MARINE SAFETY INVESTIGATION REPORT -HALF YEARLY

January - June (2025)

DIRECTORATE GENERAL OF SHIPPING
MINISTRY OF PORTS, SHIPPING & WATERWAYS
GOVERNMENT OF INDIA

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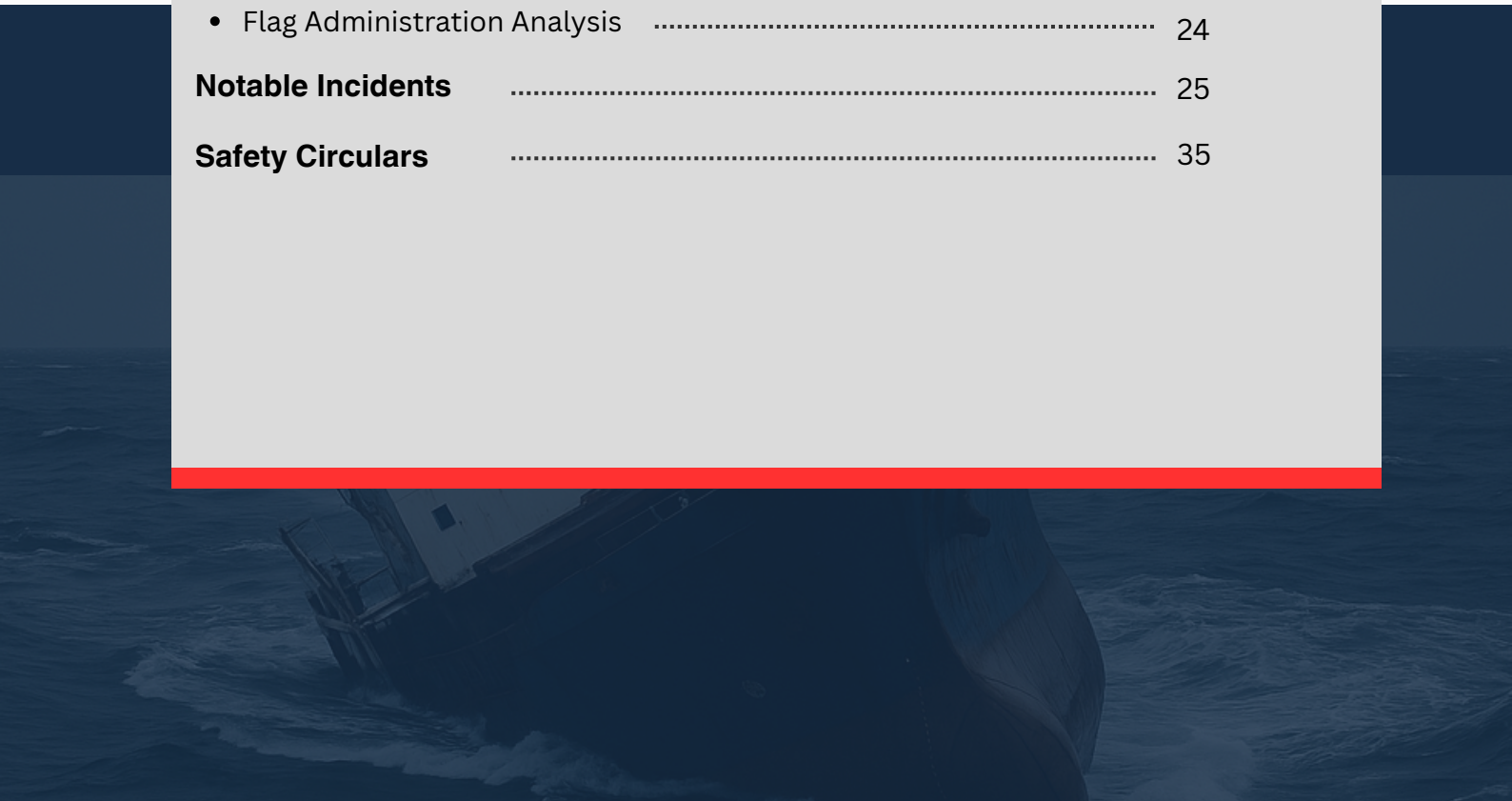


MARINE CASUALTY (OPERATIONAL INCIDENTS)- KEY STATISTICS

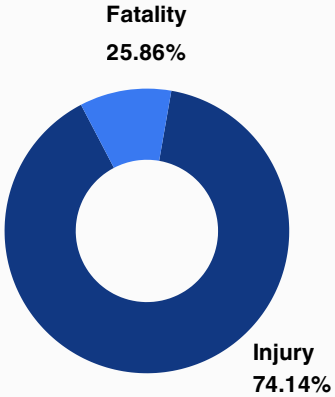
TOTAL INCIDENTS	FATALITIES	INJURIES
48	15	43

Key Highlights

- **Occupational incidents constituted nearly 67%(32) of all reported cases, reaffirming that ship-board activity risks were the dominant cause of marine casualties during this period."**
- **Two major fire and explosion incidents accounted for 8 of the 15 fatalities — nearly 53% — making them the leading cause of deaths during the reporting period.**
- **Marine casualties increased from 33 cases in Jan–Jun 2024 to 48 cases in Jan–Jun 2025, marking a rise of approximately 45% over the same period.**
- **Indian-flagged vessels accounted for only 6 of the 48 marine casualties, representing a relatively modest share of about 12.5% during this period.**

Impact Analysis

Among the 58 individuals affected, injuries were predominant, yet fatalities still represented a substantial share, underscoring the overall seriousness of the incidents.



Human Impact Analysis

The **Severity Index,** calculated at **1.21**, signifies more than one casualty element (injury or death) per incident on average.

The injury-to-fatality ratio of 2.9 : 1 indicates that injuries remain considerably more frequent than deaths, reflecting sustained operational risk exposure."

NON OPERATIONAL INCIDENTS- KEY STATISTICS

TOTAL INCIDENTS	FATALITIES	INJURIES
62	36	08

Key Highlights:

- Health-related cases — including sickness and death onboard — comprised 61% of all incidents, reaffirming medical conditions(Cardiac Arrest, Stroke, et.,)as the leading contributor to this category.
- Mental health-related(suicide,wilful-default) incidents contributed 13%, demonstrating the growing need for mental health support and intervention protocols at sea.
- Non-operational incidents moved from 55 cases in Jan–Jun 2024 to 62 cases in the corresponding period of 2025, indicating a mild upward shift
- Among the 62 non-operational incidents recorded, just 4 involved Indian-flagged vessels, reflecting a limited share of around 6.5%.

Severity Index ≈ 0.71

Lower than operational incidents, yet the high fatality ratio shows that non-operational cases, though fewer, are often more life-threatening.

Fatality Ratio – 58%

The fatality-to-incident ratio stands at 58%, significantly higher than that of operational incidents(31%), indicating the severe nature of non-operational cases.

INDIAN FLAG AND TERRITORY ANALYSIS

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TERRITORY ANALYSIS – 2025

(January - June)

The territorial distribution of marine incidents during January to June 2025 reveals that only 5% of cases occurred within Indian Territorial Waters. A further 10% of incidents were reported within the Indian Exclusive Economic Zone (EEZ), reflecting moderate exposure in this operational band. However, the vast majority, nearly 85% of incidents, took place outside Indian waters, highlighting the concentration of number of incidents that take place related to Indian seafarers. This also leads to a greater reliance on international coordination to respond to the incidents.

5% Indian Territorial Waters (Upto 12nm from baseline)

10% Indian EEZ (Between 12nm and 200 from baseline)

85% Outside Indian Waters (More than 200nm from baseline)

Major incidents in Indian EEZ and Indian Territorial Waters

Fire and Explosion in the EEZ

The incident on MV Wan Hai 503 occurred approximately 130 nautical miles northwest of Kochi, off the Kerala coast, and reinforced the value of stronger IMDG-cargo verification and onboard firefighting readiness

Vessel Sinking within Territorial Waters

The MSC ELSA 3 incident took place near the Indian coastline, where timely deployment of emergency towing support helped stabilize the situation and effectively prevent marine pollution.

Machinery Failure and Emergency Towage in the EEZ

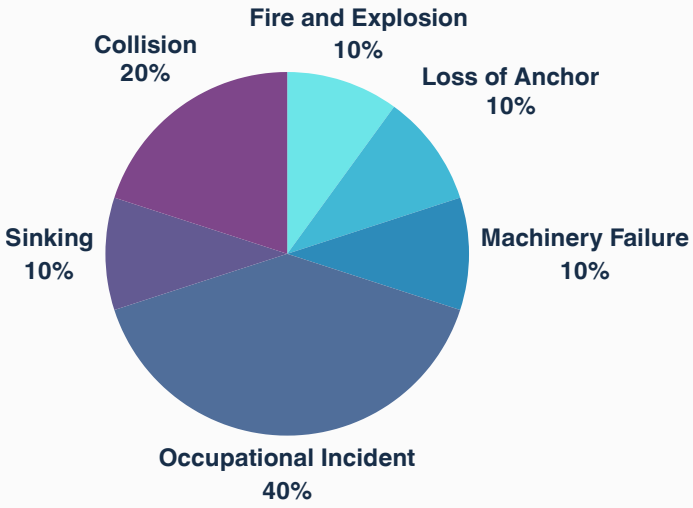
A main engine explosion onboard D ANGELS within Indian territorial waters was efficiently managed through prompt tug assistance, demonstrating strong coordination and effective machinery failure response mechanisms.

INDIAN WATERS

• Marine Casualty:

A total of 10 incidents were reported within Indian waters during this period, resulting in **6 fatalities** and **8 injuries.** Among these, **Occupational incidents (4 cases)** were the most frequent, followed by **Collisions (2 cases)**, and **single cases each of Fire and Explosion, Loss of Anchor, Machinery Failure, and Sinking.**

The Fire and Explosion incident was the most severe, accounting for 4 deaths and 6 injuries in a single event. Despite the lower frequency of other cases, the occurrence of collisions, machinery failures, and anchor losses highlights the ongoing need for enhanced safety vigilance and preventive measures across all operational fronts.



• Non Operational Incidents

A total of **7 non-operational casualties** were reported during this period, resulting in **5 fatalities**. The majority of these were due to sickness onboard, with 4 fatalities directly linked to medical issues at sea. Additionally, one case of suicide was recorded, highlighting the need for stronger mental health support systems for seafarers.

INDIAN FLAG PERFORMANCE

Overview:

In the first half of 2025, incidents under the Indian flag reflected both operational and non-operational challenges. Operational cases, including collisions, loss of anchor, and an occupational incident, led to only one injury and no fatalities, indicating progress in managing navigational and workplace risks. However, the more serious outcomes were linked to non-operational causes, with fatalities arising from sickness onboard and suicide. These highlight the ongoing need to strengthen medical preparedness, provide timely health interventions, and enhance mental well-being support for seafarers. While operational safety performance appears relatively stable, addressing human element risks remains critical to achieving a more comprehensive safety framework.

- **Marine Casualty (Operational Incidents):**

Type of Incident	No. of Incident	Fatality	Injury
Loss of Anchor	2	0	0
Occupational Incident	1	0	1
Collision	3	0	0
Total	**6**	**0**	**1**

- **Non Operational Incidents:**

Type of Incident	No. of Incident	Fatality	Injury
Sickness (Death Onboard)	2	2	0
Stowaway	1	0	0
Suicide	1	1	0
Total	**4**	**3**	**0**

Area of the Incident

(Indian Flag)

In early 2025, Indian-flag incidents spanned coastal waters and the EEZ but were largely concentrated in international seas, highlighting greater operational exposure offshore.

Indian EEZ (Between 12nm and 200 from baseline)	3
Indian Territorial Waters (Upto 12nm from baseline)	1
Outside Indian Waters (More than 200nm from baseline)	6

MARINE CASUALTY

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INCIDENT OVERVIEW

Overview of Marine Casualty:

It is reported that between January and June 2025, a total of 48 serious/very serious marine casualty incidents were recorded, resulting in 15 fatalities and 43 injuries. The distribution of outcomes reveals patterns that call for continued attention, with injuries occurring in a significant proportion of cases. This highlights the importance of strengthening preventive mechanisms and advancing onboard safety practices. The findings provide valuable reference points for reinforcing safety culture and enhancing preparedness across the maritime sector.

48

Between January and June 2025, a total of 48 serious/very serious marine casualty incidents were reported. The occurrence of incidents reflects operational challenges across maritime activities.

31.2%

Fatalities were recorded in 31.2% of incidents, though not directly proportional as certain cases involved multiple fatalities, displaying the need for stronger preventive and emergency response measures.

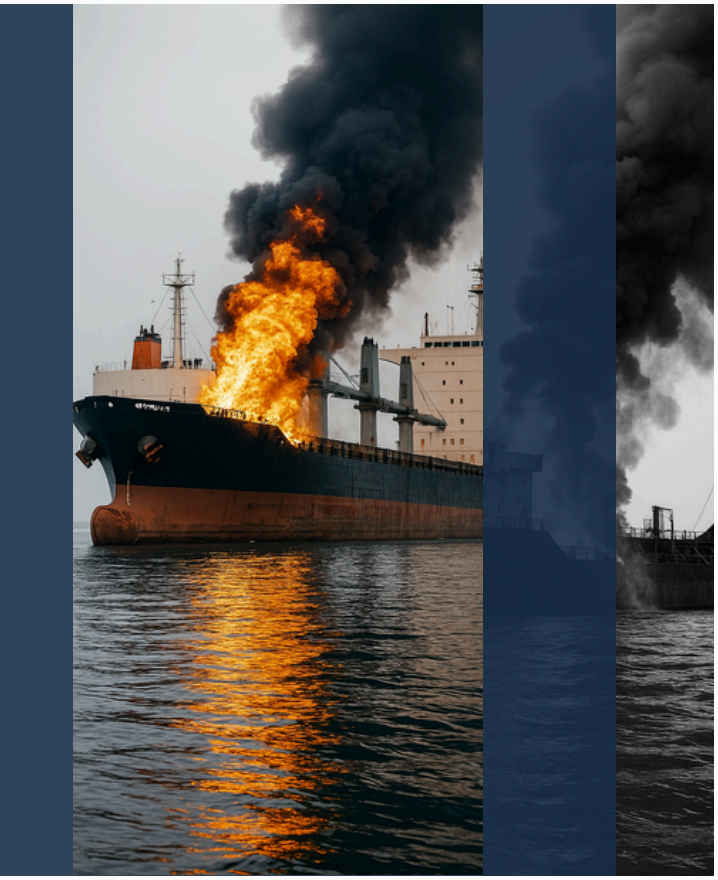
89%

Nearly 89% of incidents involved injuries, highlighting recurring risks and the importance of safety vigilance.

SEVERITY INDIEXS

The Severity Index for the reporting period is calculated at 1.21, representing the combined effect of fatalities and injuries per incident. This suggests that, on average, each incident involved more than one casualty element —reflecting a notable level of seriousness and reinforcing the need for continuous vigilance and preventive safety interventions.

FIRE & EXPLOSION



TOTAL NO OF INCIDENTS		
04		
VERY SERIOUS CASUALTY	FATALITY	INJURY
02	08	06
SERIOUS MARINE CASUALTY		
02	00	01

It is reported that multiple fire and explosion incidents occurred during the period. While most were contained through prompt response, a few resulted in fatalities and severe vessel damage. These cases highlight the importance of effective preventive maintenance, regular inspections, and strong onboard emergency preparedness.

Overview of very serious Incidents

MV Heilan Star	20,March 2025	04 Fatality, 00 Injury
Wan Hai 503	09,June 2025	04 Fatality, 06 Injury

The Wan Hai 503 incident occurred while transiting the Arabian Sea when a sudden fire intensified despite immediate crew and authority response, leading to loss of life and damage to cargo areas. Likewise, MV Heilan Star encountered an explosion in No.3 cargo hold while enroute, resulting in fatalities and damage to the ship.

Preliminary observations indicate that the incidents were contained through coordinated efforts between the ship's crew, port authorities, and emergency responders. These occurrences emphasize the importance of continuous vigilance during critical operations, regular maintenance of safety systems, and realistic emergency drills to reinforce crew readiness. Strengthening these preventive and preparedness measures can significantly reduce the potential impact of such high-risk events in the future.

MAN OVER-BOARD

TOTAL NO OF INCIDENTS 04		
VERY SERIOUS MARINE CASUALTY 03	FATALITY 03	INJURY / RESCUED 00
SERIOUS MARINE CASAULTY 01	00	01

Man Overboard continues to stand out as one of the gravest forms of maritme casualty, where even a single occurrence carries disproportionate risk to human life. Unlike other incident types, the margin between survival and fatality in such cases is extremely narrow, leaving little scope for error. The category reinforces the reality that prevention, vigilance, and immediate response are the only safeguards when individuals are exposed to the sea. Survival depends not merely on equipment but on the discipline of procedures, the readiness of crew, and the speed with which actions are taken. Every incident, therefore, becomes a reminder that preparedness is not optional but fundamental to safe maritime practice.

Incident Highlight:

One incident in May 2025 involved a seafarer falling overboard, where swift crew response and adherence to established safety protocols enabled the individual to be rescued with injuries but without loss of life. The case emphasizes the value of readiness and disciplined application of procedures in critical situations

Safety Principles that Matter:

"Man Overboard is among the deadliest casualty types, with 75% proving fatal."

Assess Conditions

Aanticipate risks by monitoring weather, visibility, and sea state before undertaking deck tasks.

Maintain Equipment

Ensure life jackets, lifebuoys, and recovery systems are always serviceable.

Enhance Training

Regular man overboard drills sharpen crew coordination and speed of response.

Avoid Exposure

Minimise deck exposure in adverse conditions where survival chances are low.

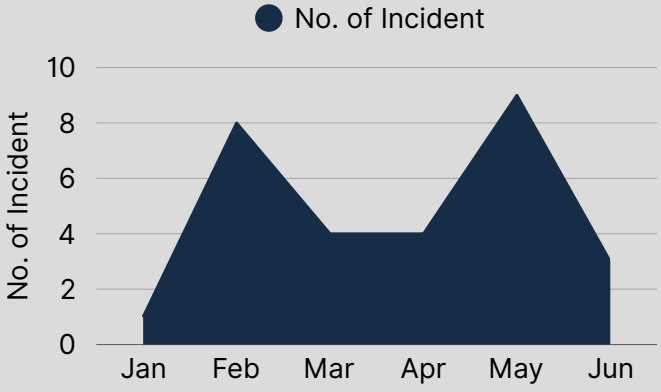
OCCUPATIONAL INCIDENT

Total Incidents
32

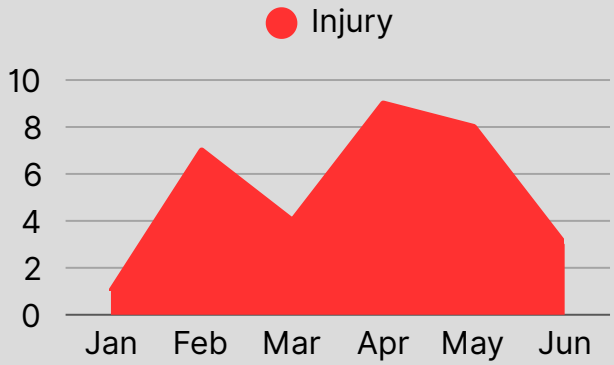
Very Serious Marine Casualty		
Total	Fatality	Injury
04	04	01

Serious Marine Casualty		
Total	Fatality	Injury
28	00	31

A total of 32 occupational incidents were reported during the period. Among these, four incidents were of very serious nature, resulting in four fatalities and one injury, reflecting high-risk situations with severe impact on life and vessel operations. The remaining twenty-eight incidents were of a serious nature, leading to thirty-one injuries but no loss of life. These figures indicate the diverse levels of operational risk present during maintenance, cargo handling, and machinery-related activities, emphasizing the continued need for robust safety supervision, procedural compliance, and proactive risk management on board.



Total Number of Occupational Incident



Number of Injury in Occupational Incident

73%

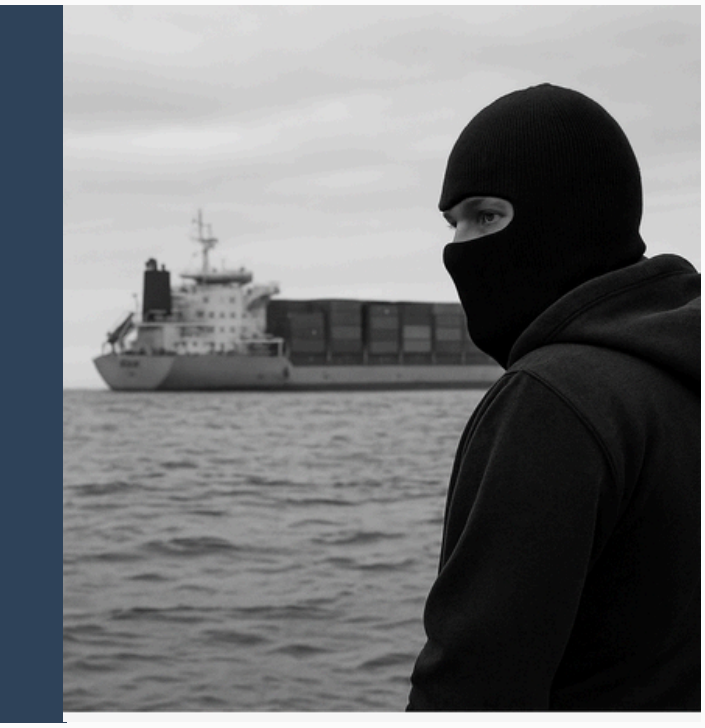
Casualties:

3 fatalities and 32 injuries were recorded, showing a high human impact.

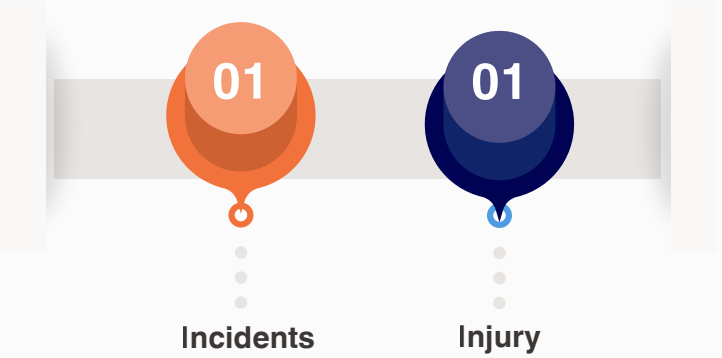
Occupational Incident Medevac

Among the occupational incidents, 03 involved medical evacuation, resulting in one fatality and two injuries. One case was of a very serious nature, underscoring the importance of timely medical response and preventive health measures on board.

HIJACKING & PIRACY



Although infrequent, piracy remains a serious concern for merchant shipping. The reported incident during this period resulted in injury but no loss of life. Such events reinforce the need for vigilance, adherence to security protocols, and coordinated responses to safeguard crew, vessel, and cargo in high-risk waters.



COLLISION

Total Incidents	03
Fatality And Injury	00

Collision incidents accounted for 3 reported cases during the period, all occurring with fishing vessels, with no fatalities or injuries. While no human impact was recorded, such incidents highlight persisting navigational risks. They reinforce the importance of vigilance, bridge resource management, and adherence to international collision-avoidance measures to maintain safe maritime operations.

Sinking

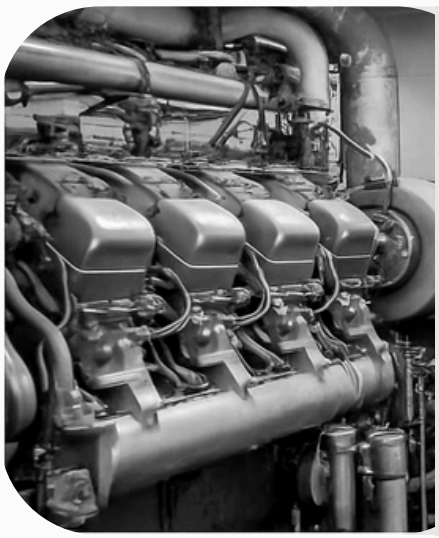
01 Incident | **0** Fatality | **0** Injured

In the first half of 2025, one sinking incident was reported with no casualties. The case involved **MSC ELSA 3**, which sank within Indian Territorial Waters. The incident highlights ongoing risks associated with vessel stability and sea conditions, emphasizing the need for strict maintenance routines, stability assessments, and timely preventive measures to ensure navigational safety and protect the coastal environment.

Loss of Anchor/Other Ship's Gear

01 Incident | **0** Fatality | **0** Injured

One incident of anchor or propeller or other ship's gear loss were reported, arising from operational or technical causes such as dragging or abandonment at sea. While no casualties occurred, such events disrupted operations and created navigational risks. Regular inspection, maintenance, and procedural discipline remain vital to prevent recurrence.



Machinery Failure

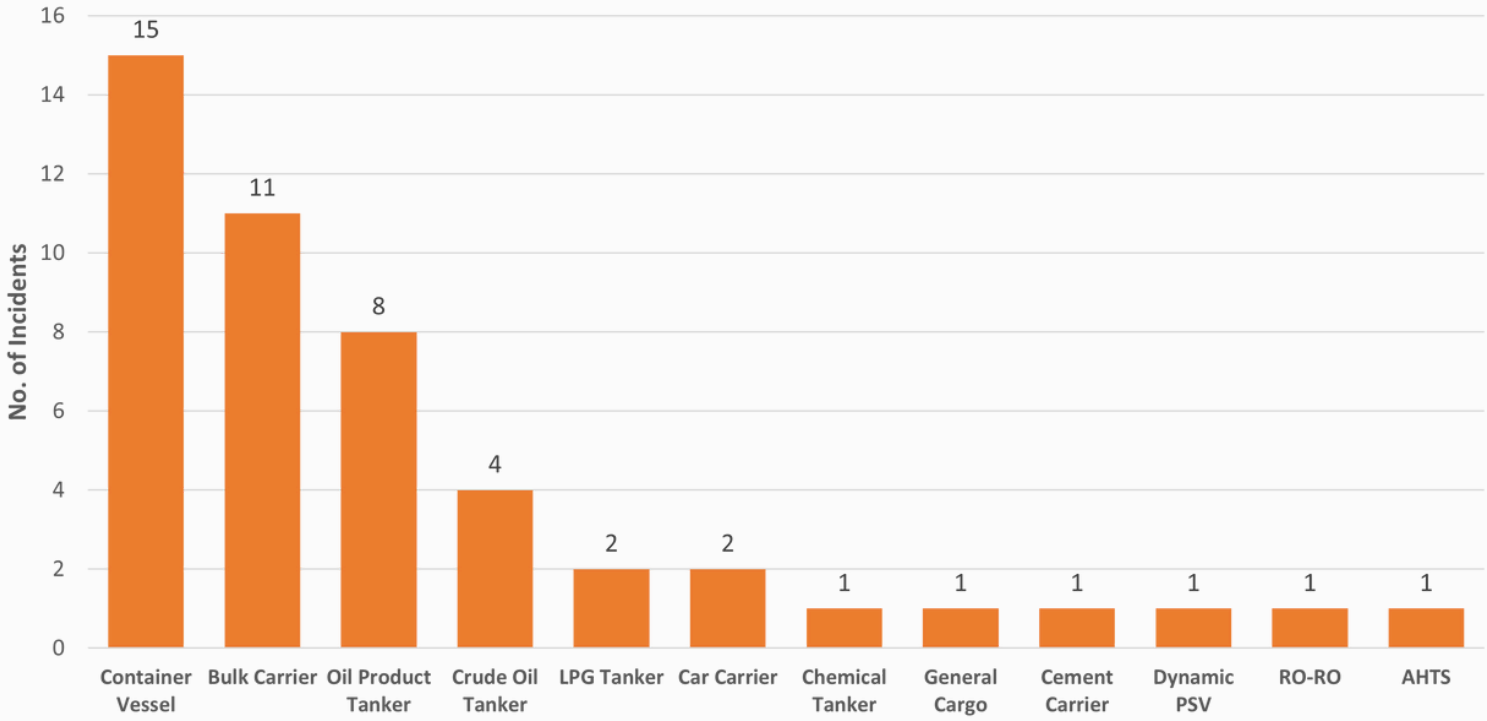
02 Incident | **0** Fatality | **0** Injured

Two incidents of machinery failure was recorded, without casualties. Though the outcome was contained, machinery reliability is central to safe navigation. Preventive upkeep, timely detection of faults, and crew readiness to respond to technical breakdowns remain essential for ensuring vessel safety and operational continuity.

VESSELS ANALYSIS

Marine Casualty (2025 Mid-Year)

During the period from January to June 2025, marine casualties were predominantly reported among Bulk Carriers, Container Vessels, and Oil Product Tankers, which together represent a substantial portion of global maritime traffic. The distribution aligns with the operational prevalence of these vessel categories in international and coastal trade.



Key Insights

One-third (33%) of Incidents in Container Vessels, Bulk Carriers, and Oil Product Tankers were due to occupational activities, making crew safety a critical concern.

Tanker-related casualties (26%) highlight the need for heightened safety measures, as even single incident involving hazardous cargo pose significant risks

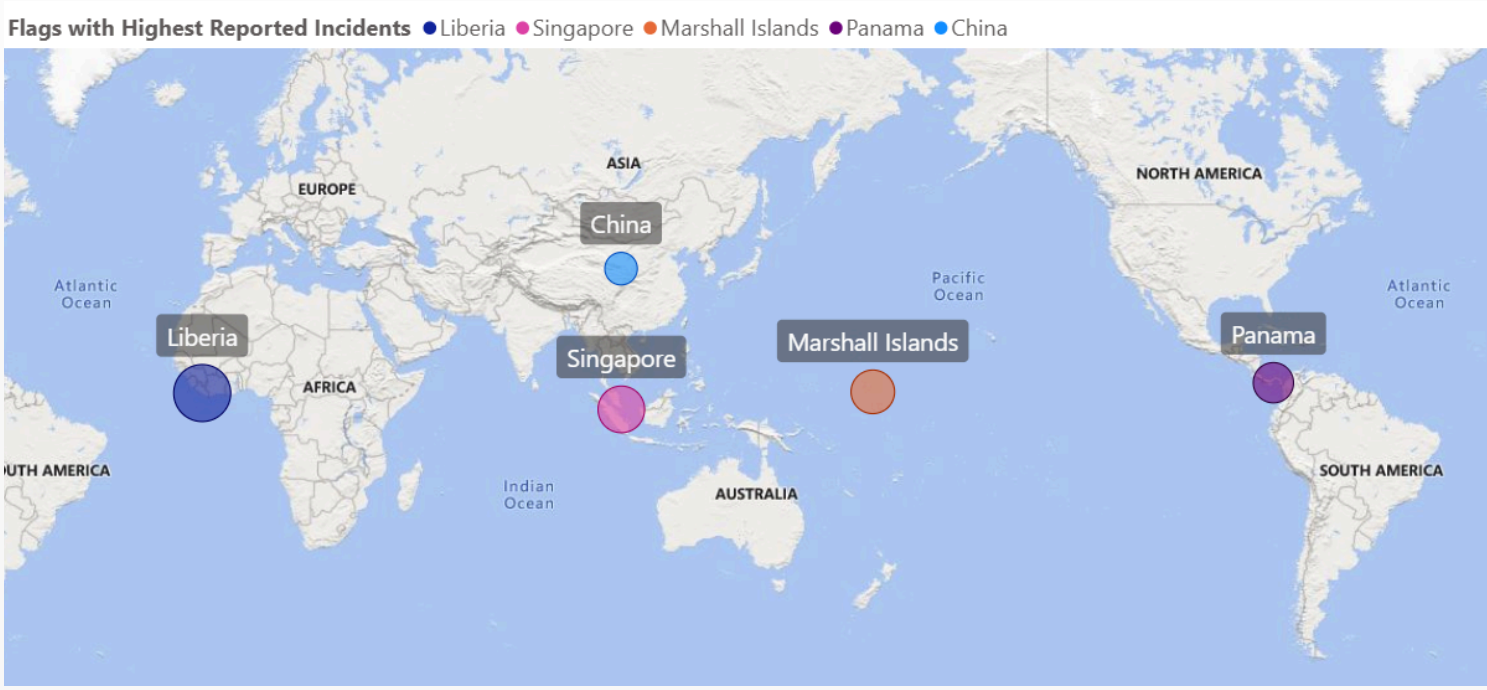
FLAG ADMINISTRATION ANALYSIS

Marine Casualty (2025 Mid-Year)

From January to June 2025, marine casualties were most frequent under Liberia, Singapore, Panama, India, and the Marshall Islands, with smaller clusters across China and a few other flags. The spread highlights that such incidents reflecting global operational risks.

Name of the Flag	No. of Incident
Liberia	10
Singapore	7
India	6
Marshall Islands	6
Panama	6
China	3
Japan	2

Name of the Flag	No. of Incident
St Kitts and Nevis	2
Denmark	1
Gabon	1
Malta	1
Norway	1
Togo	1
Italy	1
Total	**48**



NON OPERATIONAL INCIDENTS

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INCIDENT OVERVIEW

Overview of Non Operational Incidents:

Between January and June 2025, a total of 62 non-operational incidents were reported, resulting in 36 fatalities and 8 injuries. These incidents were primarily linked to sickness and death onboard, suicides, and man overboard/missing cases, reflecting the critical influence of human and health-related factors beyond direct operational risks. The outcomes underline the urgent need for stronger onboard medical support, preventive health monitoring, and mental well-being initiatives to safeguard seafarers' lives.

TOTAL NO. OF INCIDENTS

Total non-operational incidents reported in the first half of 2025, marking a significant share of overall maritime casualties.

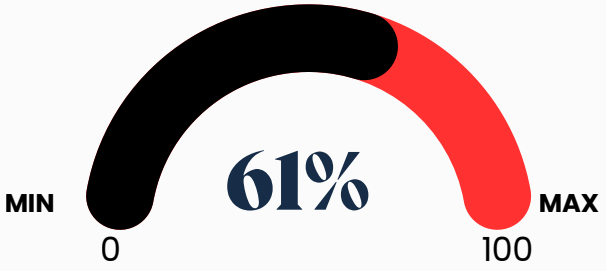
62 Incidents

FATALITY

Among 62 non-operational incidents, 36 fatalities were recorded, averaging 0.58 per incident.

58%

SICKNESS & HEALTH RISKS



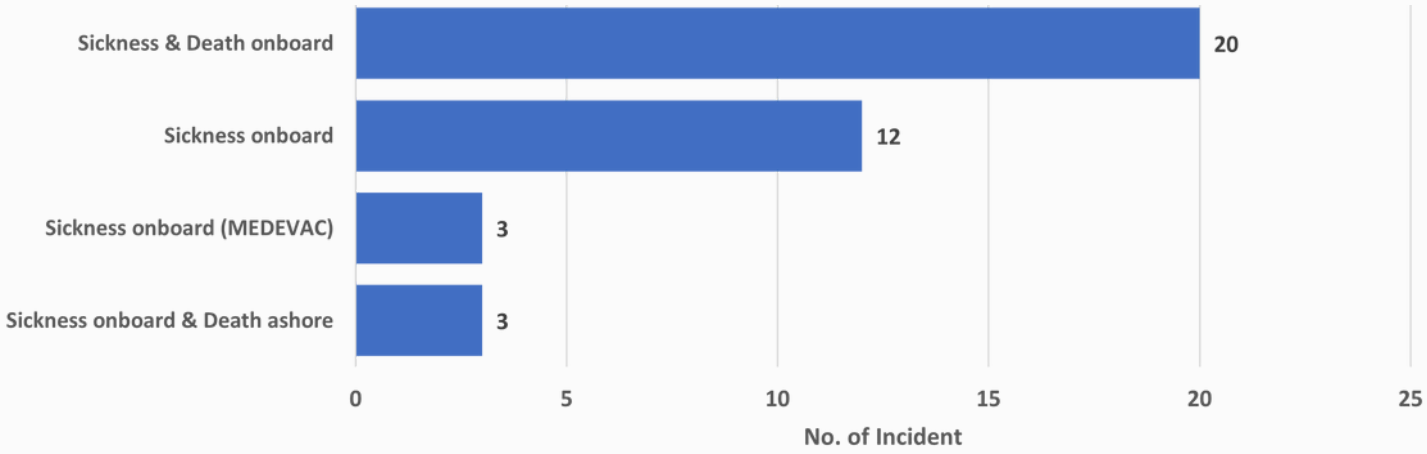
Sickness-related cases alone accounted for 38 incidents, making it the prominant concern, and highlighting the need for proactive healthcare systems at sea.

SICKNESS ANALYSIS

From January to June 2025, sickness-related incidents accounted for 38 out of 62 non-operational cases, representing nearly 61% of all such events. Most fatalities resulted from sickness and death onboard, while a few cases involved medical evacuations or deaths ashore. The trend underscores the critical need for stronger prejoining medical regime, proactive health monitoring, and preventive care systems at sea to reduce fatalities arising from cardiac, neurological, and other medical emergencies.

Type of Incident	No. of Incident	Fatality
Sickness & Death onboard	20	20
Sickness onboard & Death ashore	3	3
Sickness onboard	12	0
Sickness onboard (MEDEVAC)	3	1

Sickness Related Total Number of Incidents



Key Insights – Causes of Death (Sickness-Related Incidents)

55%

Cardiac Arrest

Majority of deaths resulted from cardiac causes where approximately 21 cases reported, such as heart attacks and cardiac arrest, highlighting rising cardiovascular risks among seafarers.

Stroke, Seizure & Neurological

Approximately 6 cases reporteed during this period. Deaths linked to strokes and seizures highlight the need for early detection and timely medical response.

15%

20%

Natural Causes

In several cases, crew members were found unresponsive with no prior symptoms; post-investigation suggested possible natural or age-related causes.

Other Medical Complications

Includes isolated cases linked to multi-organ failure, hypertension, and other chronic medical conditions aggravated at sea.

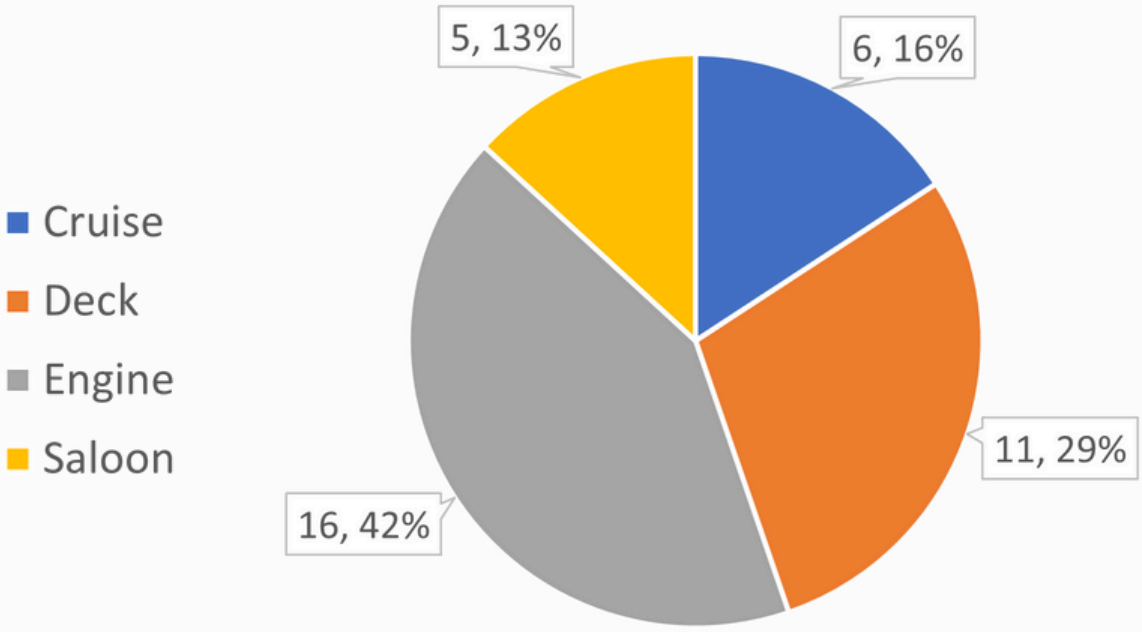
10%

*Note: Insights drawn based on the incidents reported

Insights by Department (Sickness-Related Incidents)

The analysis indicates that engine department personnel accounted for the highest proportion of sickness-related incidents (42.1%), reflecting the physically demanding and heat-intensive conditions of engine room operations. Deck department cases (28.9%) also showed significant representation, often linked to fatigue and navigation-related stress. Cruise (15.8%) and saloon (13.2%) categories together accounted for nearly one-fourth of the cases, suggesting comparable exposure to work-related strain in hospitality and service functions.

Overall, the findings emphasize the importance of routine health monitoring, onboard wellness programs, and early medical intervention across all departments to reduce health-related risks at sea.



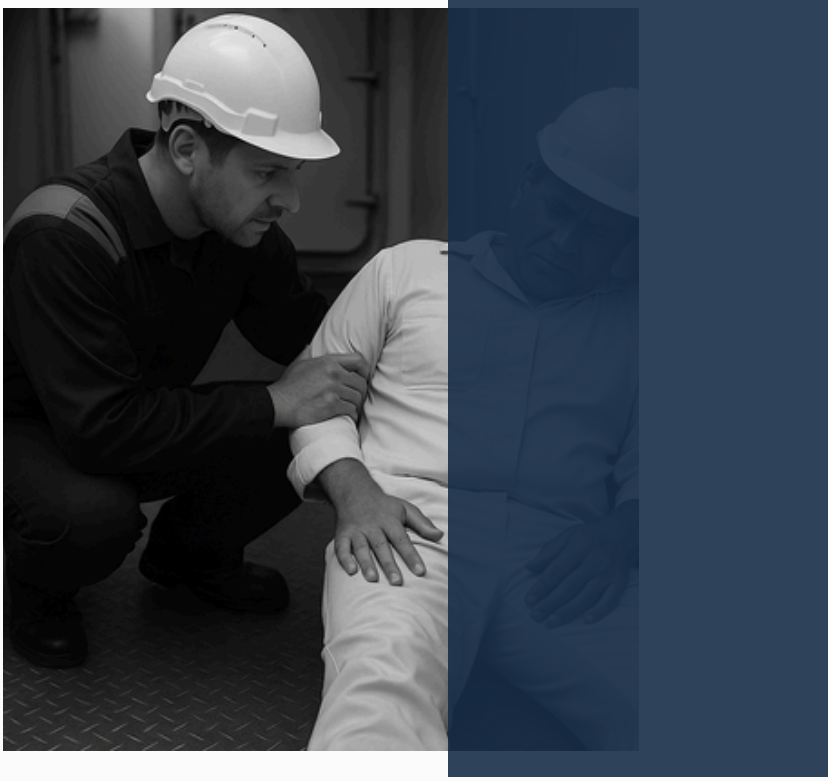
Insights by Age Group (Sickness-Related Incidents)

The analysis shows higher sickness incidents among mid-age seafarers (45–55 years) due to cardiac and metabolic risks, followed by younger crew (25–35 years) affected by fatigue and irregular routines. Cases in the 35–45 and 55–65 age groups indicate stress-related and chronic conditions, while incidents above 65 years remain minimal due to limited active service.

Age Groups	Count	Percentage
Age: 25-35	10	26.3%
Age: 35-45	09	23.6%
Age: 45-55	12	31.5%
Age: 55-65	06	15.7%
Age: 65+	01	2.6%

DEATH ASHORE & INJURY

This segment reflects two incidents reported during January to June 2025, each distinct in nature yet united by their human consequence. A death ashore reminds us that risks to seafarers are not confined to vessel operations alone, with unforeseen accidents possible during shore leave or port-related activities. In parallel, the single onboard injury demonstrates how non-operational aspects of daily life at sea, ordinary routines and personal environments, may also give rise to harm. While numerically limited, these incidents highlight the importance of extending safety vigilance and welfare measures across the full spectrum of seafarer experience, both at sea and ashore.



INSIGHTS

Injury

01 Incident | **0** Fatality | **01** Injured

A single onboard injury showed that even routine, non-operational settings can give rise to unexpected harm.

Death Ashore

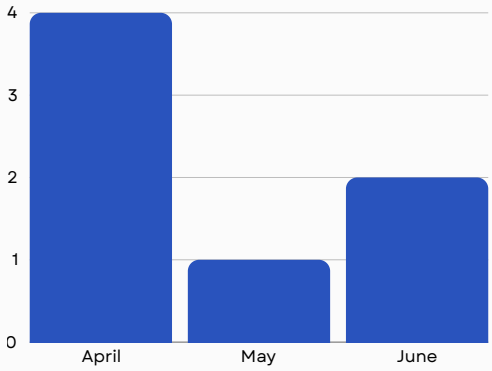
01 Incident | **01** Fatality | **0** Injured

One seafarer drowned during shore leave, highlighting the risks faced beyond vessel operations.

DESERTION

Seven incidents of desertion were reported, making it the most frequent in this category though without casualties. Such events, often driven by personal or external factors, carry implications for crew management and continuity, requiring preventive engagement and coordinated handling.

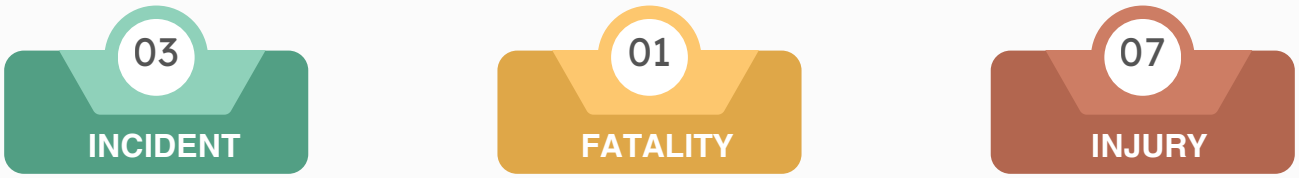
Patterns of desertion pointed to a regional concentration, with most occurrences reported from the US region.



STOWAWAY

Between January and June 2025, a single stowaway incident was reported at Dar es Salaam, Tanzania, with no casualties. Although infrequent, such occurrences pose human, legal, and security challenges for both crew and authorities. They emphasize the need for stringent embarkation checks and coordinated responses that uphold safety, regulatory compliance, and humanitarian responsibility.

WILFULL DEFAULT



Wilful default, though reported in only three instances between January and June 2025, resulted in one fatality and seven injuries — an impact far greater than its numerical weight suggests. These events underline how even isolated lapses in discipline or disregard for established norms can translate into serious human consequences. They serve as a reminder that safety is not solely dependent on systems and oversight, but equally on the everyday choices and accountability of those at sea. Strengthening a culture of compliance and reinforcing individual responsibility remain essential to reducing such high-consequence incidents.

SUICIDE

Suicide remains one of the most sensitive realities of seafaring, carrying consequences that extend far beyond the workplace. In the first six months of 2025, five such incidents were reported, each ending in loss of life. These losses underline the profound emotional and psychological pressures that accompany life at sea, where isolation, stress, and personal hardship can weigh heavily on individuals. Preventing suicide is not a matter of procedure alone, but of creating a culture of care, openness, and timely support for those who may be at risk.

SUGGESTIVE MEASURES

01 **Promote Awareness** – Normalise open discussion of mental health to reduce stigma.

02 **Encourage Early Support** – Equip officers to recognise signs and provide safe help channels.

03 **Foster Connectivity** – Strengthen links with families and shore-based networks to ease isolation.

04 **Ensure Access to Care** – Provide timely counselling and medical support, even while at sea.

MISSING/MOB

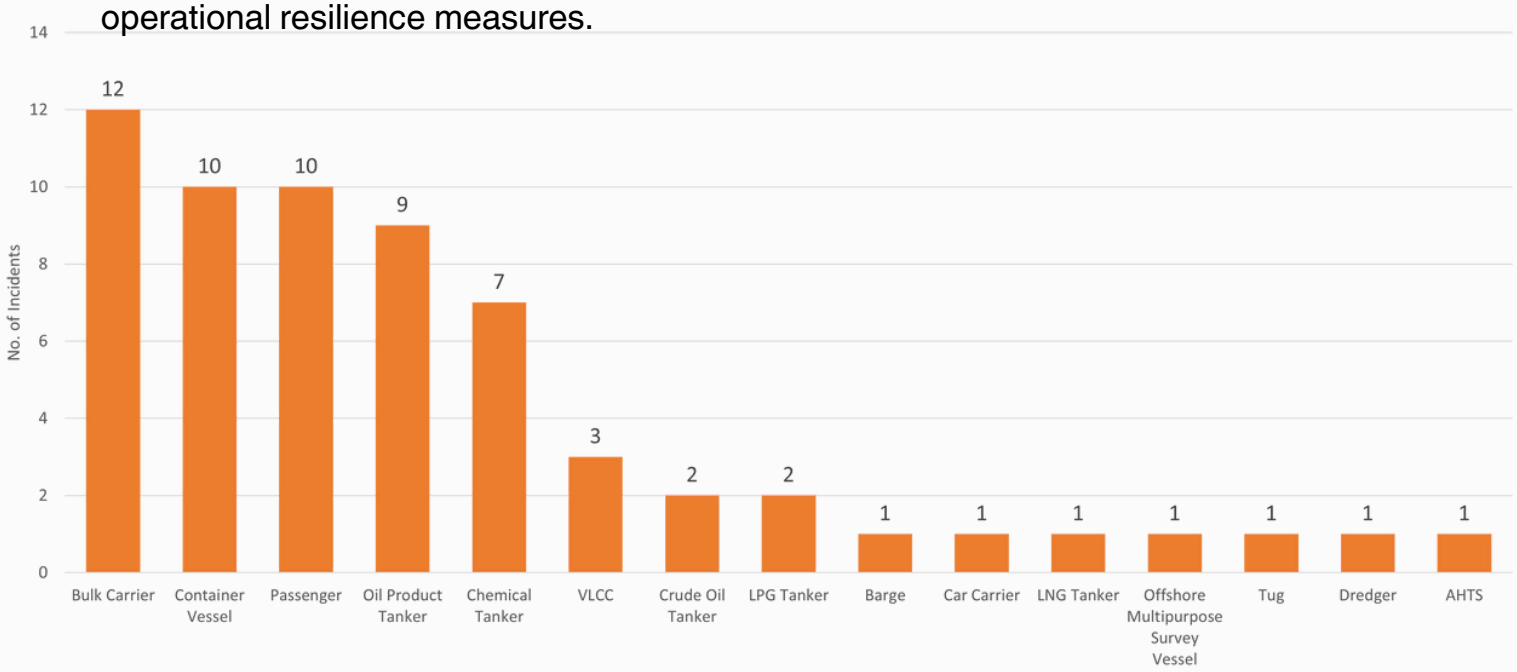
INCIDENTS	FATALITY	SURVIVED/ RESCUED
06	05	01

Missing or non-operational man-overboard incidents were reported six times in the first half of 2025, leading to 5 fatalities. While fewer in number compared to other categories, the outcomes were severe, as such situations often unfold suddenly and leave limited scope for intervention. These incidents underline the critical importance of constant vigilance, adherence to safe movement practices, and swift emergency response protocols. They also highlight the need for continued emphasis on this type of incident, as non-operational contexts can still give rise to high-consequence events.

VESSELS ANALYSIS

Non Operational Incidents (2025 Mid-Year)

Non-operational incidents during January to June 2025 were reported across a diverse range of vessel types. Bulk Carriers, Container Vessels, Oil Product Tankers, and Passenger Ships accounted for a significant portion of the cases, reflecting their extensive operational footprint in global and coastal trade. Chemical, Crude Oil, and LPG Tankers were also involved, alongside specialized vessels such as Survey Ships and Dredgers. The distribution indicates that risks are not confined to major cargo segments but extend to various vessel categories, emphasizing the importance of vessel-specific safety and operational resilience measures.



Key Insights

Bulk Carriers contributed the highest share of incidents, accounting for about 19% of the total incidents.

Container Vessels, Oil Product Tankers, and Passenger Vessels together made up nearly 50%(approx) of all reported cases, showing concentration in high-traffic vessel categories.

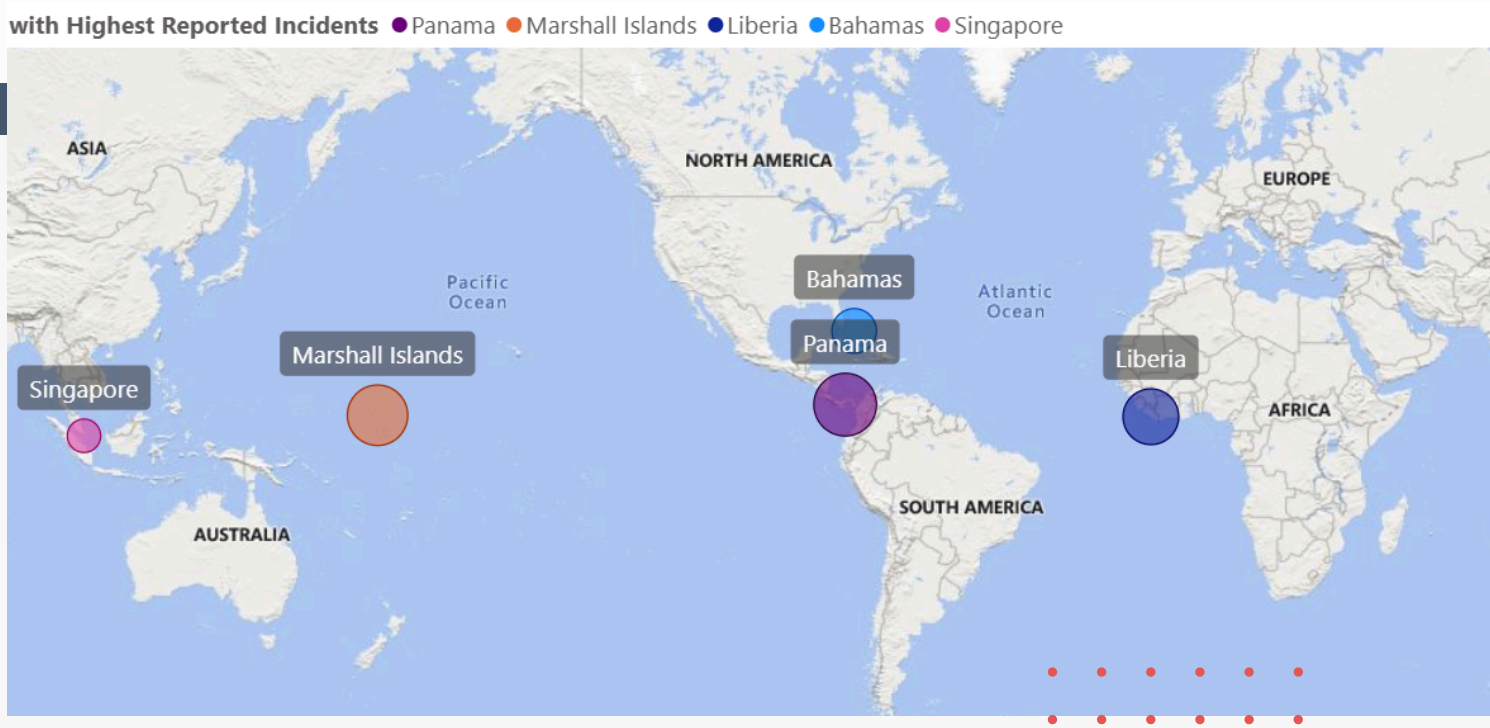
FLAG ADMINISTRATION ANALYSIS

Non Operational Incidents (2025 Mid-Year)

From January to June 2025, most non-operational incidents occurred under Panama, Marshall Islands, and Liberia, with smaller clusters under Bahamas, India, Hong Kong/China, and Singapore. A few cases appeared across other registries, highlighting the global spread of such incidents across both open and national flags.

Name of the Flag	No. of Incident
Panama	13
Marshall Islands	12
Liberia	11
Bahamas	6
India	4
Singapore	3
Bermuda	2
Hong Kong/China	2
Kuwait	1

Name of the Flag	No. of Incident
Malta	1
Norway	1
Saudi Arabia	1
Sint Maarten (Kingdom of the Netherlands)	1
Indonesia	1
St Vincent and Grenadines	1
Luxemberg	**1**
Italy	**1**
Total	**62**



NOTABLE INCIDENTS

photograph shown is for illustrative purposes only

SINKING OF MSC ELSA 3

Overview

On 24 May 2025 at ~1300 hrs IST, the container vessel MSC Elsa 3, developed a severe starboard list about 30 NM southwest of Kochi Port while en route from Vizhinjam to Kochi. The vessel carried 643 containers, including hazardous cargo. Despite emergency actions, the vessel capsized and sank on 25 May 2025. The sinking led to widespread loss of containers, navigational hazards, and environmental risks including oil seepage and plastic nurdle pollution.

Response Actions

The response was swift and well-coordinated. The Indian Coast Guard deployed a Dornier aircraft for aerial surveillance, air-dropped a life raft, and mobilised surface units, while the Indian Navy diverted vessels to assist. All 24 crew were rescued safely and given medical and psychometric checks in Kochi. The ICG also deployed three capital ships with Do-228 sorties to monitor pollution and drifting containers. MSC representatives quickly reached Kochi to coordinate with ICG, MMD, DG Shipping, ITOPF, and salvors. High-level meetings on 24–26 May directed accelerated salvage and pollution control, with shipowners required to give six-hourly updates for real-time monitoring.

SALVAGE AND CLEANING EFFORTS

Salvage operations were initiated immediately after the sinking to stabilise the wreck and prevent further environmental impact. Early air diving interventions helped seal leaks and reduce oil seepage, followed by the mobilisation of a secondary support vessel from overseas to enable large-scale recovery. The wreck rests on its starboard side at an angle of approximately 106° and remains stable for controlled extraction. In parallel, shoreline cleaning across the Kerala and Tamil Nadu coasts significantly reduced coastal pollution, with continuous monitoring maintained throughout the operation.

PRESENT STATUS

After the conclusion of the sealing of leaks and stabilization of the wreck, the shipowners appointed a new salvage firm for the oil removal operations with a revised timeline, for commencement after monsoon. For the oil extraction, the Diving Support Vessel Southern Nova was mobilised from Singapore on 24 July and arrived at the incident site on 2 August.

KEY HIGHLIGHTS

- **Diving operations conducted to seal leaks and stabilise the wreck.**
- **Additional support vessel mobilised to complete oil recovery.**
- **Oil removal successfully completed; all operational vessels demobilised.**
- **Wreck remains stable at ~106° for further extraction activities.**
- **Coastal cleanup extended across Trivandrum, Kollam, Rameshwaram, and Kanyakumari.**
- **Aprox 720 metric tonnes of plastic nurdles recovered and stored at Kollam Port.**
- **Continuous 24/7 diving and ROV operations achieved with favourable conditions.**
- **No major pollution or secondary environmental incident reported post-recovery.**

The diving operations began immediately, with three rotating teams maintaining round-the-clock progress under favourable weather conditions that supported uninterrupted diving and ROV operations. The Oil removal operations have since successfully completed, and all three vessels engaged in the process have been demobilised following the conclusion of their activities. Further, nearly 720 metric tonnes of plastic nurdles have been recovered from affected beaches and safely transported to Kollam Port for temporary storage.

RISK MITIGATION

CONTAINER HAZARDS AND MANAGEMENT

The loss of containers created navigational and community risks, with 66 units washing ashore. Public advisories were issued immediately, and fishing boats were mobilised to assist in retrieval. ITOPF carried out drift modelling to anticipate container landings, ensuring resources were positioned effectively for recovery.

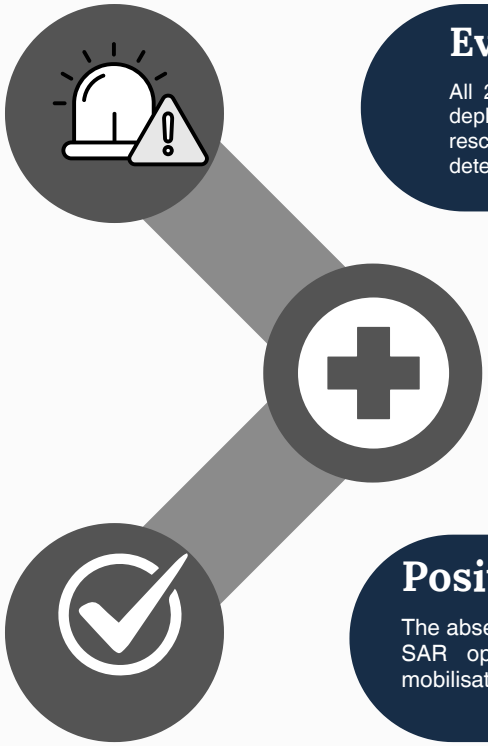
POLLUTION CONTROL AND ENVIRONMENTAL SAFEGUARDS

Oil seepage was managed through air diving operations that sealed vents and sounding pipes. Anti-pollution vessels were deployed for monitoring and containment, while salvage teams prepared for large-scale recovery. SMIT Salvage was engaged to oversee oil extraction using specialised equipment, keeping the risk of a major spill under control.

PUBLIC SAFETY MEASURES AND AWARENESS

Authorities launched targeted awareness campaigns to warn coastal communities about hazardous containers. Public advisories discouraged civilian contact, while MSC supported with retrieval and cleanup coordination. These combined actions limited exposure risks and reinforced safety along affected shorelines.

CREW SAFETY & WELFARE



Evacuation

All 24 crew were evacuated safely without fatalities. The swift deployment of Coast Guard and Navy assets ensured timely rescue, preventing casualties despite the vessel's rapid deterioration.

Medical & Welfare Support

In Kochi, the rescued crew underwent medical and psychometric checks. The P&I Club initiated welfare and compensation, while MSC representatives provided immediate support for the seafarers' needs.

Positive Outcome

The absence of fatalities highlights the effectiveness of coordinated SAR operations. Strong inter-agency cooperation and rapid mobilisation ensured human life remained fully protected.

CONCLUSION

- The MSC Elsa 3 incident involved container loss, oil seepage, and shoreline pollution, but coordinated response measures kept the situation under control and prevented escalation into a major environmental disaster.
- Oil removal operations were completed successfully, and over **720 metric tonnes** of plastic nurdles were recovered and safely stored, marking significant progress in environmental restoration efforts.
- The safe evacuation of all crew, effective inter-agency coordination, and sustained cleanup activities highlight a resilient maritime response framework that prioritised both human safety and environmental protection.

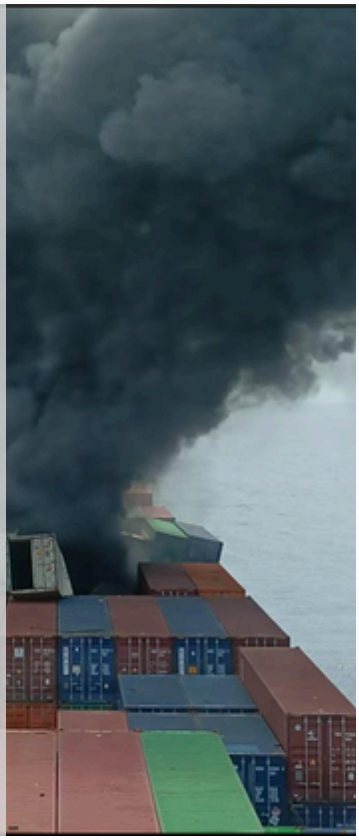
FIRE ONBOARD WAN HAI 503

Overview

On 9th June 2025, a major fire broke out onboard the Singapore-flagged container vessel WAN HAI 503 while transiting the Arabian Sea. The incident occurred in Cargo Hold No. 4, leading to multiple explosions and heavy smoke. The vessel carried a crew of 22, approximately 2000 tonnes of fuel oil, and 240 tonnes of diesel, posing serious risks of escalation.

Action Taken

Following the incident, immediate distress alerts were transmitted, triggering a well-coordinated search and rescue response. The Indian Coast Guard promptly deployed ships and aircraft to the site, while nearby merchant vessels diverted from their courses to render assistance. As a result of these efforts, 18 crew members were successfully rescued, though six sustained injuries, including two in critical condition, and four remain unaccounted for. Simultaneously, salvage support was activated, and assets were immediately mobilized to stabilize the situation and support ongoing recovery operations. This swift and collaborative response was critical in mitigating further risks to human life, shipping operations, and to the marine environment.



Mitigation Measures

- Boundary cooling and FiFi operations were sustained in the forward bays, with additional foam and DCP supplies mobilized to prevent escalation of the fire.
- Tugs with high bollard pull were engaged to establish tow connections, ensuring the vessel remained outside Indian waters and reducing coastal risk.
- Continuous thermal and gas monitoring was carried out, while dewatering operations stabilized the hull and supported salvage efforts.
- Drifting containers were tracked by the ICG and salvors, with recovery plans initiated and warnings issued to nearby vessels.
- Coordination was maintained between DG Shipping, ICG, Indian Navy, State authorities, MPA Singapore, shipowners, P&I Club, and salvors for effective technical and operational response.
- Spill containment booms and waste management arrangements were prepared, with phased entry, dewatering, and safe disposal planned at a Port of Refuge.

Conclusion

The swift action by rescue and salvage teams prevented the fire from engulfing the entire vessel and averted immediate environmental disaster. While the loss of four crew remains tragic, coordinated international efforts ensured the safety of survivors and the vessel's stabilization at sea. The incident highlights the importance of proactive fire-risk management and multinational cooperation during maritime emergencies.

CONTAINER FIRE – M.V INTERASIA TENACITY

Overview

On 12 June 2025, the Singapore-flagged container vessel INTERASIA TENACITY, en route from Port Klang (Malaysia) to Nhava Sheva (India), reported a fire onboard in one of its containers while carrying 1387 containers and 21 Filipino crew members. The fire originated in container IAAU1798796 and secondarily affected IAAU2681274. The incident occurred west of Kerala, approximately 30–40 nautical miles off the Indian coastline. The cargo manifest indicated 19 containers with lithium-ion batteries, which heightened risk during operations.

Action Taken:

Immediately upon receiving the report, the Directorate General of Shipping (DGS) instructed the vessel to maintain a minimum 50 NM distance from the Indian coastline to safeguard coastal and environmental safety. The Indian Coast Guard (ICG) deployed vessel CG18 to assist in boundary cooling and support the crew's firefighting efforts. Ship-owners, in consultation with their P&I Club, appointed the professional salvor, with firefighting experts mobilized from Singapore to Kochi. By 14 June 2025, the fire was fully extinguished, and continuous flooding and cooling operations were underway as a precautionary measure.

Risk Mitigation:

Following the container fire onboard INTERASIA TENACITY, several preventive and control measures were undertaken to mitigate risks associated with hazardous cargo and vessel safety. Boundary cooling and internal temperature monitoring were continuously maintained to prevent re-ignition. Firefighting foam and CO_2 systems were deployed strategically to isolate the affected cargo hold and limit thermal spread.

The vessel was instructed to remain at least 50 nautical miles off the Indian coastline to minimize environmental and navigational hazards. Coordination between DG Shipping, Indian Coast Guard, and Salvagers ensured real-time monitoring of fire status, gas readings, and hull stability. Salvage experts conducted onboard assessments to identify residual heat pockets, verify container integrity, and ensure safe dewatering.

Additional risk control steps included manifest verification for undeclared dangerous goods, maintaining readiness for fuel or chemical spillage, and deploying standby tugs to support emergency towage if necessary. All these measures significantly reduced the likelihood of escalation, ensuring crew safety and environmental protection.

Key Highlights:

- The vessel maintained safe positioning under Coast Guard supervision, ensuring no navigational hazards.
- Continuous monitoring of container temperatures and gas readings was conducted to prevent re-ignition.
- Salvage and firefighting personnel boarded the vessel safely at Kochi for on-site inspection.
- Coordination between DGS, ICG, Ship-owners, Technical Managers, and Salvagers ensured rapid containment and efficient multi-agency response.
- Manifest verification revealed no undeclared hazardous cargo; lithium-ion cargo remained under observation with no reported leakage or contamination.

Conclusion:

The INTERASIA TENACITY incident represents a successfully managed marine fire emergency through prompt coordination, professional firefighting intervention, and regulatory oversight. Effective inter-agency collaboration minimized risks to crew, cargo, and environment, preventing escalation into a major maritime disaster. The case emphasizes the need for stringent lithium-ion cargo monitoring protocols, early fire detection systems, and reinforced coordination frameworks for future incidents.

EXPLOSION – M.V HEILAN STAR

Overview

An explosion occurred in cargo hold no.3, on the bulk carrier MV Heilan Star, at around 1647 LT on 20 March 2025, while the vessel was around 230 nautical miles west of Goa. The vessel had departed from its load port of Jubail, Saudi Arabia and was bound for Huanghua in China. The explosion caused the hatch cover to lift. The C/E, 2/E, 4/E and Motorman were repairing the hydraulic jack cylinder of no. 2 cargo hold and were using a handheld cutting tool near the forward manhole cover of no.3 cargo hold. The flames due to the explosion caused severe burns to the above crew members.

Action Taken:

The Emergency Response Team (ERT) of the company promptly contacted the Indian Maritime Rescue Coordination Centre (MRCC), Mumbai, requesting immediate medical assistance. Acting on the request, MRCC instructed the vessel to proceed to Goa anchorage for medical support. Upon arrival, three doctors from the Indian Navy boarded the vessel by boat to attend to the injured crew members. Despite their timely response, the Navy doctors declared the vessel's Second Engineer (2/E) deceased.

Subsequently, on 21 March, a Sea King helicopter from the Indian Navy was deployed to airlift the three injured crew members to INS Hansa, Goa. They were then transferred to the Goa Medical College and Hospital, Bambolim, for further medical treatment. The coordinated response between the company's ERT, MRCC Mumbai, and the Indian Navy ensured timely medical attention and support during the emergency

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Despite all possible medical efforts and timely coordination among the Indian Navy, MRCC, and the medical team at Goa Medical College Hospital, the injured crew members could not recover from the severity of their burn injuries. The Second Engineer had been declared deceased on 21 March, while the Fourth Engineer, Motorman, and Chief Engineer, who were under intensive care, passed away on 26, 27, and 30 March respectively. Every effort was made to provide them with the best possible medical attention and support until the very end.

Probable causes / Conclusion:

- **Evidence of oxygen depletion, evolvement of flammable gasses from cargo resemble properties associated with Direct Reduced Iron (DRI).**
- **The cargo as per shipper's declaration was "Iron ore pellet chips and fines". This cargo is supposed to be non-hazardous and as such ventilation of cargo holds was not carried out. Neither were levels of O2, flammable gases and temperatures of the cargo holds being measured by the ship's staff.**
- **The cargo was likely to be direct reduced Iron (DRI) or at least contain some DRI which was not declared by the shipper. DRI is associated with O2 depletion, self-heating & accumulation of explosive gases.**
- **The self-hearing of cargo together with accumulation of explosive gases in hold no.3 apparently led to the explosion.**

SAFETY CIRCULARS

Issued by Casualty Branch - DGS

photograph shown is for illustrative purposes only

भारत सरकार/ GOVERNMENT OF INDIA
पत्तन,पोत पररवहन और जलमार्ग मंत्रालय
MINISTRY OF PORTS, SHIPPING AND WATERWAYS
नौवहन महाननदेशालय, मं बई
DIRECTORATE GENERAL OF SHIPPING, MUMBAI

F.No.25-19012/17/2023-NT-DGS (Comp. No. 26075) Date: 20.01.2025

DGS Circular 01 of 2025

Casualty Branch Circular – 01 of 2025

Sub: Fatality on board a tanker while undergoing repairs at berth

1. Overview

This circular is issued to highlight a recent unfortunate incident on an Indian-registered oil tanker at an Indian port which was berthed at layup berth for repair, which tragically resulted in the loss of one life and injuries to three shore-contracted personnel on board. The casualties occurred due to an explosion inside the port-side Slop tank while cutting of nuts and bolts, using hot work, was being carried out on the Inert Gas line at the main deck.

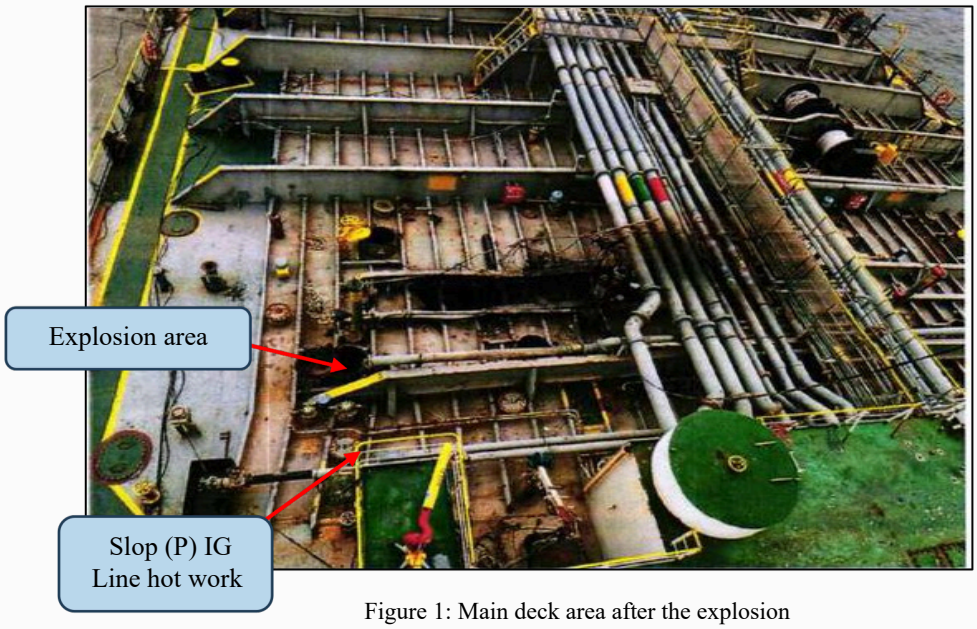

Figure 1: Main deck area after the explosion

Hot work permission had been obtained from the Port, along with a (gas-free certificate) 1for man-entry and gas-free certificate for Entry to wet and dry berth (repair berth) from the Petroleum and Explosives Safety Organization (PESO2).

[1] As per ISGOTT A certificate issued by an authorized Responsible Person confirming that, at the time of testing, a tank, compartment or container was gas free for a specific purpose

[2]The Petroleum and Explosives Safety Organization (PESO) is a nodal agency in India for regulating safety of hazardous substances such as explosives, compressed gases and petroleum. PESO's major work is to administer the responsibilities delegated under the Explosives Act 1884 and Petroleum Act 1934.

2. What Happened

An Indian flagged tanker was undergoing repairs that included renewal of sections of the Inert Gas (IG) pipeline on main deck at the Port of Chennai at repair berth since 30th October 2023 after taking the necessary permissions from Port authorities and PESO. Repairs were on going on the boiler and hence additional repairs were planned on the deck area by the onsite team.

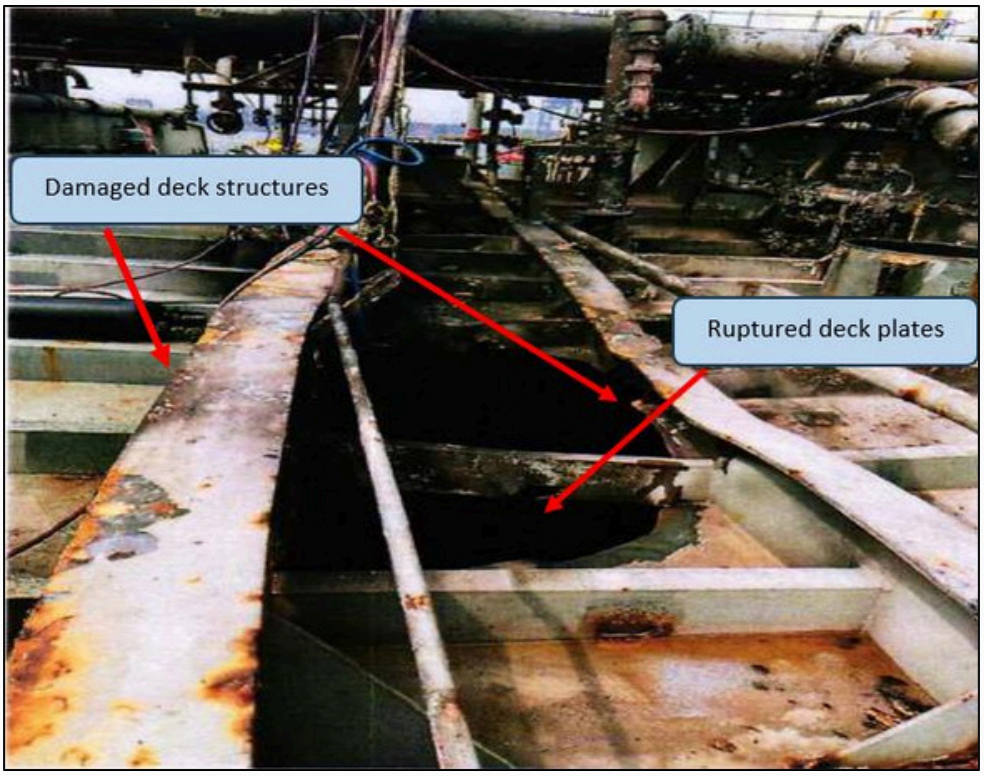

Figure 2: Damaged structural members on main deck

On 10th November 2023 at 0005 hrs. there was an explosion followed by fire on the tanker while the repairs were being carried out near the vicinity of Slop tank (port) which led to the fatality of one shore personnel and injuries to three others from the shore team. The vessel's tank dome and the internals of the Cargo Oil Tank No.7 (port) and Slop tank (port) were damaged and the main deck plating between Frame No. 49-50 were badly ruptured. There was no report of environmental pollution following the casualty or damage to the Port infrastructure following the incident.

Figure 3: Section of Inert Gas line where unscheduled job was carried out

3. Why it happened

a. The vessel was sufficiently manned, held all required valid statutory certificates, and encountered moderate, cloudy, and occasionally rainy weather during the incident. Gas

b. freeing was not carried out as per industry standards as per ISGOTT due to non- availability of IG system3 for purging since boiler was not operational. All other cargo tanks were gas-

c. freed before the vessel came to the repair port after discharging the cargo at Paradip. The tank washings were collected in the slop tank, which were later discharged ashore at the Port of Chennai. The cargo tanks were thereafter gas- freed by the introduction of fresh air in fresh air mode by IG blowers and the HC was brought below 1% Lower Explosive Limit (LEL)4.

d. Due to non-availability of inert gas on board at berth, the tank cleaning & gas freeing operations of Slop P tank were carried out after checking that tank atmosphere was having HC less than 2% by Volume. As the vessel did not have inert gas, the only condition

[3] As per ISGOTT Ch. 1.4.11 Inert Gas is principally used to control cargo tank atmospheres to prevent the formation of flammable mixtures. The key requirement for IG is low oxygen content.

[4] The concentration of a hydrocarbon gas in air below which there is insufficient hydrocarbon to support and propagate combustion, sometimes referred to as Lower Explosive Limit (LEL)

applicable in this instance would be ('Non-Inerted ships')5 and vessel was required to take precautions thereof. However, vessel carried out tank cleaning and gas freeing using HC content of less than 2% by volume instead of 10% LEL during this operation.

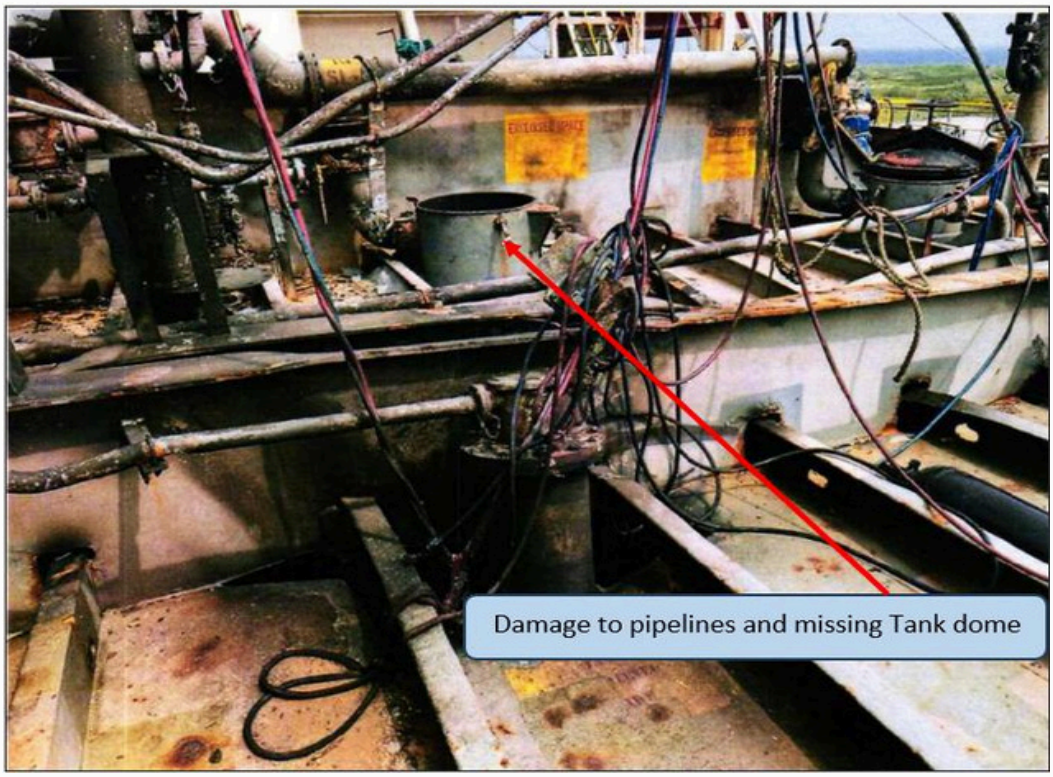

Figure 4: Extent of damage on main deck

e. While de-slopping the last tank (typically the Slop (P) tank),the tank was also water-washed in an open cycle by drawing water directly from the sea chest. During this process, the tank residues were continuously discharged ashore via the MARPOL line using the stripper pump. It is recommended that this washing be carried out with (hot water) using the tank cleaning heater to ensure proper Cleaning, adequate drainage, and overall safety. Also, all the solid residues in the tank to be removed completely for undertaking Hot work.

f. It appears that the tank cleaning procedure was not performed effectively, resulting in the formation of gas pockets within the tank. Though the records indicated that vessel had

[5]As per ISGOTT Ch. 9.4.5.2 Tankers without an Inert Gas system: The compartment where hot work is to be done should be cleaned, gas freed to meet hot work requirements and continuously ventilated. Adjacent cargo tanks, including those positioned diagonally, should either have been cleaned and Gas freed to meet hot work requirements or completely filled with water.
All slops should be either removed from the ship or securely isolated in a closed and non-adjacent tank at least 30m from the hot work location. For this purpose, tanks located diagonally should be regarded as adjacent tanks. A non-adjacent slop tank should be kept closed, securely isolated from the vent main and isolated from the piping system far the duration of the hot work. Vapour or vent lines to the compartment should be ventilated to not more than 1% LFL and then isolated. The possibility of using an external source of Inert Gas (IG) should be considered.

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carried out 03 cycles of washing which were of 45 Minutes duration each, in-adequate isolation of Inert Gas line also contributed towards accumulation of gases in the inert gas pipeline.

g. Although a risk assessment6 for the operation was conducted and signed by the Management teamonboard, upon review, it was found to be insufficient for the operations performed, as it didnot address the inherent risks associated with the entire operation. Additionally, neither therisk assessment nor the hot work permit approval was obtained from the Company.

h. Theinquiry indicates that verification and oversight by company was still necessary because the superintendent was on board, and the local agent reportedly applied for the hot work permission to the Port Authorities.

i. Itwas also observed that the (hot work permit)7 application submitted by the vessel to the Port lacked specific details and was not properly addressed by the Port. The Port issued the hot work permit for an extended duration and without verification of the appropriate conditions, based on the list of works provided by the Master.

j. Classification Society8 (RO) IRS was not informed about the repairs on the vessel by the company.

4. Recommendations

The Preliminary Inquiry conducted by this Directorate has identified specific gaps in safety measures that may have contributed to the incident and resulted in the casualties. To prevent similar incidents in the future, stakeholders are strongly encouraged to consider the following recommendations and to update their Safety Procedures in Ports and shipboard Safety Management Systems (SMS) accordingly.

[6] As per ISGOTT Ch. 4.2 A risk assessment can identify potential hazards, i.e., anything that may cause harm, and analyse the likelihood and severity of a hazard arising and the consequence of it happening.

[7] As per ISGOTT A document issued by a Responsible Person permitting specific Hot Work to be done during a particular time interval in a defined area.

[8] As per SOLAS Ch. IX-1 regulation 1. Recognized organizations or the classification society is a non-governmental organization that oversees and upholds technical standards for the construction and functionality of marine vessels and offshore structures

A. Compliance with International Safety Guide on Tankers and Terminals (ISGOTT) and Safety Management System (SMS)9 procedures (Tank Cleaning – Gas Freeing): Tank cleaning guidelines provided in the ISGOTT10 need to be strictly adhered to.The concept of reducing the HC content to less than 2% volume does not provide an acceptable referral level for any hot work, when cargo tanks are not inerted. A provision of reduction to less than 10% LEL should be maintained. Further, detailed records of such critical operations shall be maintained for future reference where required.

B. Compliance with ISGOTT and SMS procedures (Hot-Work):

The Company's Safety Management procedures must be strictly followed at all times. The Ship's Master and crew are responsible for maintaining complete oversight of shore-based workshops and subcontractors to ensure the safety and regulatory compliances of hot work operations conducted onboard the vessel during repairs at port berths. This is distinct from dry-docking facilities, where the shore fire team oversees safety. Emphasis should be placed on documenting Risk Assessments and the Office's responses for such repair activities, with all necessary approvals carefully maintained.

C. Critical Importance of Proper Isolation and Ventilation:

When performing hot work or any maintenance on systems connected to potentially hazardous areas like Slop tanks, it is essential to ensure that all pipelines, inlets, and tank domes are properly closed or isolated before starting work. This is to prevent dangerous atmospheric conditions, such as flammable gases or lack of oxygen, from affecting the workspace. Leaving tanks open to the atmosphere, especially when connected to other systems (such as IG piping), creates a high-risk environment that could lead to serious safety incidents.

[9] Company's safety management system ensures compliance with the rules and guidelines of the ISM. The requirement of this code is applied to all kinds of ships and highlights the company's environmental protection policy.

[10] As per ISGOTT Ch.12.3.5.2 non-inert cargo tanks washing should only be done when both the source of ignition and the flammability of tank atmosphere are controlled to do this as per above

As per ISGOTT Ch.9.10.10 Cargo and associated lines all cargo lines, Crude Oil washing lines and stripping lines to slops to be well drained to be cleaned, well stripped and drained.

D. Adjust Washing Protocols, Assess Cleaning Equipment and Techniques

The current washing protocol adopted by vessel, involving 3 cycles for aduration of 45 minutes each should be reviewed to ensure it is adequate for effectively cleaning the Slop Port Tank. It may be beneficial to assess the efficiency of the washing process and determine if more cycles or longer durations are needed to ensure the tank is thoroughly cleaned and free from hazardous residues. After completing the washing cycles, conduct a thorough check to verify that the tank is free of any oil residues, flammable vapors or hazardous gases. This should be a mandatory step before any further maintenance, such as hot work, is carried out to avoid unsafe working conditions.

E. Document and Monitor Cleaning Procedures and Tank Conditions

The condition of the tank before, during, and after cleaning, using gas detection devices to ensure safe working conditions shall be continuously monitored. Detailed records of the washing cycles, duration, and any issues encountered during the cleaning process are to be properly documented. Regularly review this documentation to assess whether the existing procedures are sufficient or need adjustments for future operations, ensuring both safety and efficiency.

F. Risk Assessment (RA): A comprehensive risk assessment11 process must be conducted for vessels undergoing repairs at repair berths. This assessment should be tailored to the specific tasks being performed and outline the necessary precautions to ensure safe execution. The risk assessment must also receive formal approval from the Company, with records properly maintained.

G. Hot work Permit: Shore hot work permits12 issued to vessels should specify designated times for conducting repair tasks involving hot work, preferably limiting such activities to daylight hours. Exceptions may be granted by the Port Authority in cases of emergency, allowing work to proceed outside these hours with special permission.

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[11] As per ISGOTT Ch 4.2.2 Risk assessment should consider the possibility of human errors introducing a hazard or a control failure. In this situation, Safety critical Task analysis (SCTA)11 may be used to help prevent, detect or respond to human Errors.

[12] As per ISGOTT A document issued by a Responsible Person permitting specific Hot Work to be done during a particular time interval in a defined area.

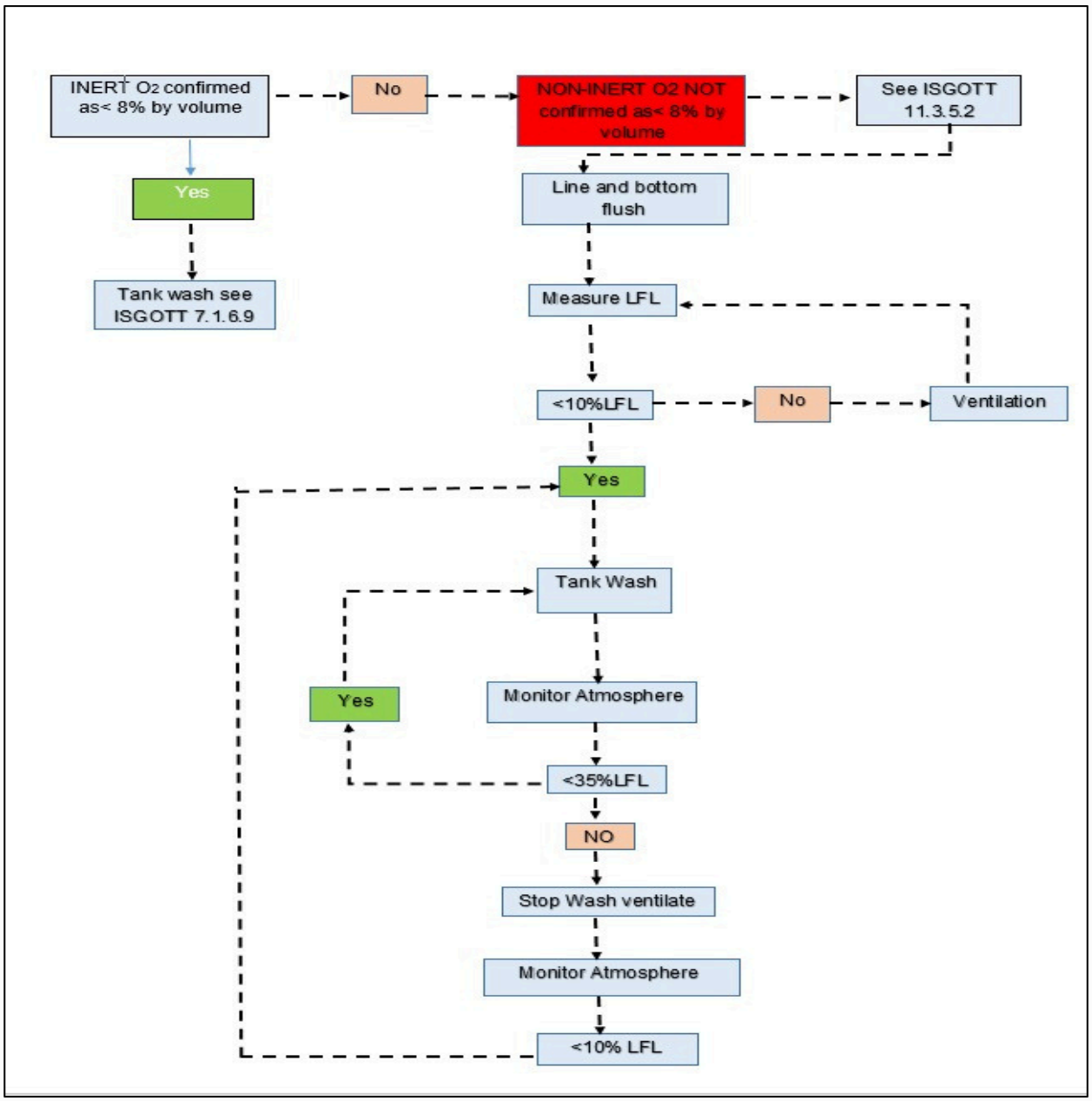

Figure 5: Flow chart showing steps to control the 'fuel' while tank washing in the non-inert tank atmosphere

H. Frequent Atmosphere Monitoring in Tanks and designated areas13: Ship staff must perform regular atmospheric checks in accordance with standard industry guidelines to verify that the areas designated for hot work and adjoining tanks / spaces are safe for workshop personnel to carry out their assigned tasks.

[13] ISGOTT chapter 12.4.4 Test the atmosphere regularly during gas freeing to monitor progress. Test at several level and each compartment of the tank if it is subdivided by bulkhead13 in large compartment tests at widely separate positions.

I. **Job Planning:** Comprehensive planning[14] must be undertaken for major tasks, with a clear action plan developed and responsibilities assigned to all stakeholders involved.

J. **Notification to Classification Society:** All extensive repairs to auxiliary machinery must be reported to the vessel's Classification Society to ensure their approval and attendance and verification of the repair work.

K. **Management of Workshop Personnel:** Workshop personnel engaged in vessel repairs must be closely supervised[15]. Ship staff should conduct regular meetings with all workshop personnel on board to ensure they are fully informed about ongoing repair activities and the associated safety measures. The assignment of additional Safety Supervisors should also be considered to enhance safety during extensive repair work.

L. **Role of Port Authorities:**

(i) The execution of hot work in high-risk environments requires strict adherence to clearly defined procedures and protocols, as outlined in Industry standards such as ISGOTT guidelines and mandatory Company SMS procedures. Ports should establish specific

(ii) protocols for vessels performing repair work at berths, as the generic permissions granted did not account for the unique hazards posed by tankers.

(iii) The Port Fire Department must conduct regular inspections to ensure that fire safety guidelines are consistently followed throughout the duration of the repair work on the vessel.

(iv) Nighttime cutting and welding work should be prohibited at cargo or repair berths on Tankers where adequate facilities for such operations are limited.

(v) Port Hot Work Permits should be limited in duration, particularly for hazardous or potentially dangerous vessels undergoing repairs at port facilities.

(vi) Port officials must exercise thorough due diligence before issuing hot work permits to hazardous or potentially dangerous vessels.

(vii) ChPA should conduct internal procedural reviews to prevent the recurrence of similar incidentsin the future.

[14] As per ISGOTT Ch. 9.10.7 Work planning meeting should be held before starting any work and on each workday. They normally involve representative from ship and contractors. These meeting ensures all are aware about daily schedules and interrelation ship between contractors, area of concerns and any precautions, including permit requirement and method of control.

[15] As per ISGOTT Ch. 9.7 the master should be satisfied that when contractors or work gangs are employed arrangements are made to ensure they understand and comply with all relevant safe working practices. A formal safety induction should be completed. A responsible officer should supervise and control contractors

M. Role of PESO:

(i) The certificate16should be issued to the vessel only after a thorough physical verification of the cargo spaces,and should not rely solely on the Master's statements.

(ii) Atmosphere checks must be conducted directly by PESO, and should not be based on the Master's submissions.

(iii) PESO should perform internal procedural reviews to prevent the recurrence of such incidents in the future.

N. Classification Society:

(i) It has been noted from previous IRS visit reports and correspondence between the company and IRS surveyors prior to the incident that the vessel had an issue with a leaking boiler water tube before the Paradip cargo discharge. However, no PR 17 was raised by the classification society, nor was a Major Non-Conformity identified or an additional SMC issued by Class, despite evidence of a failure in the Safety Management System (SMS).

(ii) The vessel underwent a class special survey, renewal statutory surveys, and dry-docking in August 2022, along with annual surveys in August 2023 by the Recognized Organization (RO).

(iii) The quality of the surveys should be scrutinized, as annual endorsements were given despite the need for significant repairs, such as the renewal of pipelines on the main deck of an oil tanker within three months.

O. Company Action on preventive recurrence of safety incidents:

(i) **Afloat & Layby Berth Repairs:**
Safetyproceduresforhot work during repairs were
reviewed and implemented, requiring safety team approval for afloat repairs. Safety Procedures for approval by Safety team was in the SMS however same was not complied with.

(ii) **Fleet Safety Assessment:** A fleet-wide safety assessment was conducted, including an additional management review meeting in December 2023.

(iii) **Hot work Approval System**: Hot work in designated areas now requires centralized approvals from the ISM department.

[16] "This certificate states the condition of the tanks, compartments etc.only.at the time of test, even though the gas free condition is expected to continue for some time, and it gives no assurance that it will remain gas free".

(iv) **Safety Campaign:** A Concentrated Inspection Campaign (CIC) focused on hot work procedures to ensure SMS compliance. **Training:** Training programs, including computer-
(v) based, video-based sessions and development of course for Training staff were implemented to ensure SMS awareness. The company also partnered with a leading content creator for enhanced digital training.

These recommendations are applicable to all vessels at Indian ports and to all Indian ports and any non-compliance with these guidelines will attract appropriate action. All the ports are required to develop and implement the Standard Operating Procedure and Safety Protocols to avoid recurrence of such incidents in future.

This is issued with the approval of the Competent Authority.

(Capt. Harinder Singh)
Nautical Surveyor and Dy. Director General of Shipping (Tech.)

Details of the Ship

Particular	Details
Name /Flag	M.T. Patriot / India (Ex Name-Ceylon)
Hull Number	5138
Type	Oil Tanker /Product Carrier
Imo No	9242156
Call sign	VTEB
GRT	28099
NRT	11613
DWT	46001
LOA	179.88 m
LBP	172.00 m
Beam	32.20 m
Depth	18.70 m
Draft summer	12.022 m
Built	M/s Shin Kurushma Dockyard Co Ltd ,Ehime prefecture Japan
Flag	India
Owner	Seven Island Shipping Limited, Mumbai
P&I	North of England
Local agents	M/S Atlantic Shipping
Class	Indian Register of shipping
Cargo & Quantity	Nil
Main Engine	B&W,6550MC-C
Bottom hull /Ship Side Color	Blacktop-Red Bottom
SMT	+0530 Hrs. in SMT / IST

भारत सरकार / GOVERNMENT OF INDIA
पत्तन, पोत परिवहन और जलमार्ग मंत्रालय
MINISTRY OF PORTS, SHIPPING AND WATERWAYS
नौवहन महानिदेशालय, मुंबई
DIRECTORATE GENERAL OF SHIPPING, MUMBAI

File No.25-19012/14/2024-NT-DGS (Comp. no.28915) Date: 17.03.2025

DGS Circular 10 of 2025 Casualty Branch Circular – 02 of 2025

Sub: Collision between merchant vessel and Indian fishing vessels on the West Coast of India

1. Background:

This circular is issued considering the increasing frequency of collisions between fishing vessels and merchant vessels along the west coast of India, which requires urgent and effective attention.

On 12 May 2024, at 2210 hours, an Indian-registered merchant vessel (GRT-1220 & Lenth-72 Meters) on a voyage from Kochi to Beypore, Calicut, had a head-on collision1with an Indian fishing vessel (engaged in fishing2), approximately 12 nautical miles west of Chavakkad (approximate position: 10°38.8'N, 075°48.64'E) on the West Coast of India. *(See Figure 1)*

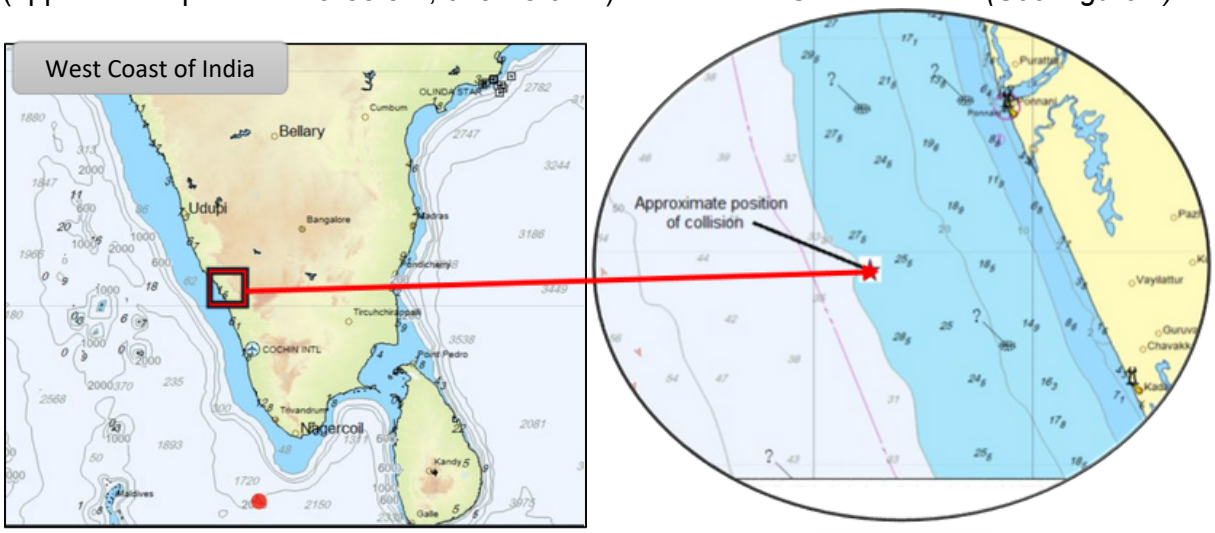

Figure 1: Location of incident

[1] As per Comité Maritime International (CMI), the term **"Collision"** means any accident involving two or more vessels which causes loss or damage even if no actual contact has taken place.

[2] As per COLREG Rule 3 The term **"vessel engaged in fishing"** means any vessel fishing with nets, lines, trawls, or other fishing apparatus which restrict maneuverability, but does not include a vessel fishing with trolling lines or other fishing apparatus which do not restrict manageability.

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The incident caused the fishing vessel to split into two halves, resulting in the total loss of the vessel. Only four out of the six fishermen were recovered from the water. The merchant vessel sustained damage to the starboard side bow and paint damage along the forward part of the hull.

2. Incident Description

The merchantvessel (Length 72 meters) was underway on a voyage from Kochi to Beypore, Calicut.Thefishing vessel (Length 15.75 meters) was reported to be at anchor and engaged in fishing activity.

Accordingtothemerchant vessel's statement, the fishing vessel was first noticed on starboard side whenitwasalready very close. Master of the vessel and look out man was on the bridge at that time.Themerchant vessel attempted to alter course to port, but the delayed response resultedinahead-on collision with the fishing vessel at 2210 hours, splitting it in two. The vesselsloweddown quickly and stopped for search operation. The larger portion of the boat was draggedalong the port side, where peeling paint marks were observed. The collision causeddamageto the starboard bow and paint scraping on the forward port side hull. *(See Figure 2)*

As perthefishing vessel's statement, one crew member in the wheelhouse noticed a ship approaching.They started the engine and attempted to move, intending to release the anchor, but inadvertentlysteered toward the approaching vessel. Unable to raise the anchor, they slackenedtheanchor line, leading to the collision with the merchant vessel.

Figure 2: Scratches on port bow and starboard bow of merchant vessel.

The merchant vessel returned to the scene one hour later, rescuing the four fishermen with a rescue boat. The survivors reported that out of six fishermen, four had jumped into the water and stayed afloat for 2 hours and 10 minutes using debris for support. Two fishermen who went inside to retrieve life jackets remain missing. Worsening weather conditions, including heavy rain and strong winds, forced the suspension of further search efforts.

The Indian Coast Guard was notified of the incident at 0000 hours, nearly two hours after the collision which is a crucial time for survival. Other vessels in the vicinity were informed only after

the recovery of the four survivors, resulting in a delay of about 2.5 hours. However, during this time, the vessel conducted search and rescue operations and saved four fishermen.

3. Cause Analysis

1. Failure to maintain a proper lookout3 is likely the most probable reason for this incident.

2. Delayed notification to Indian Coast Guard and vessels in vicinity about the incident, which resulted in loss of critical response time in rescue efforts, reducing the changes of a successful recovery.

4. Lessons Learnt

4.1 The importance of maintaining a proper lookout and the serious consequences of failing to do so cannot be overstated. Every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.

4.2 The Officer on Watch (OOW) must avoid engaging in any activity that could distract from lookout and watch keeping duties.

4.3 When navigating in fishing concentratedareas,thevessel should increase the navigation watch team with additional lookouts,maintainingsafespeed and with all engines readily available. Extra attention shouldbepaidtothesignallights of fishing vessels. In close quarter situation, the vessel shoulduseship'shorn,signaling light, and any means of communication or navigationalaidtopreventthesituation from escalating. It is also important to note that small targetsmaynotbedetectedby the vessel's radar.

4.4 As far as possible, vessels shouldaltercoursewellinadvance to avoid and maintain a safe distance from areas with a highconcentrationoffishingvessels. The vessel should not cut across areas where fishing vesselsarecongregated.

4.5 In the event of an incident, asidefromreportingtothe company's Designated Person Ashore (DPA), it is crucial to immediatelyinformthenearest maritime authorities to ensure a timely response and coordinationforsearchandrescue operations, if necessary. The priority must always be to provideassistanceandrescuehuman life.

5. Breach of Regulations and OtherIssues

5.1 Non-adherence to the InternationalRegulationsforprevention of Collision at Sea pertaining to LOOK OUT (Rule-5).

[3]As per COLREG Rule 5 **"LOOK OUT"** means every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.

5.2 The merchant vessel was maintaining rest and work hour logs in manual format, which does not comply with STCW and MLC requirements for accurately recording rest hours.

Manual records may not capture actual rest and work hours, leading to inaccuracies. The company has been advised to transition to electronic logging for improved accuracy.

6. Safety Recommendations

6.1 All vessels navigating in areas with fishing traffic on Indian coast are advised to maintain heightened vigilance, ensure compliance with safe navigation practices based on the above learnings from incident. Exercise caution, in areas with dense fishing traffic.

6.2 Fishing vessels & trawlers, especially those of more than 15 meters in length, should equip themselves with AIS to ensure their detection, even in poor visibility. Additionally, fit radar reflectors and high-intensity strobe lights to further enhance their visibility and detection by other vessels.

6.3 The Department of Fisheries should take steps to raise awareness among the fishing community about safety and legal requirements including fitment of AIS.

6.4 **Timely Reporting**: Vessel operators must prioritize immediate reporting to authorities following an incident to ensure prompt emergency response.

6.5 **Enhanced Lookout Measures**: Proper lookout practices must be strictly enforced onboard merchant vessels, especially when navigating near fishing zones.

6.6 **Improved Record-Keeping**: The Company is advised to transition from manual logbooks to electronic systems for recording rest and work hours to enhance accuracy and compliance.

6.7 **Fishing Vessel Compliance**: The Directorate of Fisheries must strengthen oversight mechanism and procedures to ensure fishing vessels maintain valid licenses, insurance, and adhere to safety standards.

These recommendations are applicable to all Indian fishing vessels, Fisheries department and merchant vessels in Indian waters navigating in and around areas of fishing vessel traffic.

This is issued with the approval of the Competent Authority.

(Capt. Harinder Singh)
Nautical Surveyor & Dy. Director General of Shipping

To,
All stakeholders through the DGS Website
Ship Owner/ Ship Operators/ Ship Manager/ Ship Masters

भारत सरकार / GOVERNMENT OF INDIA
पत्तन, पोत परिवहन और जलमार्ग मंत्रालय
MINISTRY OF PORTS, SHIPPING AND WATERWAYS
नौवहन महानिदेशालय, मुंबई MUMBAI
DIRECTORATE GENERAL OF SHIPPING,

File No: 25-19012/5/2025-NT-DGS(comp. no.34250) **Date: 13.05.2025**

DGS Circular No. 19 of 2025

Casualty Investigation Branch Circular No. 03 of 2025

Guidelines for the Safe Transfer of Seafarers, Pilots etc. using Pilot ladders, Gangways or Combination ladder etc. to / from a service boat or launch or a barge or crafts.

This safety circular is issued to highlight the two unfortunate incidents occurred in the recent past at Ulsan Anchorage (South Korea) and Port Said (Egypt) which resulted in the tragic loss of lives of the two Indian seafarers. This safety circular is to be read in conjunction with any existing safety circular issues by individual ports, terminals in addition to the SOLAS Regulation V/23 as amended on pilot transfer arrangements.

Personnel transfers using a passenger transfer basket, pilot ladder, gangway or combination ladder to/from a service launch or a barge are high risk operations and compliance with safe work procedures are of paramount importance to avoid fatal consequences, loss of lives, damages etc.

A. Incident Description

1. Incident No. 1: On24 May 2024, at Ulsan Anchorage, one of the seafarers signing-off from a Singapore flagged vessel prepared to disembark through the starboard combination ladder. While the seafarer descended through the ladder and reached the pilot ladder, the service boat attempted to come alongside, but rough seas and heavy swells hindered proper alignment with the pilot ladder. Despite these conditions, the transfer continued. While attempting to disembark into the service boat, the seafarer lost his grip on the pilot ladder and fell into the sea. Though the seafarer could initially grab a lifebuoy and rope deployed by the crew, panic and exhaustion caused him to lose his hold and was swept away by the strong current.

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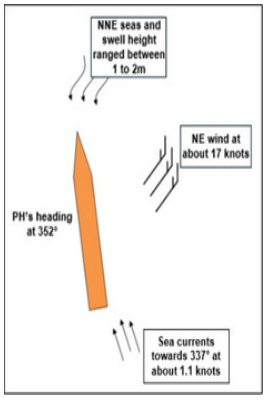

Figure1:Illustration of the weather and sea conditionsrelative to PH at 0800 Hrs.
(Source: TSIB report)

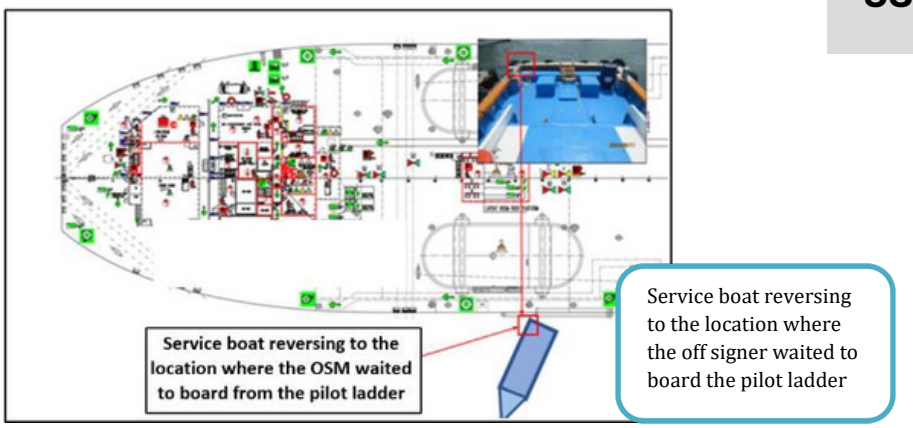

Figure 2: Indicating the service boat angle of approach. Source: TSIB report

The service boat was unable to rescue him due to the rough seas. He was later recovered by the Korea Coast Guard in an unconscious state and taken to the hospital, where he was declared dead upon arrival.

2. **Incident No. 2:** On 15th February 2025, at Port Said (Egypt), a seafarer disembarking from a

Gabon flagged vessel onto a service boat via a combination ladder lost his balance when the boat suddenly swung away from the ship's side due to sea movements and fell into the water. Despite rescue efforts, including throwing lifebuoys, lowering the gangway, and deploying a lifeboat, the seafarer was unable to secure any assistance. He drifted toward the aft of the vessel and eventually disappeared from sight. The service boat, which had been tracking him, later reported losing contact, leading to a tragic outcome.

B. Cause Analysis

Both incidents revealed significant lapses in adhering to critical safety procedures during the disembarkation process, resulting in seafarers falling into the sea.

In the first case, the prevailing sea conditions were not properly assessed. The rough seas led to a misalignment between the pilot ladder and the service boat, creating a highly unsafe environment for personnel transfer. Despite the visible risk posed by strong swells, the operation continued without implementing any safety interventions. The disembarking seafarer, who was not wearing appropriate PPE, lost his grip and fell into the water.

In the second incident, similar rough sea and swell conditions caused the service boat to swing away at a critical moment during the transfer operation. This sudden movement disrupted the seafarer's balance, resulting in fall into the sea. In both cases, poor coordination and lack of preventive action in response to adverse sea conditions played a direct role in the accidents.

These incidents highlight the dangers associated with unstable sea states and several systemic safety failures, including inadequate risk assessment, insufficient awareness of environmental

conditions, failure to follow established safety protocols, and improper use of PPE. They emphasize the urgent need for stronger safety measures, including proactive planning, better coordination between ship and service boat crews, and comprehensive training tailored to transfer operations in varying sea conditions.

It is equally important that service boat operators remain fully aware of and responsive to sea conditions during such operations. The first incident occurred in daylight, while the second took place at dawn, drawing attention to the additional risk posed by poor visibility. In such cases, proper illumination of the pilot ladder is critical to ensuring safe disembarkation.

C. Lessons Learned:

1. Safe Work Procedures: Always comply with the company's safe transfer procedures and risk assessment for embarking and disembarking personnel via service boat/barge.

2. Equipment Rigging and Maintenance:Ensure that the means of embarkation/ disembarkation are properly rigged and maintained as per regulatory requirements, manufacturer's instructions and company procedures. Maximum age of the pilot ladder should be 24 Months, maximum age of the man ropes used with Pilot ladder 12 months. If the condition of the Pilot Ladder or Man Ropes are not good, it must be replaced immediately.

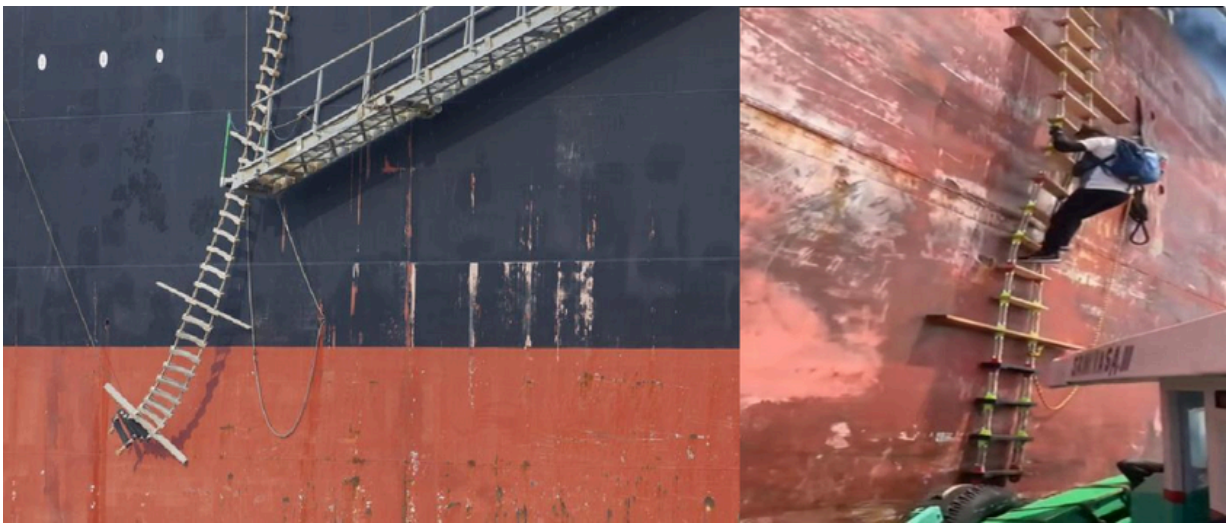

Figure 3: Illustration of a seafarer disembarking from a vessel through a pilot ladder with inadequate PPE

3. Time Pressure: Avoid scheduling crew changes within tight operational timelines like ETA deadline, where there is an inherent urgency exists to complete the transfer operation quickly, compelling to cut corners.

4. Weather Conditions: Evaluate the adverse effects of existing weather and forecasted weather conditions, with particular attention to factors such as wind speed, swell height, and sea state, which may significantly impact safe transfer operation. While in doubt, be on the safety zone and

postpone transfers during adverse weather conditions. If required,movetheoperationsin sheltered areas or provide an adequate lee to facilitate safe transfer.

5. Human Element: Consider the physical fitness, experience andconfidence of the person embarking / disembarking especially those is embarking soon after completion of longwork hours on board. Familiarization and toolbox meeting: Carry out a tool box meeting with all relevant crew explaining the hazards, safeguards, means of communication etc.

6. Personal Protective Equipment (PPE): Transfer personnel must wear life jackets and should not carry backpacks or baggage duringthetransfer.Transferthebaggageorotheritemsusinga heaving line. Both the victims were notwearinglifejacketsatthetimeofincident.Lifejacketcould have kept the victim afloat even afterfallinginwaterwhichcouldhavehelpedinrescue.

7. Operational Safety: Always inspect ladders and equipment to ensure they are not stained with oil, grease. This inspection to be done prior to rigging. Assign experienced person to supervise the operations and ensure clear communication between ship and service launch.During the transfers, always maintain 3 point contact and keep the body weight near to the ladder to prevent it from swinging. When transferring between a pilot ladder or a gang way and boat, it is crucial to always use the available handhold so the vessel/boat to maintain stability and prevent falls,especially when crossing over between the two platforms; make sure to firm grip the handholds before stepping onto or off the ladder. It is crucial to stay alert to your surroundings. Listen to the instructions for launch personnel as they will instruct when it is safe to transfer. Adequate lighting of the transfer area is also very important.

8. Safety Culture and Stop Work Policy: Implementcompany'ssafetystopworkpolicywhen unsafe acts or conditions are noticed, ensuringimmediateattentiontohazardousconditions.

9. Emergency Preparedness: Crew must befamiliarwiththeoperationsandawareofrequired emergency actions in invent of man overboard(MOB)eventbywayofregulardrills,including raising of alarm, reporting procedures and rescuemeasures.

10. Emergency Preparedness: Crew must be familiar with the operations and aware of required emergency actions in invent of man overboard (MOB)event by way of regular drills, including raising of alarm, reporting procedures and rescue measures.

D. Safety Recommendations

1. Industry to take Note of Gaps in Compliance

Compliance with dock safety regulations lies with the respective port authorities and designated safety officers. Pilot transfer procedures—whether involving a pilot boat, tug, barge, or service launch—are critical to maintaining uninterrupted vessel operations, as berthing and un-berthing depend on the safe movement of pilots. Ports must recognize the importance of ensuring that pilot

transfer crews are fully aware of and committed to safe operating practices. All passenger and pilot transfers should be conducted with safety as the primary concern and only in calm weather conditions. Port safety officers must verify that all craft crew are properly briefed, trained, and experienced for such operations. The Code of Safe Working Practices may be used as a guiding reference for compliance. Service launch operators should regularly review their procedures to include adequate handholds for safe transfers, availability of life jackets for all personnel, effective communication devices, and reliable survivor recovery arrangements. It is hereby emphasized that any attempt by the Ship Owners/ Ship Managers/ RPSL Agencies/ Port Authorities/ Ship Masters/ Pilots/ Seafarers to carry out passenger and pilot transfer operations in unfavorable weather conditions without proper safe guards will be considered as a serious violation of safety requirements and necessary penal action shall be initiated against the persons involved in accordance with the provisions of the Merchant Shipping Act.

2. Vessel owners, Technical Managers and RPSL agencies:

Ship owners, managers and RPSL agencies to review the company's safe transfer procedures and risk assessment for embarking and disembarking personnel via pilot ladder, combination ladders, and while using services of boat/tug/barge based on the above learnings. Vessel owners and tech managers shall ensure SOLAS Chapter V, Regulation 231 are complied with.

GPS-enabled Personal Locator Beacons (PLBs): In the interest of enhancing personnel safety during transfers to and from ships, it is strongly recommended that all pilots and transferring seafarers be equipped with GPS-enabled PLBs. These devices serve as vital emergency tracking tools that can significantly expedite search and rescue efforts in the event of a fall overboard or any other incident during transfer operations. The real-time location capability of GPS PLBs ensures immediate identification of the distressed individual's position, improving survival chances and response efficiency. Incorporating this equipment into standard transfer protocols reflects a proactive safety culture and aligns with international best practices for safeguarding maritime personnel.

3. Ship Masters

Master should carry out regular safety drills to familiarize crew in stopping the operations, responding to an emergency while passenger or pilot transfer is in progress. Compliance with SMS procedure and other company guidelines and contents of this circular is to be discussed and followed.

[1] Regulation 23 - *Pilot transfer arrangements*

Avoid holding personnel on board till the departure of vessel and disembarking into a boat prior departure creates a sense of urgency among personnel to get down into boat “come what may”. This kind of attitude is a clear recipe for dangerous incidents.

Fresh risk assessment is to be carried out if there are any changes in conditions prevailing at the time of planning of operation. inculcate habit of use of wearing PPE during transfer whether for going ashore or signing off from a vessel

Three-Point Contact Rule: Maintaining three points of contact (e.g., two hands and one foot or two feet and one hand) when using ladders or handholds is a globally recognized safety practice to minimize accidents during transitions

Man Overboard (MOB) Training: Always keep in mind Pilot Transfer, Passenger Transfer poses a potential threat of man Overboard situation, therefore emergency preparedness plays a

pivotal role in saving lives. Crews must be trained in quick rescue actions which can dramatically improve chances of survival in such events.

(Capt. Harinder Singh)
Nautical Surveyor and Dy. Director General of Shipping (Tech.)

To,
All stakeholders through the DGS Website
Ship Owner / Ship Operators / Ship Manager / Ship Masters

Directorate General of Shipping

Casualty Branch, Nautical Wing

Directorate General of Shipping,

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Kanjurmarg (East), Mumbai - 400 042