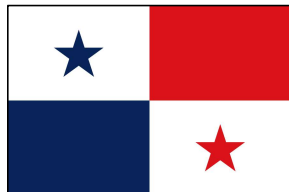
- The car freighter had just left German territorial waters
- The fire occurred north of the Wadden Sea National Park (UNESCO world heritage and biosphere reserve area)
- According to Mr Kaspera (Director of German Maritime Accident Investigation Board – BSU), it was ‘luck and skill’ that enabled the shipwrecked vessel to be salvaged:

‘I would like to praise our Dutch colleagues, who managed to prevent a catastrophe with great professionalism and calmness.’



Technical data (I)

- Name: FREMANTLE HIGHWAY
- Vessel type: Car carrier / Large
- Flag: Panama



- Year built: 2013
- Draft: 10.01 m
- Length overall (LOA): 199 m
- Width (beam): 32 m
- Deadweight (DWT): 18,549 t

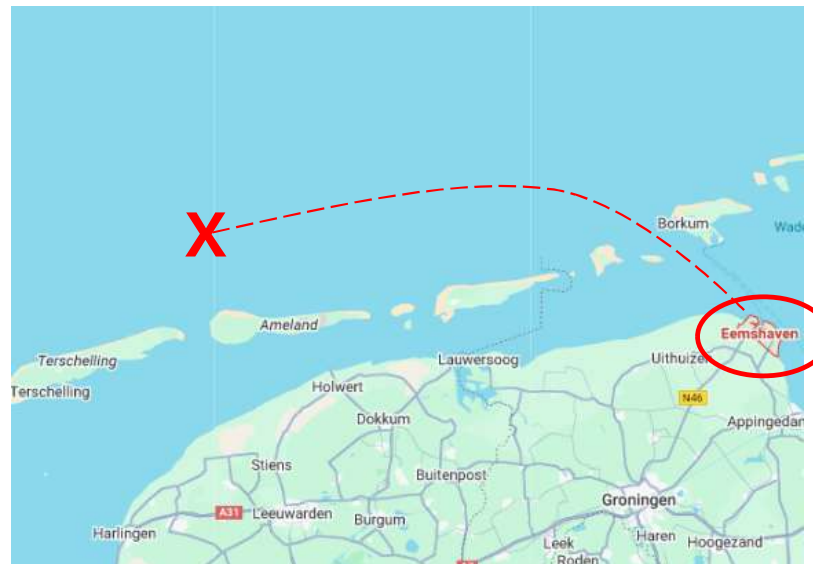


Technical data (II)

- The ship is powered by a two-stroke eight-cylinder diesel engine with an output of 12,240 kW (16,410 hp), acting on a propeller
- Four diesel generators with a total output of 4,750 kW for power generation
- A stern ramp on the starboard side and a side ramp approximately in the middle on the starboard side are available for cargo handling.
- The rear ramp can be loaded with up to 100 t.
- The maximum ceiling height on the vehicle decks is 5.1 m.

Salvage works (I)

- The Dutch government decided to tow the damaged car carrier 'Fremantle Highway' to the port of Eemshaven in the Netherlands for salvage works.



Salvage works (II)



The damaged ship in Eemshaven

Unloading vehicles from
the belly of the freighter



Salvage and re-use of the vessel

- On 27 Dec 2024, the 275-meter long BOKA Vanguard, the world's largest semi-submersible heavy lift vessel, delivered the damaged freighter for repair to China
- Here, it will undergo repairs and modifications before returning to service





Investigation (I)

- Two investigations
 - The Dutch Safety Board is investigating the course of emergency assistance during the fire.
 - How did the assistance start immediately after the fire and how did that assistance develop further?
 - The investigation is still ongoing and is in the analysis phase.
 - It is currently unknown when the final report of this investigation will be published.



Investigation (II)

- Two investigations (cont'd)
 - The Panama Maritime Investigation Agency (PMA) is leading the investigation into the fire and the resulting (fatal) injuries to the people aboard the ship, because the cargo ship was sailing under the flag of Panama.
 - The fire broke out off the Dutch coast, making the Netherlands a 'substantially interested state' in this investigation.
 - The Dutch Safety Board is actively contributing to the investigation and will cooperate with the Panamanian authorities if requested.



Investigation (III)

- There has been much speculation that the battery pack from an electric car caused the fire, but this proved to be wrong when offloading the ship.
- Around 1,000 cars were recovered in essentially good condition - among them all the 498 electrical cars which were on board the ship.
- However, the cause of the fire is unknown. Investigations started when the ship was moored in Eemshaven.

Reactions (I)

Germany

- Christian Meyer, minister for the environment of Lower Saxony, a German coastline state, demanded better safety and environmental standards for commercial ships.
- High-risk ships should not take any coastal routes and thus endanger the Wadden Sea National Park.
- Meyer recalled the past ship disasters with the MSC Zoe, in which several containers fell overboard and landed near Borkum in 2019, and the Pallas, which was wrecked off the German island of Amrum in 1998.

Reactions (II)

German nature conservation organization NABU

- NABU demanded that the protection of the Wadden Sea should have priority over economic interests.
- They also stated that maritime traffic had to be reorganized around marine protected areas in order to comply with the EU biodiversity strategy, and that the transport of battery-powered vehicles had to be carried out under much stricter transport and fire protection regulations.
- Germany should play an active advocate for these regulations at the IMO in cooperation with the Netherlands and Denmark.

Reactions (III)

International Maritime Organization (IMO)

- In light of the growing number of fires on cargo ships, IMO will announce new safety standards for those transporting electric vehicles in 2024.
- The guidelines could include specifications on how fully a battery can be charged.
- The IMO said that
 - chemicals for extinguishing fires,
 - special fire blankets,
 - equipment such as battery-penetrating jet extinguishers, and
 - bigger gaps left between electric vehicles on ships

could also become mandatory.



IMO Sub-Committee on ship systems and equipment (SSE 10)

- The 10th SSE was held from 4 to 8 March 2024.
- SSE 10 agreed
 - on a road map for considering the adequacy of the fire safety system requirements for ships carrying new energy and electrical vehicles, and
 - initiated the consideration of measures for detecting and controlling fires in cargo holds of container ships.

Recent items at IMO SSE 11 (Feb 25)

Further work on fire protection

1. Review and update of SOLAS regulation II-2/9 on **containment of fire** to incorporate existing guidance and clarify requirements
2. SOLAS chapter II-2 and International Code for Fire Safety Systems (FSS Code) concerning **detection and control of fires in cargo holds** and on the cargo deck of container ships

Recent items at IMO SSE 11 (Feb 25)

3. Evaluation of adequacy of fire protection, detection and extinction arrangements in vehicle, special category and ro-ro spaces, in order to reduce the fire risk of ships carrying new energy vehicles.

Questions



*Gimhae Int'l Airport, South Korea, 28 Jan 2025, Fire onboard Airbus A321ceo, Air Busan
Probable cause of the fire was a malfunctioning portable power bank in carry-on luggage*