



**MARINE SAFETY INVESTIGATION REPORT ON A
VERY SERIOUS MARINE CASUALTY**

VESSEL NAME	: ENKİ / HÜRKUŞ
IMO NUMBER	: 9237864 / -
FLAG OF THE VESSEL	: SAINT KITTS&NEVIS / TURKISH
LOCATION OF ACCIDENT	: Anchorage Area C at the Southern Entrance of the Istanbul Strait
DATE and TIME OF ACCIDENT	: 03/03/2022-12:15 (GMT +3)
DEAD / INJURED	: 1/-
DAMAGE CONDITION and POLLUTION	: -/-

Board Decision No: 07 / D-03 / 2023

Date: 20 / 03 / 2023

The sole objective of this investigation is to make recommendations for the avoidance of similar accidents and incidents within the framework of the Transport Safety Investigation Center regulation. This report is neither the product of a judicial or administrative investigation nor intended to attribute blame or liability.

LEGAL BASIS

This marine casualty has been investigated by the provisions of the “Directive of Investigation of Marine Casualties and Incidents” published and enacted in the Official Gazette dated 11/27/2019 and numbered 30961.

Also, MSC.255(84) [International Maritime Organisation Resolutions on International Standards and Recommended Practices for Safety Investigations into Marine Accidents or Incidents (Casualty Investigation Code)], as well as IMO Resolution A.1075(28) (Guidelines to Assist Investigators in the Implementation of the Casualty Investigation Code), have also been taken into account for the procedures and principles of the investigation.

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DEFINITIONS and ABBREVIATIONS

<i>GMT</i>	: <i>Greenwich Mean Time</i>
<i>NM</i>	: <i>Nautical Mile</i>
<i>SOLAS</i>	: <i>International Convention for the Safety of Life at Sea</i>
<i>ISM</i>	: <i>International Safe Management</i>
<i>MOB</i>	: <i>Man Over Board</i>
<i>SMS</i>	: <i>Safety Management System</i>

SUMMARY

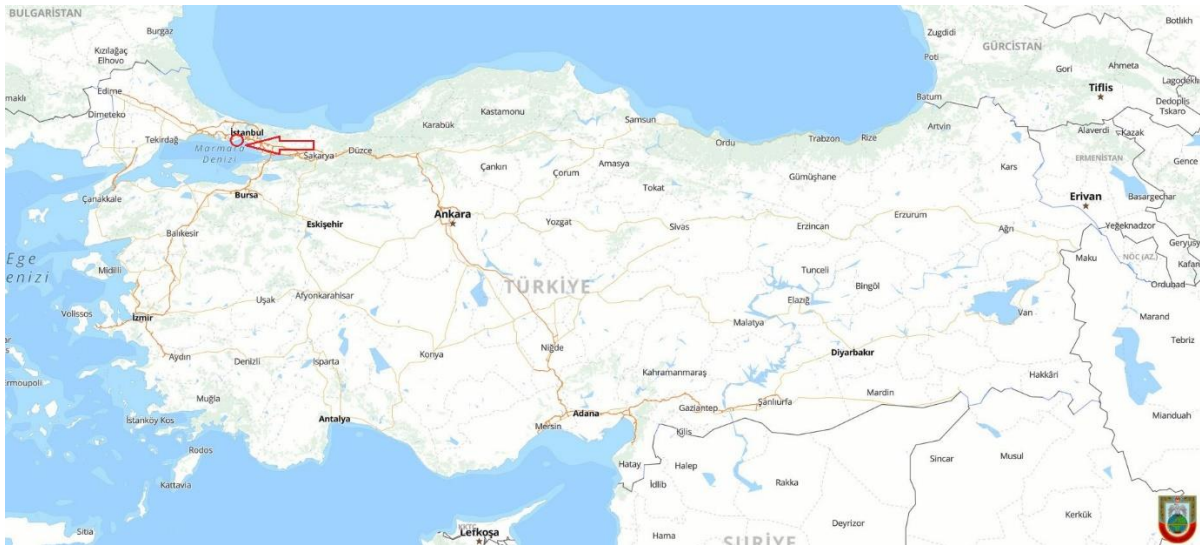


Image 1 Location of the Accident

Note: All times used in the report are local time (GMT +3)

ENKI, a Saint Kitts&Nevis flagged chemical tanker, departed from Samos Island Port of Greece to Kulevi Port of Georgia with no cargo (ballasted) at 00:00 on 24/02/2022 for cargo loading. The tanker moored at the anchorage site for Vessels Carrying Dangerous Goods in Zone C at the southern entrance of the Istanbul Strait on 26 February 2022. Since the duty of the cook working on board the tanker has expired, the new cook was planned to board the tanker at the anchorage site.

The new cook, who boarded HÜRKUŞ, a Turkish-flagged agency boat, to be transported to the tanker, went overboard at around 12:15 on 03/03/2022 while climbing up the side ladder from the agency boat to the tanker. The crew of the tanker and the agency boat initiated search and rescue operations to rescue the casualty from the sea. The casualty was recovered from the sea at 12:50 by the rescue boat that was launched by the tanker and first aid was applied to revive the casualty, but the casualty was already passed away.

Based on the results of the marine casualty investigation, recommendations were directed to the Directorate General for Maritime Affairs, Ship Operator / Shipowner and Agencies providing Agency Boat Service.

SECTION 1 – FACTUAL INFORMATION

1.1 Information on the Vessels ENKİ and HÜRKUŞ

	M/V ENKİ	HÜRKUŞ
Flag	Saint Kitts&Nevis	Turkish Flag
Port of Registry	Basseterre	Istanbul
Number	IMO 9237864	2100315
Call Sign	V4OI4	TCA3976
Ship Type	Chemical Tanker	Agency Boat
Place and Year of Building	Tuzla – Türkiye / 2001	Tuzla – Türkiye / 2016
Gross Tonnage	2788	24,97
Length Over All	96,30 m	14,3 m
Breadth	14,2 m	4,6 m
Freeboard	3,7 m	1,7 m
Main Engine Power	2040 kW	456 kW



Image 2 The tanker, M/T Enki



Image 3 Hürkuş agency boat

1.2 Information on Vessel Navigation

	M/V ENKİ	HÜRKUŞ
Port of Departure	Samos Island/Greece	Zeytinburnu/Istanbul
Port of Arrival	Kulevi/ Georgia	Zeytinburnu/Istanbul
Number of Crew	13	2
Minimum Safe Manning	10	2
Type of Navigation	Ocean Going	Cabotage
Cargo/Passenger Condition	In Ballast	1 passenger

1.3 Information on Accident

Date/Time of Accident	03/03/2022/ 12:15 (GMT +3)
Accident Type (IMO)	Very Serious Marine Casualty
Type of Accident	Man Over Board From Side Ladder
Location of Accident	40 56',6 North- 28 51',0 East
Injured / Dead / Missing	- / 1 / -
Damage	None
Pollution	None

1.4 Information on Environmental Conditions¹

Wind	4/6 Beaufort force from North/Northwest
Weather Condition	Overcast and Showers
Wave Height	1 - 1,5 m
Seawater temperature	7 °C
Air temperature	5 °C
Visibility	Good, moderate during rainfall

¹It was prepared based on the meteorological data retrieved from the Directorate General of Meteorology on 23/05/2022.

1.5 Information on Manning and Key Crew

The tanker ENKI was required to be manned with 10 crew members on board according to the Minimum Safe Manning Certificate issued by SAINT KITTS&NEVIS, the flag State of the tanker, in accordance with Rule V/14 of the International Convention for the Safety of Life at Sea (SOLAS 74). There were 13 crew onboard, including the master, on the day of the accident and the tanker was manned with sufficient number of qualified seafarers according to the Minimum Safe Manning Certificate.

The Directive on the Manning of Vessels with Seafarers issued by Turkey, the flag State of the agency boat HÜRKUŞ, regulates the minimum number of seafarers required to be on board the service boats and the minimum qualifications required for the seafarers to hold. Table 9 of the said Directive stipulates that the agency boat HÜRKUŞ, which navigates in cabotage, must be manned by a total of two seafarers; consisting of one able seaman and one ordinary seaman.

The agency boat was manned by one able seaman (skipper) and one ordinary seaman total two crew on the day of the accident, and it was manned with sufficient number and qualification of seafarers.

The following provides information about the key crew members involved in the accident.

1.5.1.1 Master of the tanker, ENKI

The Ship's master is a Russian citizen. He was 43 years old at the time of the accident. He has certificate of competency as an Oceangoing Master. He has been working as a master for the last year and has been working on the tanker for the last three months. He does not know the casualty.

1.5.1.2 Chief Officer of the tanker, ENKI

The Chief officer is a Russian citizen. He was 37 years old at the time of the accident. He has certificate of competency as an Oceangoing Chief Officer and did not acquaint with the casualty. He was on board the rescue boat which was launched from the tanker during the rescue operations of the casualty from the sea.

1.5.2.1 Skipper of the Service Boat, HÜRKUŞ

The skipper (agency boat master) is a Turkish citizen. He was 35 years old at the time of the accident. He has certificate of competency as an able seaman. He has been working at the same company for 4 years.

1.5.2.2 Ordinary Seaman of the Service Boat, HÜRKUŞ

He was 25 years old at the time of the accident and Turkish citizen and has a certificate of competency as an oiler and ordinary seaman of the Service Boat. He was the closest eyewitness at the time of the accident.

SECTION 2 – NARRATIVE

The sequence and timing of the events that led to the marine accident under investigation and the location of the individuals involved are based on eyewitness statements and video footage.

2.1 Sequence of Events

While the chemical tanker ENKI was sailing from Samos Island of Greece to Kulevi Port of Georgia, on 26/02/2022, she was moored at the tanker anchorage site off the coast of Zeytinburnu. While the tanker was moored, it was decided to change one of the crew. The agency service boat HÜRKUŞ departed from the port of Zeyport at 12:00 on 03/03/2022 and arrived at the anchorage site of the tanker ENKI (Image 4).

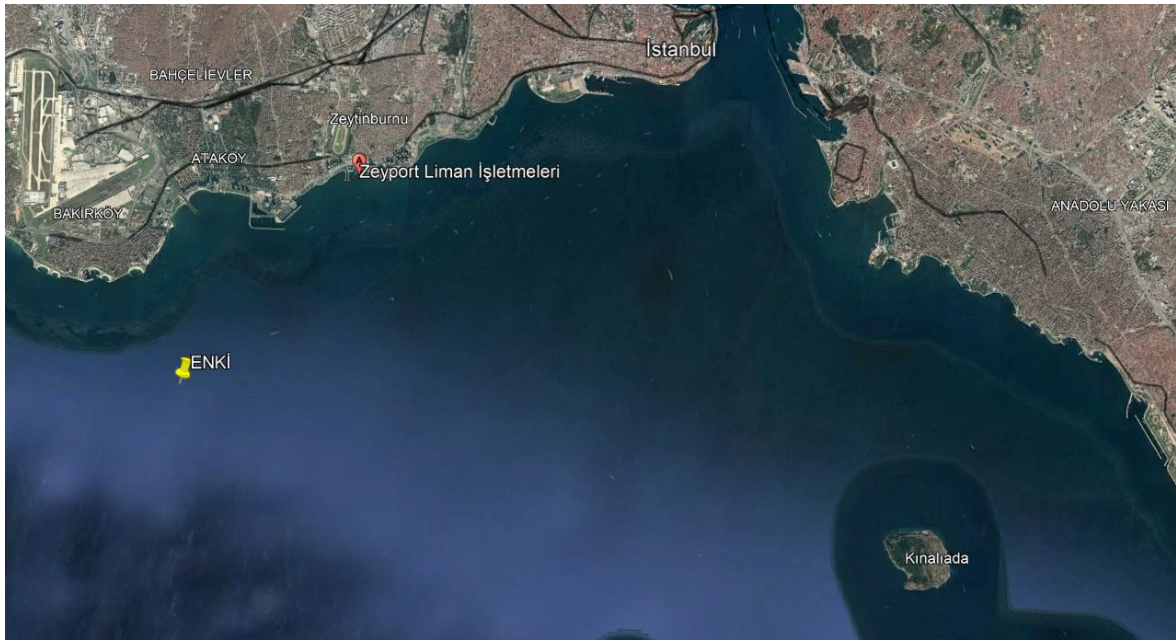


Image 4 Location where ENKI was moored

At around 12:20, the agency service boat first tried to come alongside the tanker from the side, but with the effect of weather conditions and the belief that the crew would not be able to board the tanker, the service boat approached the tanker from the bow. The ordinary seaman aboard the boat took the lower end of the side ladder extending from the tanker ENKI to the forecandle of the boat (Image 5).



Image 5 The side ladder on the forecastle

Thereafter, the ordinary seaman aboard the service boat accompanied the casualty until she stepped on the side ladder, (Image 6) and upon the casualty not to ask for help, he headed towards the bridge of the boat. Meanwhile, when the casualty stepped onto the third step from the second step of the side ladder, she went overboard the sea from the port side of the boat with a bag on her shoulder.

After 13 seconds, a life jacket was thrown to the casualty by the ordinary seaman aboard the agency service boat (Image 7), and assistance was sought from the crew of the tanker and the boat. The second life jacket was thrown to the casualty 36 seconds after the casualty went overboard, and the life buoy with a hauling line was thrown to the casualty 87 seconds after the casualty was overboard.



Image 6 When the ordinary seaman accompanied the casualty until she stepped on the side ladder



Image 7 Throwing a lifebuoy into the sea

The casualty was able to grab the hauling line of the life buoy thrown into the sea for a while and then released it after a while. The currents around the region drifted the casualty about 100 metres away from the tanker.

Meanwhile, a “Man overboard” alarm was raised on the tanker, and a lifeboat was launched (Image 8). The adrift casualty was reached approximately 25 minutes after the accident and

taken into the rescue boat. Although the first aid and resuscitation, airway, breathing and circulation (ABC) procedure was performed when the casualty was taken into the rescue boat, it was found out that the casualty had drowned² and died.



Image 8 Launching of the lifeboat

According to the deck logs of the tanker ENKI, the sequence of events related to the accident is outlined below.

12:20 Crew change boat came alongside the starboard side.

12:25 A “Man overboard” message was broadcasted on VHF.

12:27 An alarm was raised.

12:30 Lifeboat was launched and a rescue operation was initiated.

12:50 The seafarer was recovered from the sea to the rescue boat and the Chief Officer began the first aid.

²Report of the Forensic Medicine Institute dated 23/11/2022.

13:00 The casualty was observed to show no signs of respiration. CPR was initiated. Medical assistance was sought from the Vessel Traffic Services Sector Kadıköy.

13:30 ABC (first aid) was ceased as no result was achieved.

13:35 The police boarded the tanker.

13:42 A doctor boarded the tanker.

13:46 The doctor examined the casualty.

13:50 The doctor pronounced the casualty as dead.

14:20 The casualty was laid on a stretcher.

14:25 The casualty was moved down to the agency boat.

14:30 The police-doctor-agency disembarked the tanker and the boat detached from the tanker.

SECTION 3 - ANALYSIS

When analysing the marine accident under investigation, the sequence and analysis of events aimed to identify the safety factors that led to the occurrence of the accident to draw valuable conclusions to guide safety recommendations.

3.1 Height and Balance of the Side Ladder from the Boat

Generally, crew and pilots embark and disembark on commercial vessels offshore through the side ladders. Since many accidents have taken place worldwide during the transfer of crew through this means, it has been regulated by Rule 23, Chapter V of SOLAS 74 Convention. Also, the International Maritime Organisation (IMO) Resolution A.1045 (27) sets out the technical specifications of the side ladders and the requirements for their installation on board for the use of the side ladders in crew transfers. A poster prepared by the IMO lists the characteristics that a side ladder should have (Annex 1). As clearly illustrated in Figure 9, the height of the side ladder from the boat during crew transfer should be adjusted according to the request of the pilot boarding the tanker and it should be higher than the deck of the boat where the transfer will take place. When the height of the side ladder is required to be adjusted, the vessel should be informed and the transfer should be stopped until the side ladder has been adjusted to the correct height. There must be permanent communication between the vessel and the boat during the transfer. All steps of the side ladder should rest on the side of the vessel to maintain stability of the side ladder (Figure 9).

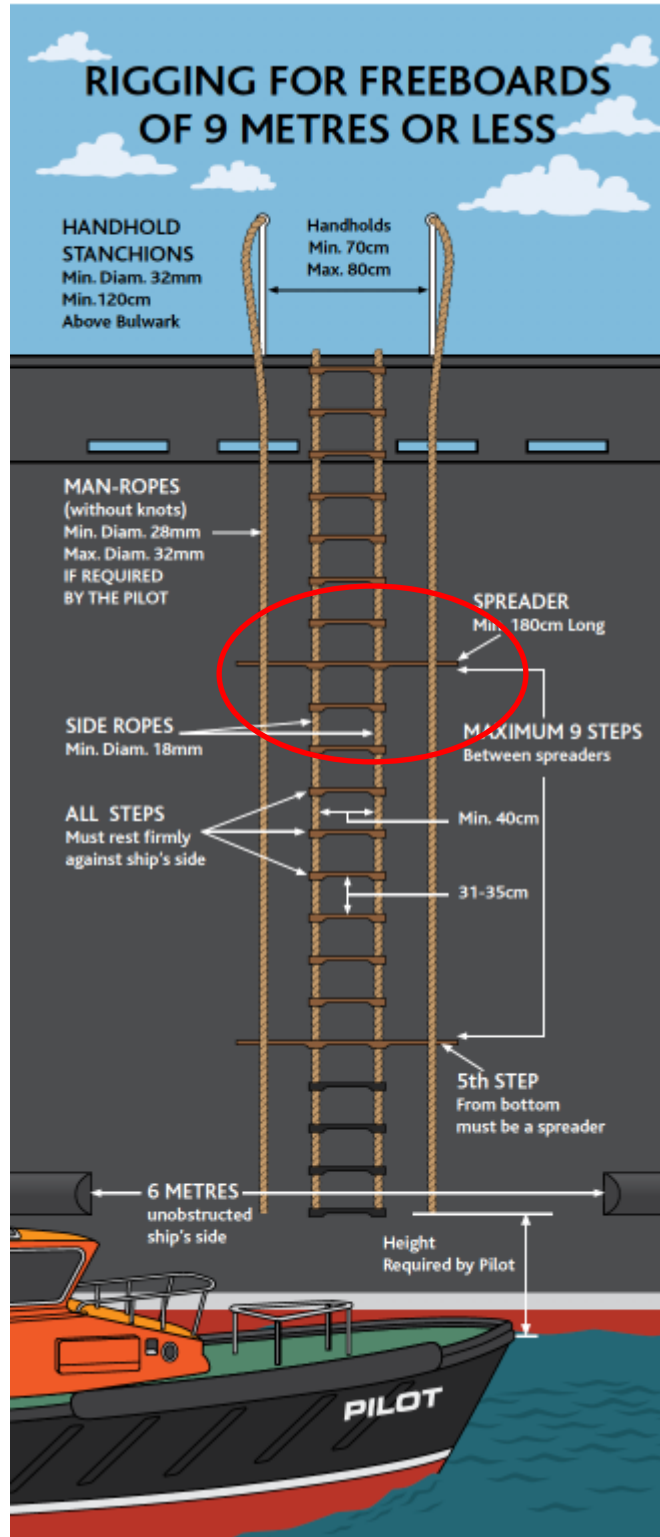


Image 9 Application of a side ladder on the IMO Poster

In best maritime practices, the boat crew should stabilise the side ladder as far as possible by holding the side ladder, as shown in Image 10 while the crew is boarding a vessel, and the boat crew should continue to supervise the crew until the crew can climb the side ladder safely.



Image 10 Stabilising the side ladder and accompanying the pilot

On the day of the accident, when the agency service boat transported the new seafarer on board, the side ladder was rigged on the starboard side. The freeboard of the tanker was 3,7 metres and the side ladder was approximately 1 metre above the sea surface. The freeboard of the service boat was 1,7 metres and the height of the side ladder required for the casualty to board was approximately 2 metres. When the tanker was visited for an accident investigation one day after the accident, the location of the side ladder was as shown in Image 11.



Image 11 Pilot's ladder lowered down to the sea, image taken 1 day after the accident

On the day of the accident, the agency service boat, having positioned herself with engine power at the side where the side ladder was rigged, began to prepare for the transfer of the seafarer on board. The ordinary seaman in charge on board the agency boat took the lower steps of the side ladder down the sea to the forecastle of the boat for a better alongside the tanker and to avoid any gap between the tanker and the boat (Image 12).



Image 12 Taking the side ladder on the forecastle of the agency boat

At the time of the accident, the agency service boat moved up and down relative to the tanker on the sea with 1-1.5-metre-high waves due to the effect of the wind that blew from the north-northwest with a force of 4-6 Beaufort. The sea conditions also affected the boat to move away from the tanker. The side ladder was rigged longer than required by the tanker and the excess of the ladder was taken to the forecastle of the boat by the boat crew. When the excess of the side ladder was placed on the forecastle of the boat, it prevented all the steps of the side ladder from resting on the ship's side and rendered the side ladder unstable. Also, the boat crew did not maintain the stability of the side ladder by holding it until the seafarer began to climb safely up the side ladder. Based on the statement of the boat crew,

the casualty refused the assistance offered to climb the side ladder. Thereupon, the boat crew headed towards the accommodation of the lifeboat. When the casualty left the agency boat and began to climb the side ladder, she went overboard the sea from the unstable side ladder from the fore port side of the boat (Image 13).

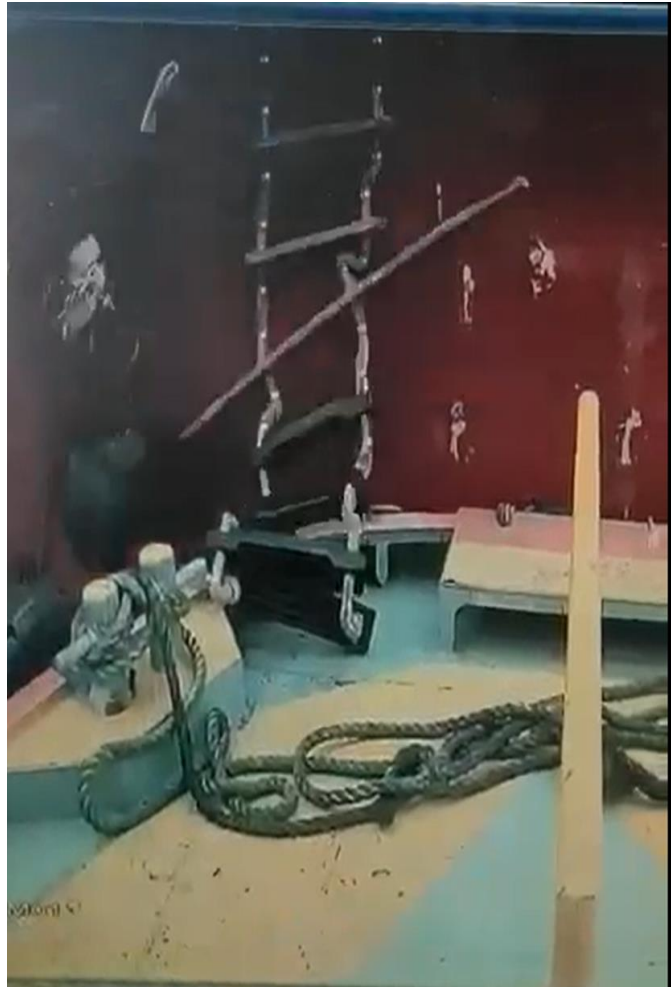


Image 13 The moment of Overboard of the Casualty from the Side Ladder

It is clearly visible in the video footage on the boat related to the moment of the accident that while the ordinary seaman in charge of the boat was trying to help the casualty immediately after she went overboard, the side ladder, which was on the fore-castle of the boat before the accident, was affected by the sea conditions and could not maintain its vertical position, lost its balance and shifted its direction (Image 14, Image 15). In addition, it is important for the safety of crew transfer that the ordinary seaman in charge of the boat tries to stabilise the side ladder as much as possible by holding side ladder during the climb of the seafarer.

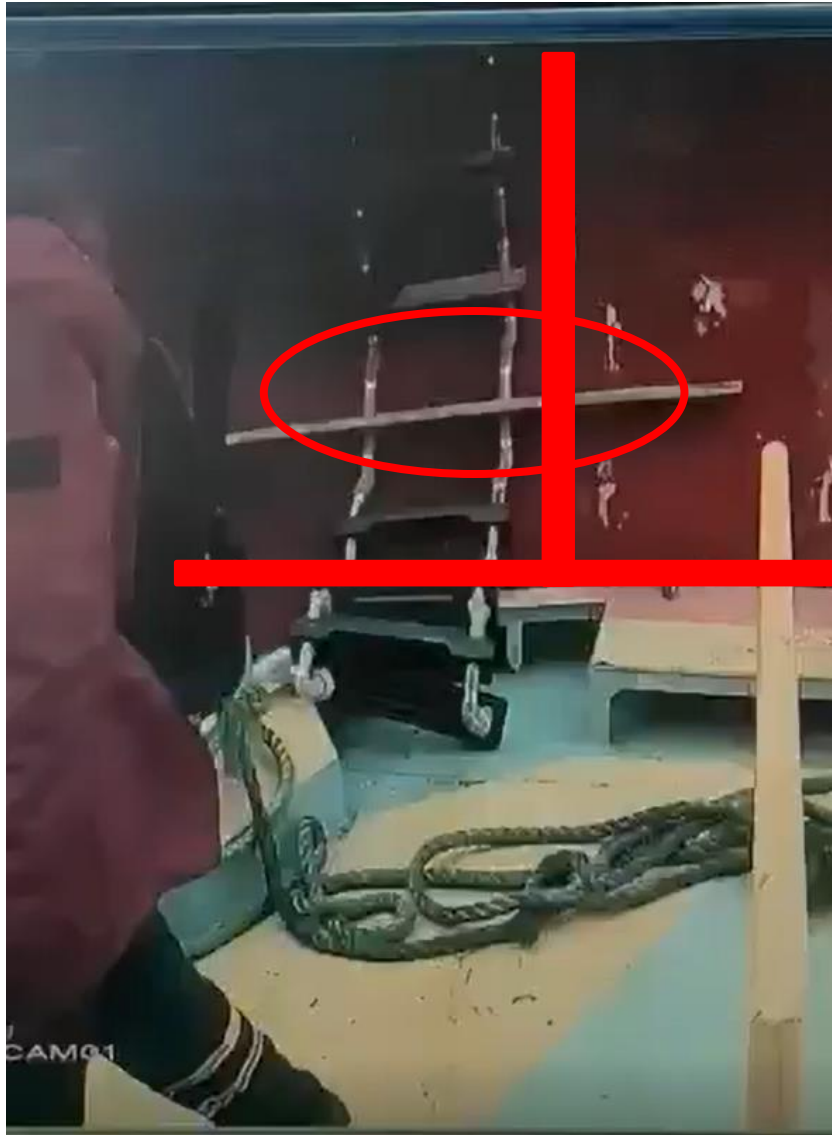


Image 14 The condition of the side ladder at the time when the casualty went overboard

Based on the above analysis, it is considered that there were no suitable conditions for the transfer of the crew to the tanker since the side ladder was not rigged in accordance with the requirements of IMO Resolution A.1045(27) and the lower steps of the side ladder were placed on the forecastle of the boat and the boat crew could not maintain the stability of the side ladder during the transfer. This is considered to be first of the factors that caused the casualty to go overboard.



Image 15 The condition where the step of the side ladder rotates at the time when the casualty went overboard

It was observed that the side ladder control was valid until 01/12/2022 and that there were logs indicating that the periodical inspection was performed. However, the images of the side ladder taken after the accident show that the ropes of the side ladder were locally fagged out and the side ladder was worn out (Image 16). Both the rotation of the step of the side ladder while the casualty stepped on the side ladder as seen in Image 15 and the images that give an idea about the condition of the side ladder indicate a lack of maintenance on the side ladder.



Image 16 General condition of the step of the side ladder

3.2 Risk Assessment and the Drills for Boat-Tanker

As it is known, the studies required to be carried out to identify hazards, analyse and rate the factors that cause these hazards to turn into risks and the risks resulting from the hazards and determine the control measures are defined as risk assessment.

The researches have revealed that 98% of accidents/incidents are related to human-systems and can be prevented by measures to be taken as a result of appropriate risk management. It can be said that risk management involves taking precautions and protecting life, property and environmental safety against possible hazards through the operation of a kind of an early warning system, as well as hearing/seeing/feeling the footsteps of the accident/incident and taking precautions.

International Safety Management (ISM) Code, 1.2 Objectives, 1.2.2 The objectives of the company's safety management include Paragraph 1 which stipulates the provision of a safe working environment and safe practices in vessel operation; Paragraph 2 which stipulates the assessment of all identified risks to the vessel, crew and the marine environment and the establishment of appropriate measures; and Paragraph 3 stipulates the continuous improvement of the capabilities of vessel and shore crew in emergencies, including the safety of the vessel and the protection of the environment.

Muster drills, which are carried out in accordance with SOLAS and compulsory to be practised at certain periods on board vessels navigating internationally, are exercised to get ready for emergencies such as fire, rescue from an enclosed space, emergency manoeuvring, emergency departure, flooding, fuel leakage, man overboard, station duty in a rescue boat, etc.

SOLAS Chapter III, Regulation 19 states:

Each crew member shall attend at least one abandon ship drill and one fire drill per month. If more than 25% of the crew did not attend the abandon ship and fire drills held one month ago, drills shall be held with the crew within 24 hours after leaving the port. Training shall be provided in accordance with the drills exercised in the muster drills held every month. Monthly inspections shall include weekly checks and quarterly inspections shall include monthly checks.

When the muster drills of the crew were analysed, given that the crew was replaced in December, there was no evidence that Man Overboard (MOB) drills were carried out on time.

In general, agency boats are defined under service boats in vessel types definitions. The Technical Regulation of Vessels (Annex 23) of Turkish national legislation defines the requirements for training and drills according to vessel types. Accordingly;

The man overboard drills must be held once every 6 months on all service vessels. After the subject accident, no evidence could be provided that the mentioned drills were recorded. Therefore, it was not possible to make sure whether the crew of said boat exercised the scheduled drills or not.

On the other hand, the reaction of the boat crew in the first minutes of the accident indicates that they were not sufficiently prepared for the accident. As such, it is considered that it would be helpful to record the drills to be exercised on the agency boats and to review the relevant logs during the surveys of the boats to make sure that the said drills were exercised.

When the muster drills of the tanker crew were analysed, given that the crew was replaced in December, there was no evidence that MOB drills were carried out on time.

No evidence was found that the tanker and the boat assessed the risks against the man overboard, implemented measures and risk control steps to minimise the risk, and exercised muster drills.

Casualties who go overboard in cold waters begin to breathe faster than normal (hyperventilation) and their blood pressure and heart rate rise due to exposure to cold water shock, raising the risk of drowning or a heart attack. Although five minutes after getting into the water, heart rate and breathing can not return to normal. Therefore, if the person who goes overboard could not be rescued within 5 minutes, most probably s/he would either fail to help himself/herself or lose consciousness. As of the date of the accident, the average temperature of the seawater in the Marmara Sea/Istanbul Strait was 7°C. Therefore, it seems that the casualty is likely to suffer from hypothermia in the first stage. The search and rescue operations in man overboard cases are carried out against time and it is of vital importance to recover the seafarer from the sea as soon as possible.

Indeed, the log book on board showed that the overboard casualty was taken to the rescue boat 25 minutes after she went overboard. It is clear that if the crew of the tanker was sufficiently qualified in the practice of man-overboard drills, the rescue time would have been considerably reduced and therefore it would have been effective in the rescue of the person. The statements of the crew indicate that the temperature of the seawater was 7°C during that time and the effect of excessive heat loss on the seafarer and that she was dragged 100 metres away from the tanker and when she was taken to the rescue boat, she was already dead, indicating that the tanker crew should also be prepared in such emergencies.

3.3 Personal Protective Equipment of the Boat Crew and the Seafarer Boarding the Tanker

Research has shown that most of the fatalities of seafarers who went overboard are caused by drowning and the striking majority of the drowned seafarers do not wear a life jacket. The life jacket is of vital importance as it is produced in such a way that the person who goes overboard, even if fainted or unconscious, turns their face upwards within five seconds and keeps their mouth in a position that allows them to breathe comfortably above the water.

Man overboard during boarding from the side ladder is one of the most common marine accidents. Even the pilots who constantly board the vessel from the side ladder as their job requires, unfortunately, may suffer from such accidents.

The casualty was not wearing a life jacket on the day of the accident. The casualty, who was also observed to be rather anxious from the video footage, climbed up the side ladder with a bag on her shoulder without wearing any life jacket (Image 17) although the tanker-boat oscillated by rolling and pitching. It is considered that boarding the tanker with a bag on her shoulder and no life jacket affected being overboard of the seafarer and her inability to survive in the sea.

After the accident, the boat crew tried to throw a life jacket but not a life buoy to the casualty who went overboard. It was observed that the casualty was unable to put on the life jackets thrown to her and hold on in the sea. Therefore, it is considered that it would be beneficial for the persons who will embark or disembark from the vessel to use life jackets during the transfers by side ladders.

On the other hand, it is also clear that there was a high risk of going overboard when considering that the ordinary seaman intervened from the port side of the boat and alongside in positions that may pose a danger. Despite the regulation in Turkish national legislation³ that the boat crew should always wear life jacket on the boat against the risk of going overboard since they are on a boat which is highly exposed to wave and wind conditions, the video footage of the accident shows that the boat crew did not wear life jackets.



Image 17 Life Jacket

³Local Maritime Traffic Guide of Harbour Master Office of Istanbul

3.4 Throwing a Life Buoy and Rescue Operation of the Casualty

In case of a man overboard, the first action to be taken is to throw a life buoy (MOB life buoy) with light-smoke and a hauling line to the casualty. A marked lifebuoy should be kept ready for use on board the vessels and the pin that holds the lifebuoy should be pulled when a crew goes overboard. When pulling the lifebuoy with MOB marking, its light will automatically flash and smoke will start to come out.

According to the video footage and as stated in the narrative of the accident, when the pilot's ladder was on the deck of the agency boat, the ordinary seaman of the boat first threw a life jacket 13 seconds after the seafarer went overboard. As can be seen in Image 14, the ordinary seaman of the boat tried to help the casualty on the one hand by hanging from the boat deck and asked for help from the tanker crew on the other hand. The ordinary seaman of the boat threw the second life jacket to the casualty 36 seconds after the casualty went overboard and finally threw the life buoy 87 seconds after the casualty went overboard.

Meanwhile, the seaman at the side ladder on board the tanker ENKI and the crew who were on deck at the time of the accident did not throw the life buoy with light and smoke, which should have been thrown to the casualty who went overboard in the first instance, and then they launched the rescue boat, but when they reached the casualty, they realised that the casualty had already lost her life.

Although the casualty held on to the hauling line of the lifebuoy, she had to release the hauling line of the lifebuoy due to the effect of the current and cold seawater. Failure to throw the lifebuoy at the first instance was considered to affect in the inability to rescue the casualty from the sea.

3.5 Suitability of Crew Transport Boats and Rescue Equipment from the Sea

When the video footage of the accident is analysed, it is observed that the ordinary seaman of the boat tried to rescue the casualty who went overboard by dangling from the boat with a freeboard of approximately 1,7 m, but he could not succeed despite all his efforts (Image 14). When the agency boat is structurally examined, it is observed that it was designed mostly for carrying provisions and materials to the vessels. It is considered that the use of boats with a freeboard and a platform for intervention at the stern as in the case of Image 18 for crew transport would enable easy rescue in case of a man overboard.



Image 18 Pilot boat⁴

It requires a lot of effort and physical strength to take the man overboard into the lifeboat or boat due to sea conditions and the reason of casualty becoming heavier by wetting of the clothes. It is considered that it would be more effective to respond with equipment such as a bulwark ladder (Image 19) and Jason's Cradle (Image 20) etc., which provide easier rescue from the sea since they have high freeboard (1,7 m) in case of a man overboard in the existing agency boats that do not have such a platform and also carry seamen.



Image 19 Bulwark Ladder

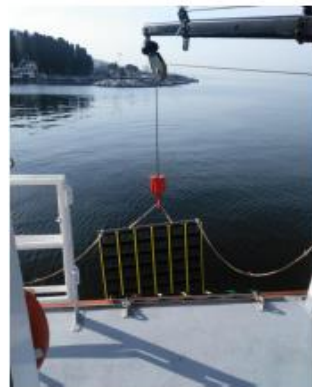
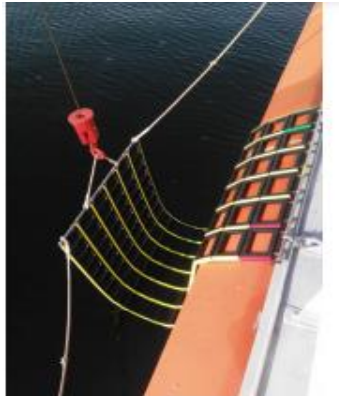


Image 20 Jason's Cradle

⁴ Retrieved from the website <https://www.denizhaber.net/metal-shark-kilavuz-botu-insa-ediyor-haber-78399.htm>.

SECTION 4 – CONCLUSIONS

- 4.1 The height to be climbed by the casualty from the side ladder was approximately 2 metres.
- 4.2 The height of the side ladder was not adjusted to the boat in accordance with the requirements of SOLAS Part V, Regulation 23 and IMO Resolution A.1045(27).
- 4.3 There was a lack of communication and coordination between the tanker and the boat when it came to adjusting the height of the side ladder.
- 4.4 As the side ladder of the tanker was rigged longer than required, the ordinary seaman on the boat took the excess part onto the forecastle of the boat. This impeded the full resting of the steps of the side ladder on the tanker side.
- 4.5 During the climbing up to the side ladder by the casualty, the side ladder was affected by the movements of the boat on the sea and the balance of the side ladder was disturbed since the last three rubber steps of the side ladder were taken onto the forecastle of the boat.
- 4.6 The boat crew did not maintain the stability of the side ladder by holding it until the seafarer began to climb safely up the side ladder.
- 4.7 The ropes of the side ladder were observed to have been fagged out, and the side ladder was worn out.
- 4.8 When the casualty stepped on the first step of the side ladder after the spreader, the step turned downwards.
- 4.9 The seafarer did not use a life jacket when climbing up from the side ladder.
- 4.10 Weather conditions affected the occurrence of the accident.
- 4.11 To rescue the casualty, the boat crew first tried to deliver two life jackets to the casualty who went overboard by dangling from the boat and then threw a lifebuoy to the casualty.
- 4.12 No life buoy with a MOB function was thrown to the casualty so that she could hold on at the first instant after she went overboard.

- 4.13 A few minutes after the accident, a MOB alarm was raised on board, the message “Man overboard” was broadcasted on VHF and a rescue operation was initiated.
- 4.14 The casualty held on to the hauling line of the lifebuoy thrown from the boat at first, but released it due to the cold seawater (7° C) and the current around.
- 4.15 The casualty lost consciousness due to hypothermia caused by the cold temperature of the seawater.
- 4.16 The rescue boat launched by the tanker ENKI took the dead body of the casualty on board about 25 minutes after the accident at a distance of 100 m from the tanker.
- 4.17 First aid was applied in the rescue boat but was ceased when no response was received, and the doctor who was called to the tanker pronounced the casualty dead, and the autopsy confirmed the cause of death as “drowning”.
- 4.18 The agency service boat was not equipped with the necessary gears (rescue hook, Jason’s Cradle, bulwark ladder etc.) for a rescue operation in case of a man overboard.
- 4.19 When the muster drills of the crew of the tanker ENKI were analysed, given that the crew was replaced in December, no evidence was presented that the Man Over Board (MOB) drills were exercised on time.
- 4.20 There was no evidence that MOB muster drills were carried out by the crew of the agency boat every six months according to national legislation.
- 4.21 The structure of the boat by which the seafarer was transferred was not suitable for taking the seafarer out of the water.

SECTION 5 – RECOMMENDATIONS

The Directorate General of Maritime Affairs is recommended:

- 6/03-23 To consider regulations for the availability of the necessary tools (rescue hook, Jason's Cradle, bulwark ladder, etc.) for rescue operations in case of a man overboard on agency service boats;
- 7/03-23 To regulate the recording of the Man Overboard Drill, which should be carried out every six months for agency service boats, and to check it during the surveys to be held for the certificate of seaworthiness.

The Ship Operator is recommended:

- 8/03-23 To plan again the Man Overboard drills, which are routinely exercised within the scope of ISM on the ships in the company fleet, based on effective scenarios taking into account the consequences of such accidents, and to make sure that the drills are exercised in a way to raise awareness among the crew in accordance with the planning;
- 9/03-23 To replace the existing side ladders and effectively inspect them for any signs of wear and tear using a checklist to be prepared before each use.

The Agencies Providing Boat Service are recommended:

- 10/03-23 To make sure that Man overboard drills are exercised effectively on the agency boats in the fleet and to organise trainings on Man overboard rescue;
- 11/03-23 To equip the boats in their fleet with the necessary gears (bulwark ladder, Jason's cradle etc.) for rescue operations in case of a man overboard.

The Chambers of Shipping (IMEAK DTO and Mersin DTO) are recommended:

- 12/03-23 To circulate this report to all agencies engaged in the transfer of seafarers.

ANNEX 1 Requirements of SOLAS Part V, Regulation 23 and IMO Resolution A.1045 (27)

REQUIRED BOARDING ARRANGEMENTS FOR PILOT



In accordance with SOLAS Regulation V/23 & IMO Resolution A.1045(27)

INTERNATIONAL MARITIME PILOTS' ASSOCIATION

H.Q.S. "Wellington" Temple Stairs, Victoria Embankment, London WC2R 2PN Tel: +44 (0)20 7240 3973 Fax: +44 (0)20 7210 3518 Email: office@impahq.org
 This document and all IMO Pilot-related documents are available for download at: <http://www.impahq.org>

