Isle of Man Ship Registry

Annual Summary of Casualties, Accidents and Incidents on Isle of Man Registered Vessels

2022

Isle of Man Government
Department for Enterprise

Isle of Man Government
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Executive Summary

- There were 26 Accident, 25 Incident and 6 Casualty reports in 2022
- The most common occurrences in 2022 were collision/allision and sudden uncontrolled release of substances from a system.
- Watch keeping duties and mooring operations were the most common activity reported on the ARF forms
- There were 4 fatalities, 10 serious injuries and 7 minor injuries reported in 2022
- Using portable tools were the most dangerous activity for seafarers
- The most common causal factor was the working method used followed by human factors
- The most common causes identified for each causal factor were:
    - Working method – Unsafe working methods
    - Mechanical and other equipment – Fire
    - Human factor – Negligence or carelessness of others
    - Other miscellaneous causes – Ship movement
    - Movement about the ship – Dropped objects

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Chapter 1 Introduction

The Isle of Man Ship Registry's 2022 Casualty Summary report provides statistics and analyses the trends identified from the Accident Report Forms (ARF) submitted to the registry over the course of 2022. We hope providing this data will help to reduce similar accidents in the future. All identifying information has been removed to respect the confidentiality of our clients and seafarers.

This report does not include statistics relating to fatalities or injuries from natural causes or suicide unless they are directly related to an 'occurrence' on board.

An 'occurrence' is either a **casualty**, **accident** or an **incident** as defined in the Merchant Shipping Accident Reporting and Investigation Regulations (SD815/01), with casualty being the most severe type of occurrence. In some areas of this report, the classification 'Fatality' is used where a casualty occurrence has resulted in death. These occurrences are still casualties under SD815/01 but the distinction is made to highlight the severity of the occurrence.

In this report, a "***serious injury***" means an injury sustained by a person resulting in incapacitation where the person is unable to function normally for more than 72 hours, commencing within seven days from the date when the injury was suffered. A "***minor injury***" means any lesser injury that is not a serious injury.

Chapter 2 Investigations

All reports received that are "Very Serious Marine Casualties" as defined by the IMO Casualty Investigation Code (refer to Chapter 6) are investigated and have a report published.

For all other reports received, a decision is made by the Isle of Man Ship registry as to whether an investigation is required or not. Any reports published are available on the IOMSR website.

2.1 Investigations by IOMSR in 2022

Type of Ship	Nature of Investigation
None	

2.2 VSMC Safety Investigations conducted by UK MAIB for IOM in 2022

Name of Ship	Type of Ship	Nature of Investigation
Berge Mawson	Bulk Carrier	Fatal injuries to 3 stevedores in a cargo hold on board

2.3 Reports Published by IOMSR in 2022

Ship Name	Type of Ship	Nature of Investigation
Frey	Fishing Vessel	Fire

2.4 Investigations on IOM Vessels by other investigation bodies in 2022

Type of Ship	Nature of Investigation	Investigation Authority
None		

Chapter 3 ARF Reports Received in 2022

3.1 Reports from Isle of Man Registered Ships

In 2022, the Isle of Man Ship Registry received 57 ARF reports from Manx ships. The graph below shows the number of reported occurrences in 2022.

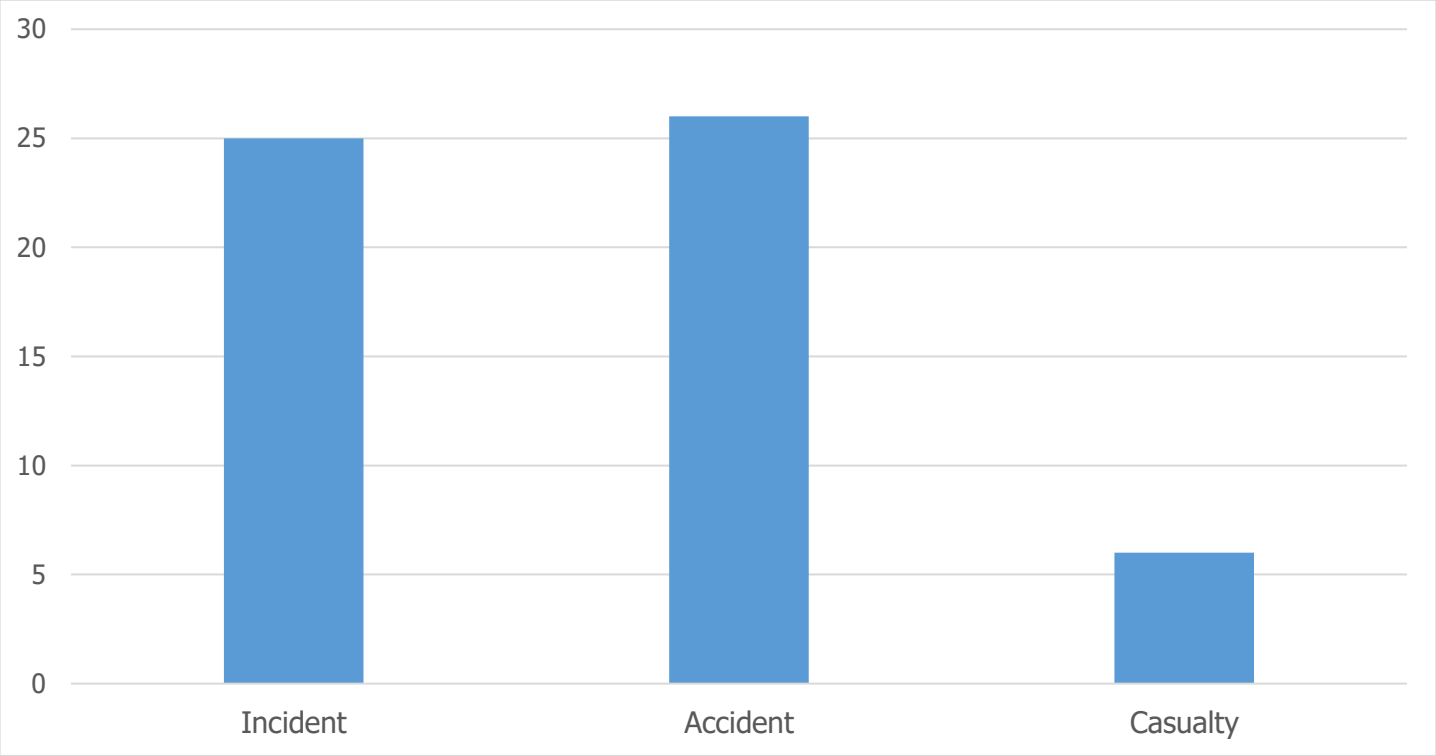

Figure 1 – ARF reports received in 2022

The table below gives a breakdown of cases reported per ship type in 2022.

	Incident	Accident	Casualty
Bulk Carrier	1	0	1
Oil/Chemical Tanker	2	4	1
Gas Carrier	2	1	0
Other Cargo Ship	6	3	2
Offshore / Standby	8	13	0
Passenger Ship	2	0	1
Commercial Yacht	5	4	0
Pleasure Yacht	0	1	0

Of the 21 accident ARF reports submitted from Offshore/Standby vessels, 11 of these were related to minor leaks (<2ltr) of oil or other fluid to sea. These have been disregarded from further analysis to allow trends pertaining to safety to be highlighted without bias from these reports.

Chapter 4 Analysis of ARF Reports Received in 2022

The most common occurrences reported to the Isle of Man in 2022 were collisions and sudden uncontrolled release of substances for a system (fig.2).

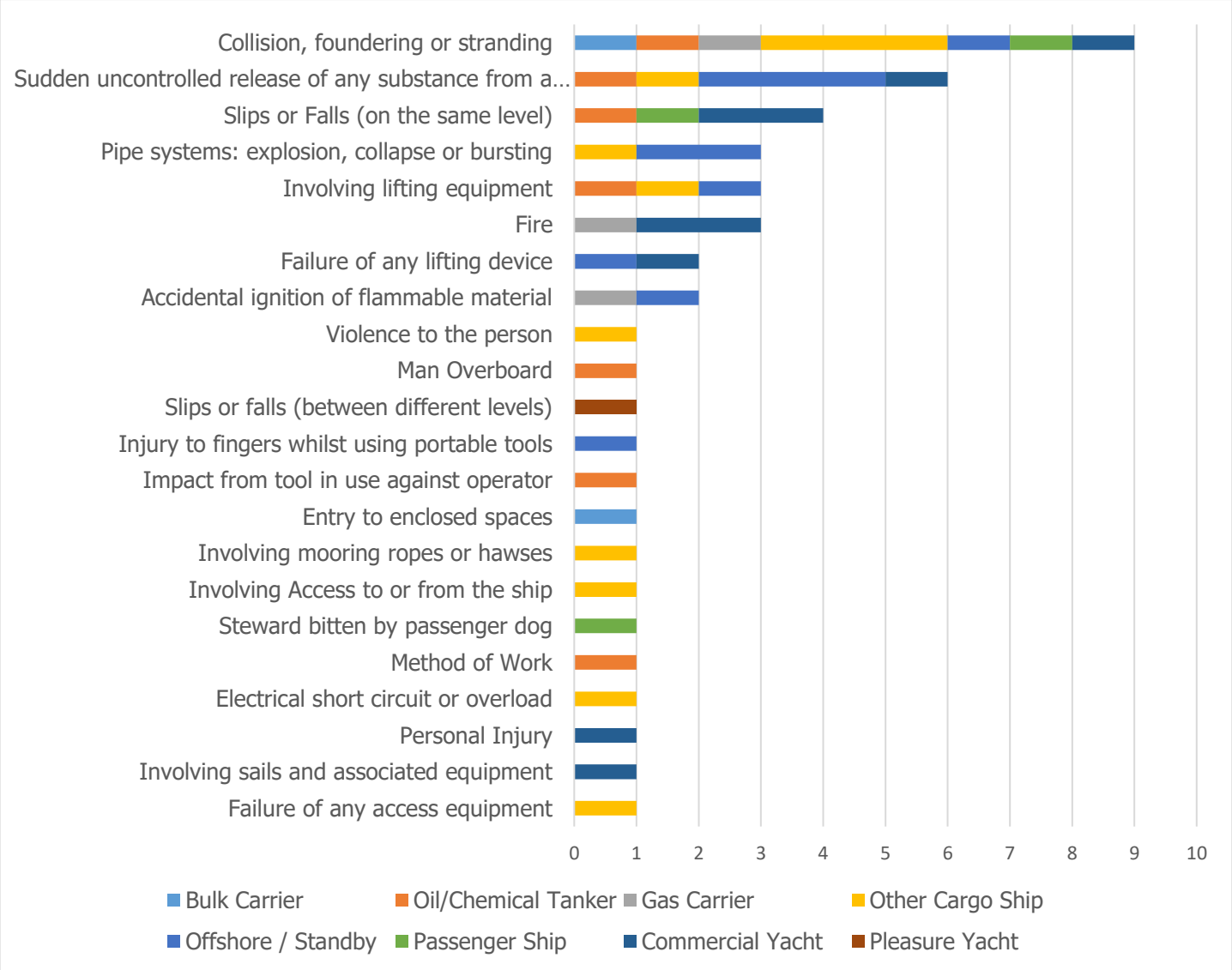

Figure 2 - ARF Occurrence by Ship Type

The reported occurrences came from several different ship types and there does not appear to be enhanced risk associated with a specific class of ship.

To minimise the risk of collision, allision and grounding occurrences, correct watch keeping procedures, organisation of work and vigilance are key.

To minimise the risk of sudden uncontrolled substance losses from a system, rigorous preventative maintenance systems and detailed plans of work before starting any job are vital.

Figure 3 below shows the ARF reports received in 2022 broken down by the activity being performed at the time of the accident:

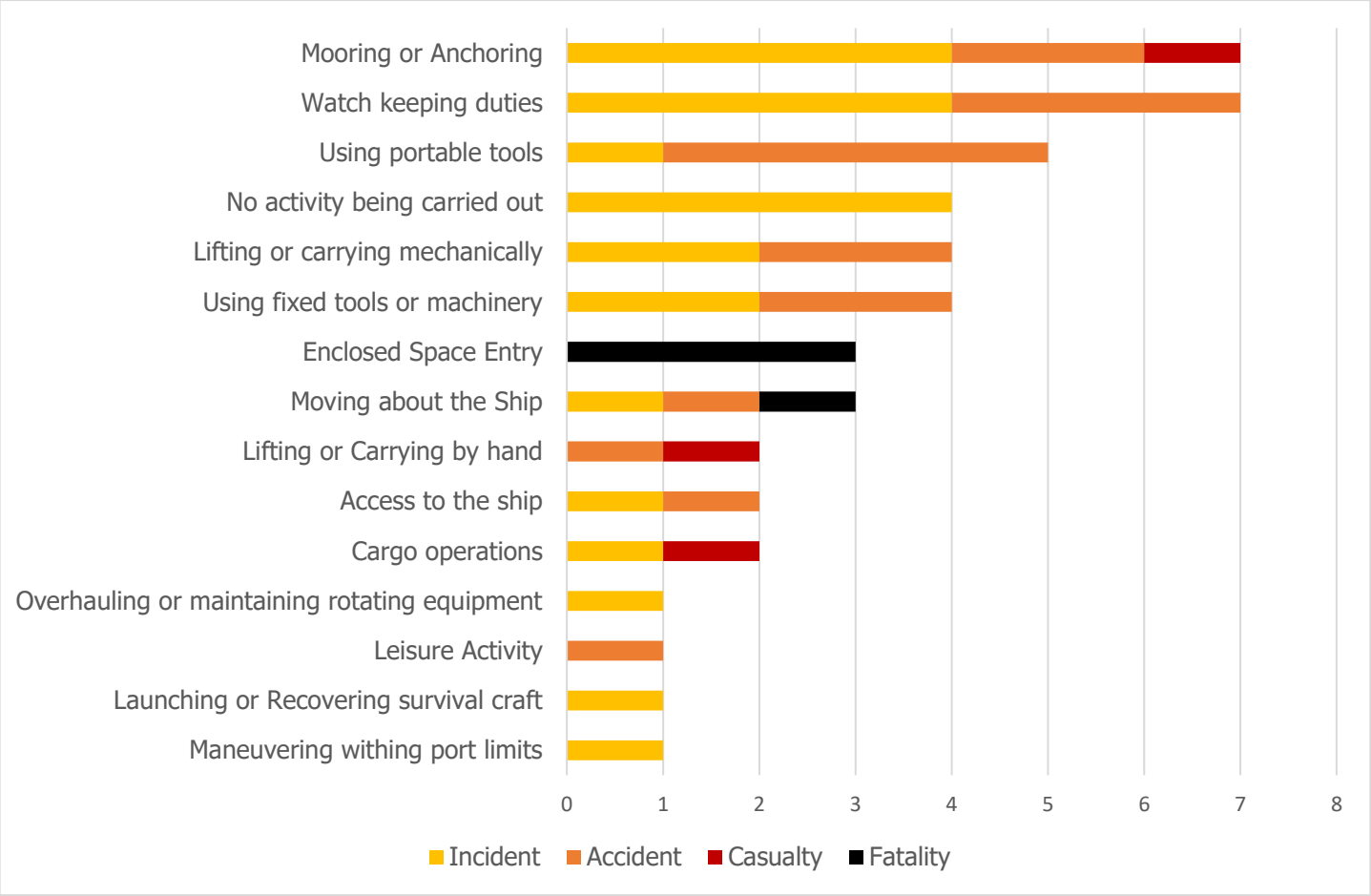

Figure 3 - ARF Reports by Activity Performed

Watch keeping duties and Mooring/Anchoring were the most prevalent activities being performed at time of incident. Mooring is one of the most dangerous activities on board when a marine accident occurs due to the significant potential energy bound within the tension of the ropes. All danger zones relating to mooring operations should be clearly marked on deck and crew should be regularly reminded of the significant risk associated with mooring operations.

The number of occurrences discovered through watch keeping duties highlights the importance of maintaining an effective and vigilant watch using crewmembers or a robust UMS system. Most of these occurrences were caught early and prevented from becoming significantly worse thanks to the quick action of those on board.

Use of portable tools remains a significant contributor to personal injuries, crew should be regularly reminded of the dangers posed by hand tools and all tools should be frequently inspected to ensure they remain fit for purpose.

2022 also saw the tragic loss of 3 stevedores in the cargo hold of a bulk carrier, investigations are ongoing by the MAIB to establish the root causes of the incident. Preliminary reports from the company indicate that the stevedores made unauthorised entry to an incorrectly identified cargo hold that was not gas free. Companies should consider hard locks on all enclosed spaces on board a vessel as a preventative measure, particularly when there are contractors who may not be familiar with the vessel and its layout on board.

Chapter 5 Reported Injuries and Fatalities

This section of the report analyses only the ARF reports received in 2022 that resulted in injury to a seafarer. In 2022, there was a total of 1 fatality, 9 serious injuries and 6 minor injuries to seafarers.

5.1 Seafarer Injury Rate

The table below shows the approximate rate of injury and severity across the Isle of Man fleet extrapolated to the injury rate per 100,000 seafarers. This gives a standardised industry health performance and allows for comparison between other work sectors (i.e. construction).

	All Ships		MLC Ships		Non-MLC Ships	
Seafarers Injured	**Number**	**Rate**	**Number**	**Rate**	**Number**	**Rate**
Fatalities	1	10	1	14	0	0
Serious injuries	9	89	8	108	1	36
Minor injuries	6	59	6	81	0	0

Rate per 100,000

Note:

1. The number of seafarers is estimated based on a seafarer average per ship type per ship size. Number of seafarers is based only on seafarers employed on board ships only and does not include seafarers at home on leave.
2. "**MLC Ship**" means any ship to which the Maritime Labour Convention 2006 applies.
3. MLC seafarer does not include passengers, yacht guests, visitors or crewmembers employed on a non-MLC ship.
4. See introduction for definition of "Serious Injuries" and "Minor Injuries".

5.2 Number of Injuries and Fatalities Reported

The tables below show a breakdown of injury by rank on board.

MLC Seafarer Injuries

MLC Seafarer Injuries by Rank	Minor	Serious	Fatality	Total
Master	0	1	1	**2**
Chief Officer	0	0	0	**0**
OOW Nav.	2	1	0	**3**
Chief Engineer	1	1	0	**2**
2nd Engineer	1	0	0	**1**
OOW Engineer	0	1	0	**1**
ETO	0	0	0	**0**
Deck Rating	1	3	0	**4**
Engine Rating	0	2	0	**2**
Deck/Eng. Cadet	1	0	0	**1**
Cook/Steward	0	0	0	**0**
Others	0	0	0	**0**
Total	**6**	**9**	**1**	**16**

Non-MLC Seafarer Injuries

Non-MLC Seafarers	Minor	Serious	Fatality	Total
Passenger / Yacht Guest	0	0	0	0
Visitor/Contractor/Stevedore	1	1	3	5
Fishing Vessel Crew	0	0	0	0
Total	**1**	**1**	**3**	**5**

The data shows that deck ratings were the biggest risk rank for receiving an injury in 2022.

5.3 Injury by Activity

Figure 4 shows the injury severity by the activity being performed.

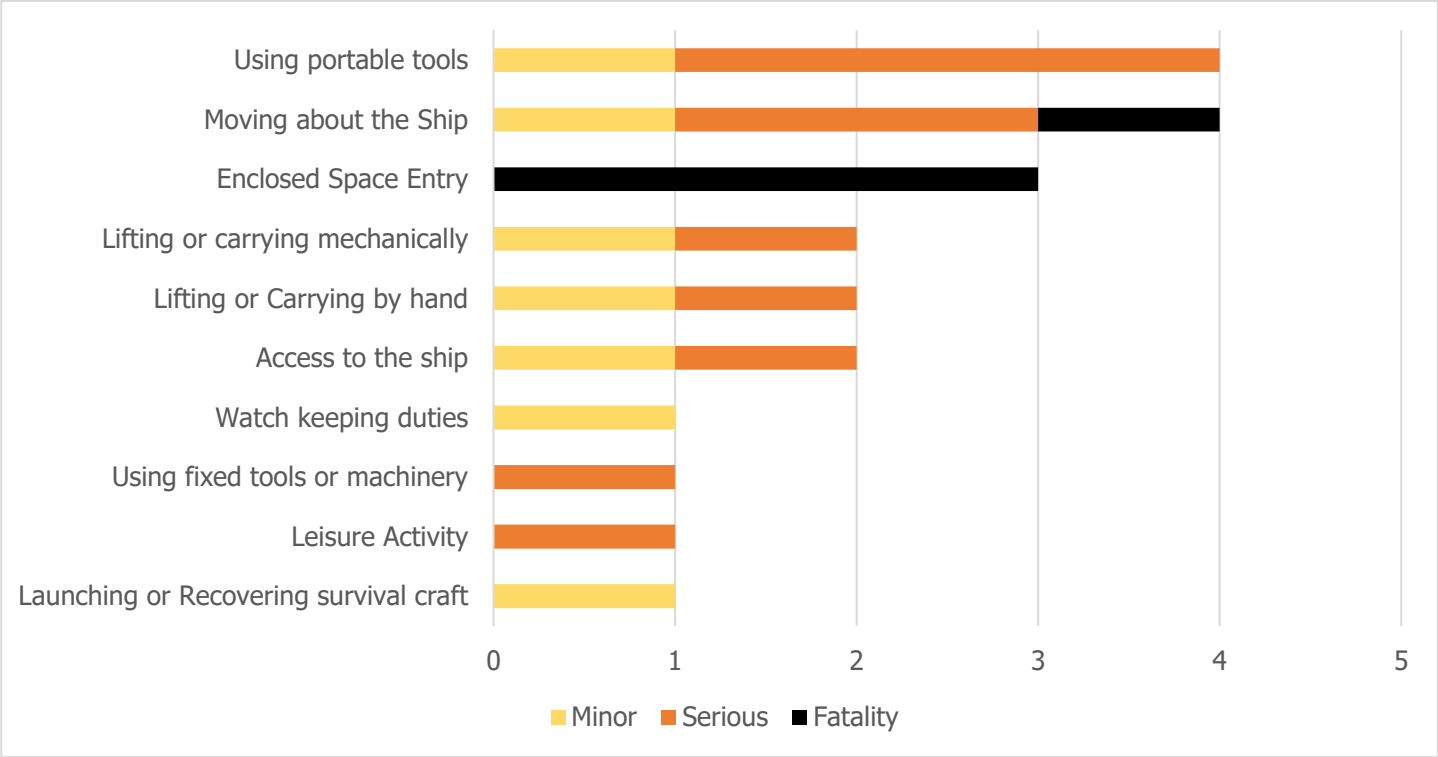

Figure 4 - Injury Activity by Activity

The most dangerous activities for seafarers were using portable tools and moving about the ship. Care should be taken by all crewmembers when moving about the ship, especially if they are focused on another task. The design and materials used for construction of most ships combined with surface movement means that the risk of injury during a slip or trip can be significant. Portable tools should only be used by crewmembers if they are in good condition and the operators is competent in their use.

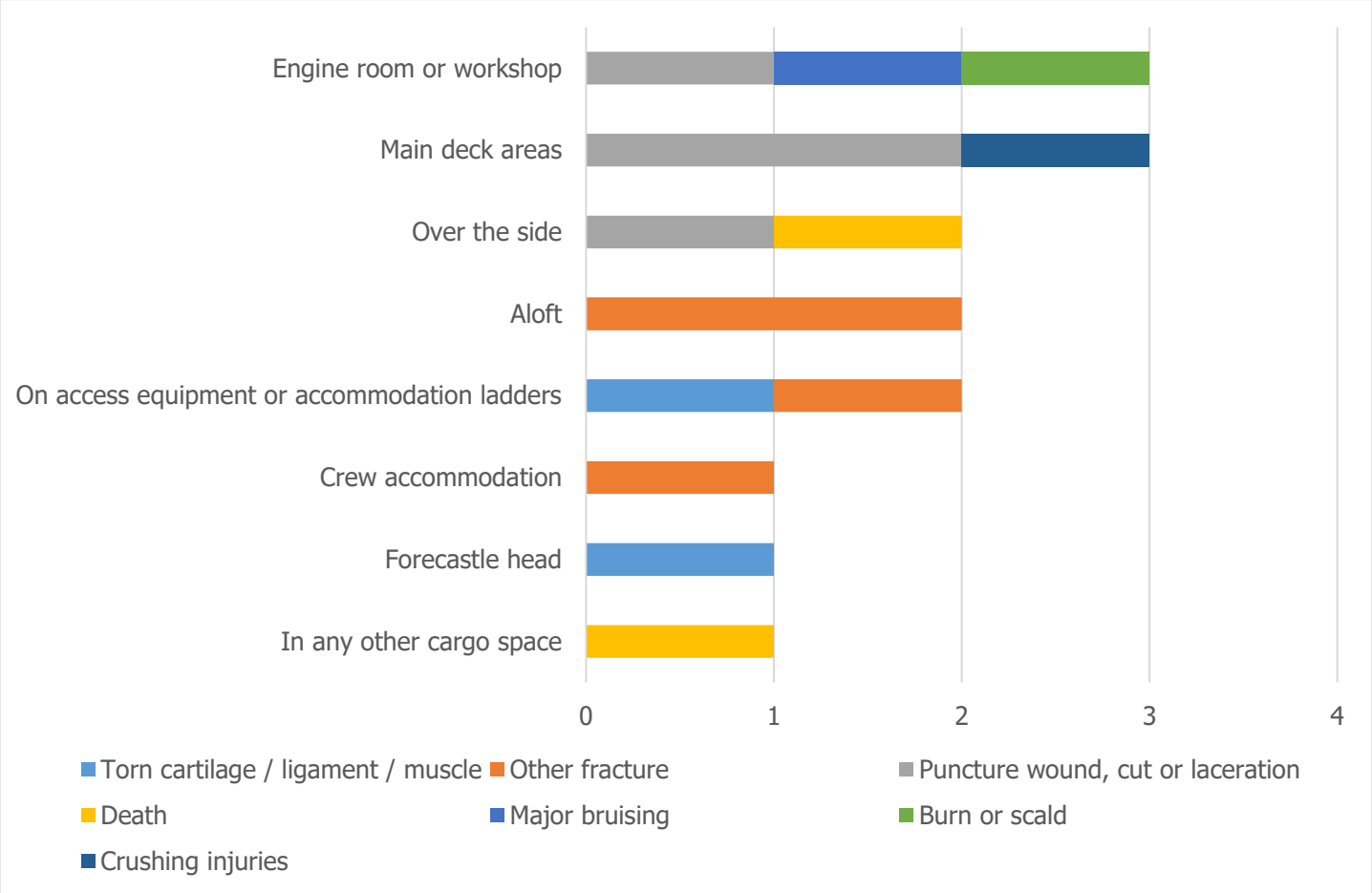

Figure 5 - Injury by Location about Ship

Consistent with the activities data, deck areas and the engine room carried the greatest risk of injury. The most common injuries were puncture wounds/cuts/lacerations and fractures.

Chapter 6 IMO Casualty Investigation Code

Figure 6 represents the cases reported to IOMSR in 2022 classified as per the IMO Casualty Investigation Code for different vessel types.

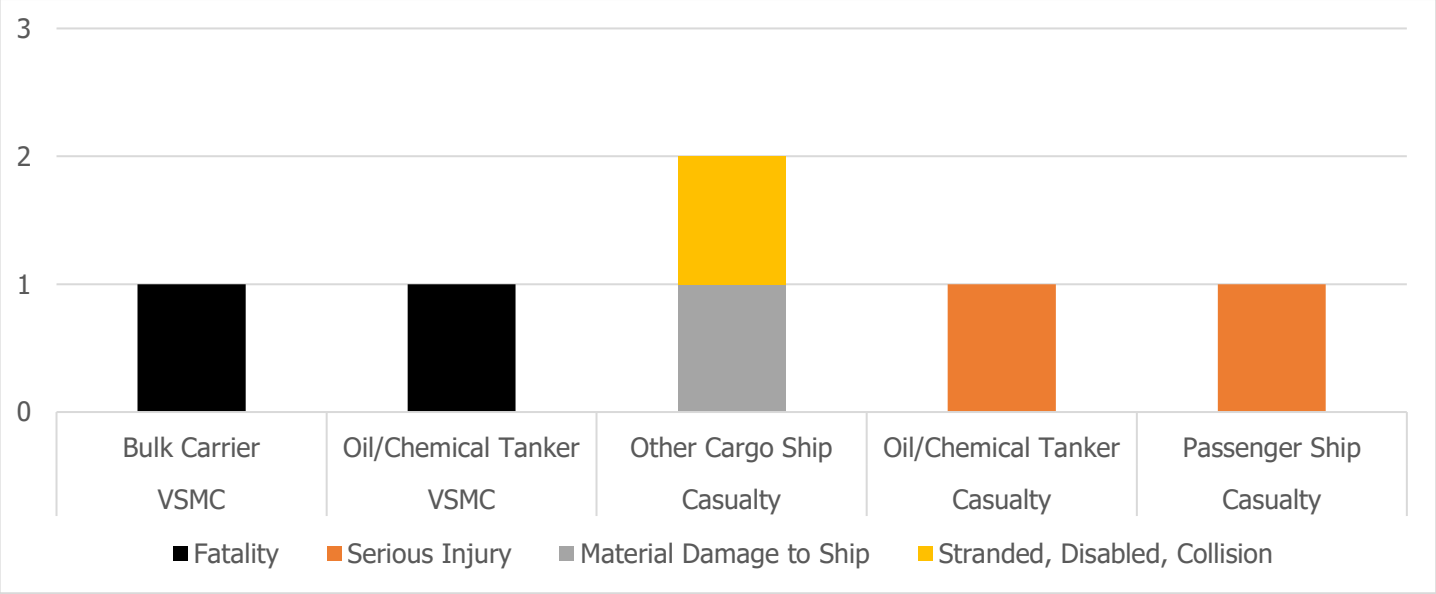

Figure 6 - Casualty Cases by Ship Type

Serious injury to seafarers are the most common type of casualty reported to the Ship Registry. Crew training, awareness campaigns and promoting a culture focused on safety remain the most important actions shipowners can take to reduce casualty cases and keep seafarers safe across the industry.

A summary of select ARF cases is provided in the appendix to this report.

Chapter 7 Breakdown of Occurrences in 2022 by Cause

The following charts represent a breakdown of all the occurrences by the causal factor. Determination of the various causes follows an investigation into the occurrence by the ship's staff, company investigators or an external investigating body. It is important to remember that an occurrence may be the result of several factors across different categories.

Figure 7 below shows occurrence split by the causal factor categories.

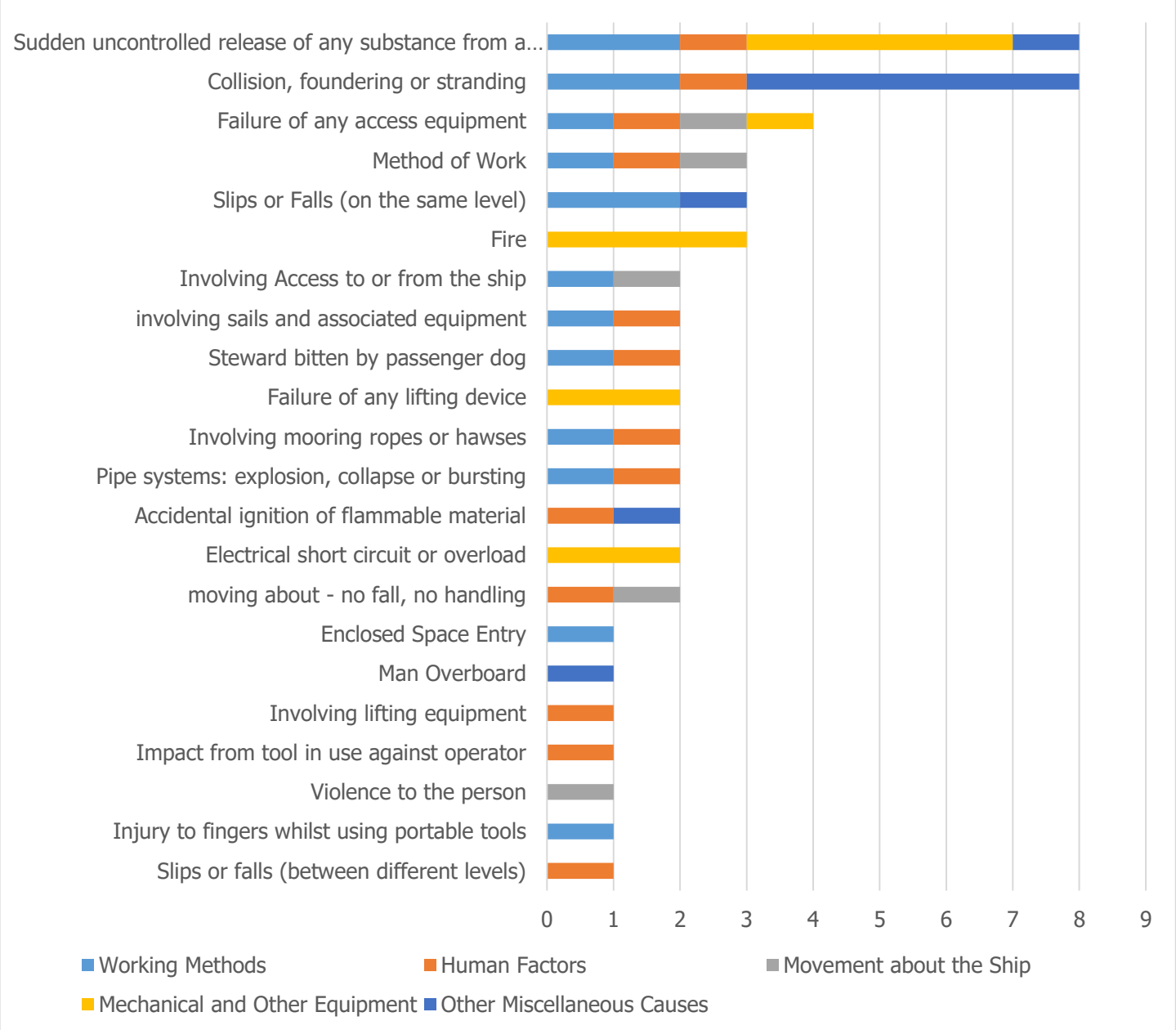

Figure 7 - Occurrence by Causal Factor

The most common causal factor was the working method used, followed by human factors.

7.1 Occurrences by Working Method

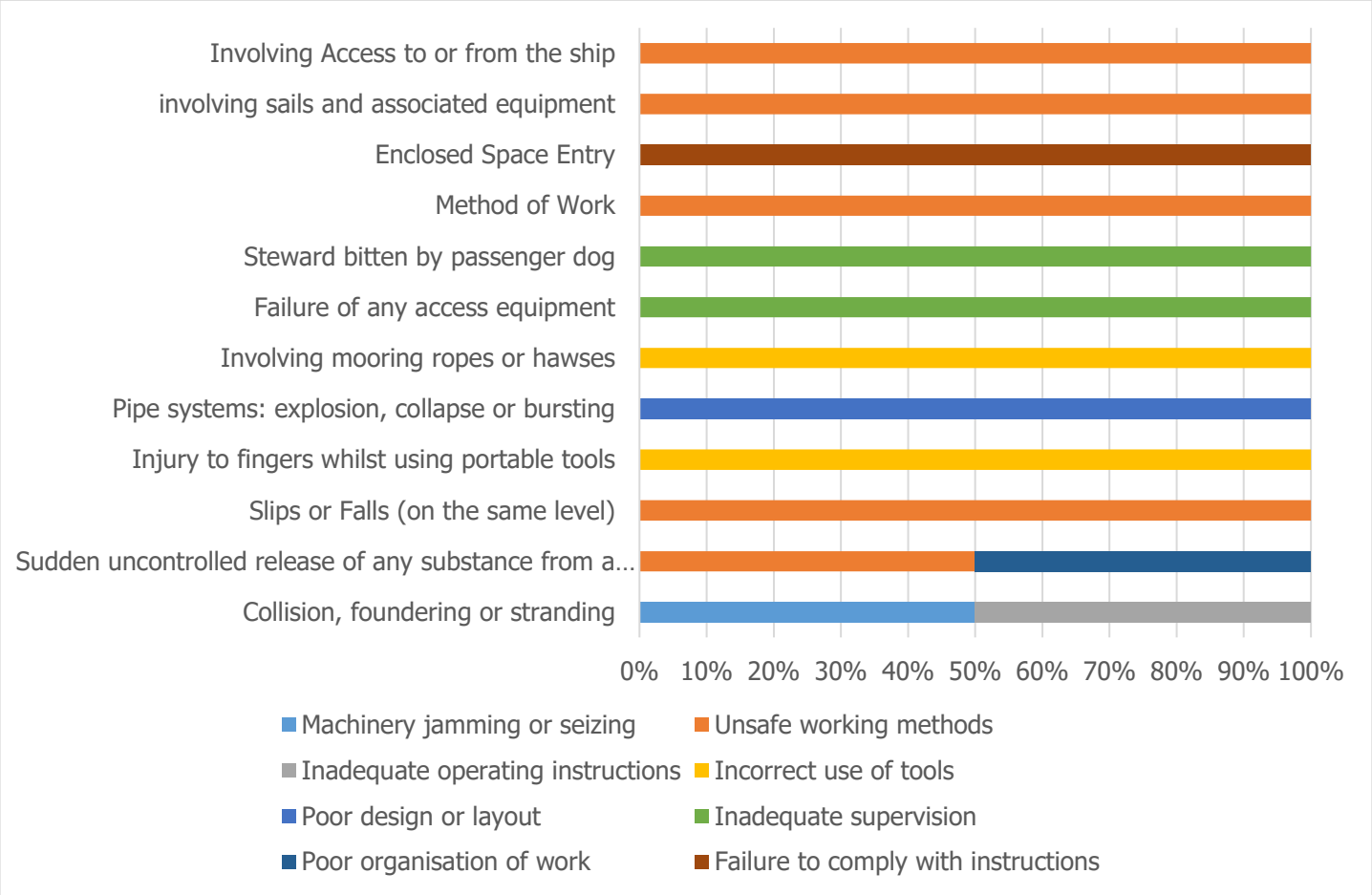

Figure 8 - Occurrences by Working Method

In 2022, the predominant working method cause was reported to be "unsafe working methods"

Seafarers should plan their work and safety precautions adequately and avoid taking shortcuts to get the job done more quickly. This highlights the importance of effective risk assessment. A seafarer should not feel they must put themselves in a dangerous situation to complete the job or to save a few minutes of time.

Continuous training, rigorous risk assessment and detailed procedures all contribute to a safety culture that helps reduce occurrences caused by unsafe working methods.

7.2 Occurrences by Movement about the Ship

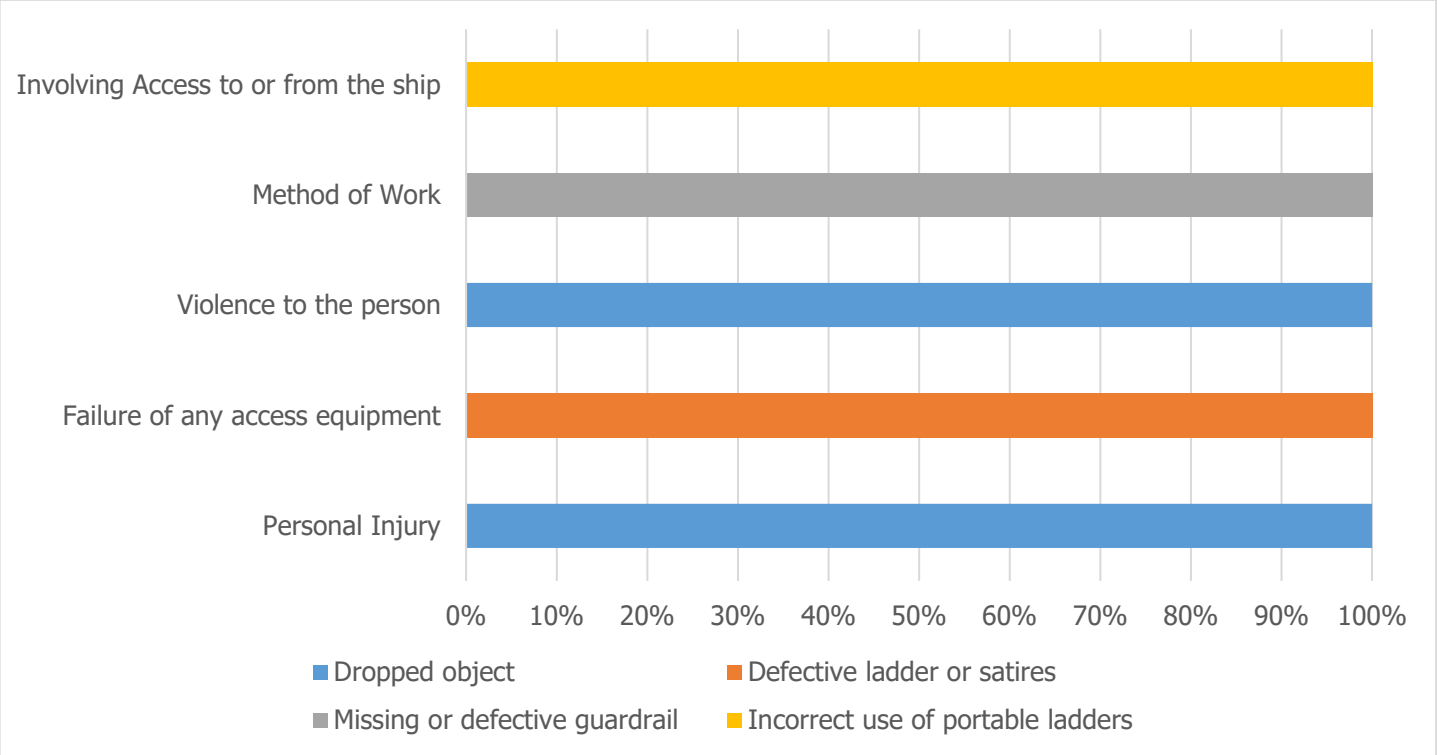

Figure 9 - Occurrences from Moving about the Ship

Seafarers should always take care when moving about the vessel, particularly when carrying items.

Crewmembers should also be aware of their surroundings and remain vigilant for other personnel in their vicinity or areas where safety barriers have been temporarily removed for maintenance purposes, effective toolbox talks involving all crew can be useful for this purpose, to ensure all are ware of ongoing works around the ship.

Where appropriate, masters should ensure that deck-working areas have non-slip surfaces. This can be achieved by either clearing/cleaning the deck, placing non-slip mats or use of non-slip paint mixes.

7.3 Occurrences by Human Factor

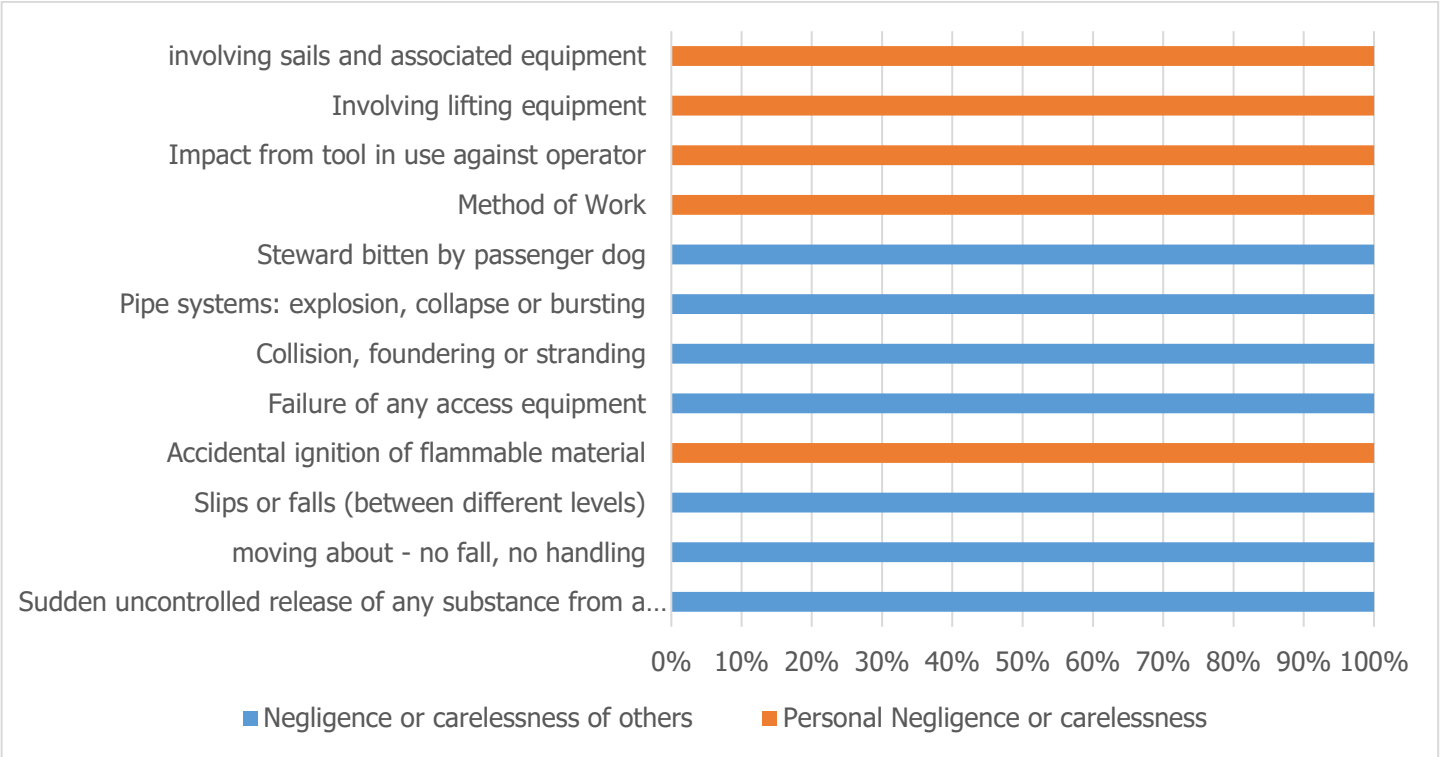

Figure 10 - Occurrences by Human Factor

By "human factor" we mean the act or omission of a person to do something that leads to the occurrence happening. This stresses the need for adequate knowledge and training associated with the particular work activity for the crewmember to be made aware of any associated risks and for crewmembers to pay attention to what they are doing.

7.4 Occurrences by Mechanical & Other Equipment

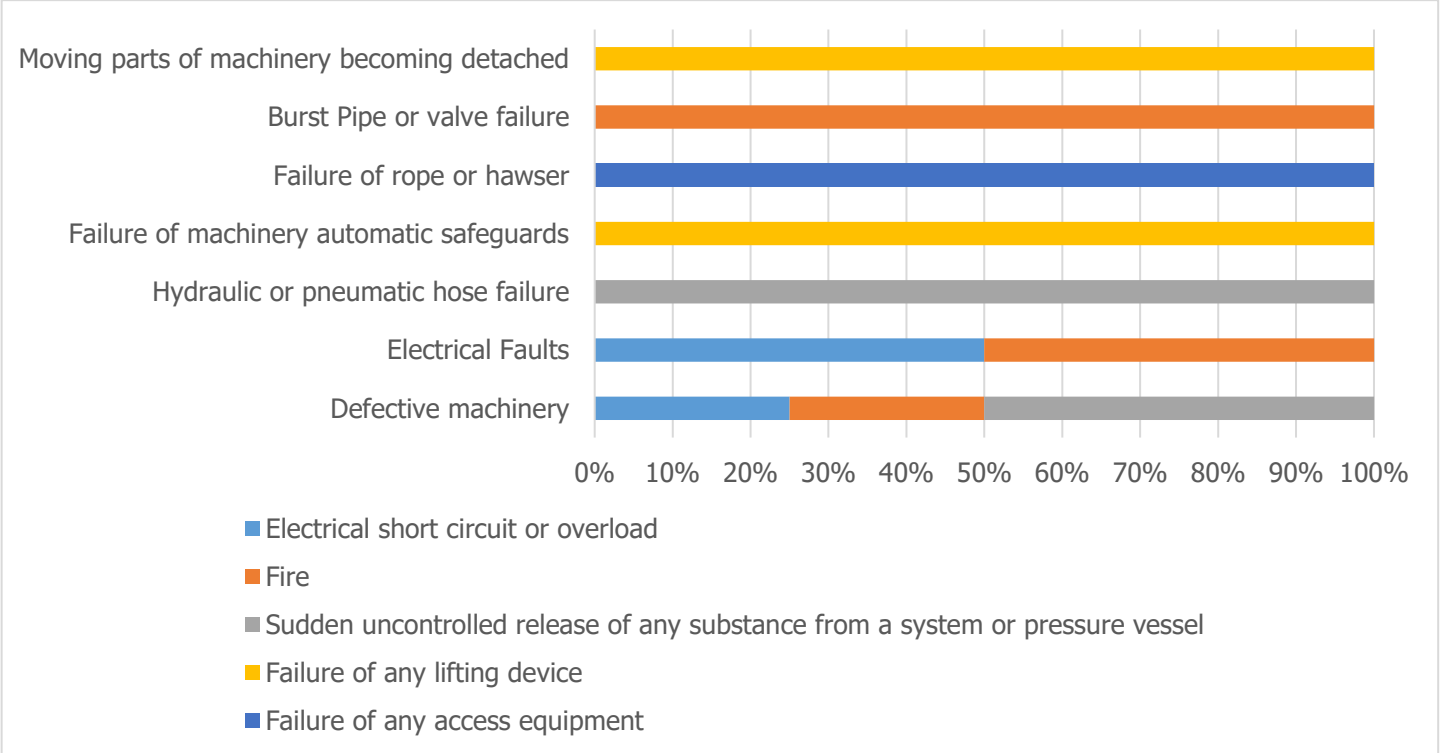

Figure 11 - Occurrences by Mechanical Factors

In 2022, the predominant mechanical & other equipment cause was reported to be "fire". All machinery should be regularly inspected and maintained according to the schedule outlined by the manufacturer to ensure the risk of fire is minimised. Work areas should be kept clean and all flammable materials should be disposed of in the proper manner as soon as possible once a job is completed.

7.5 Occurrences by Other Miscellaneous Causes

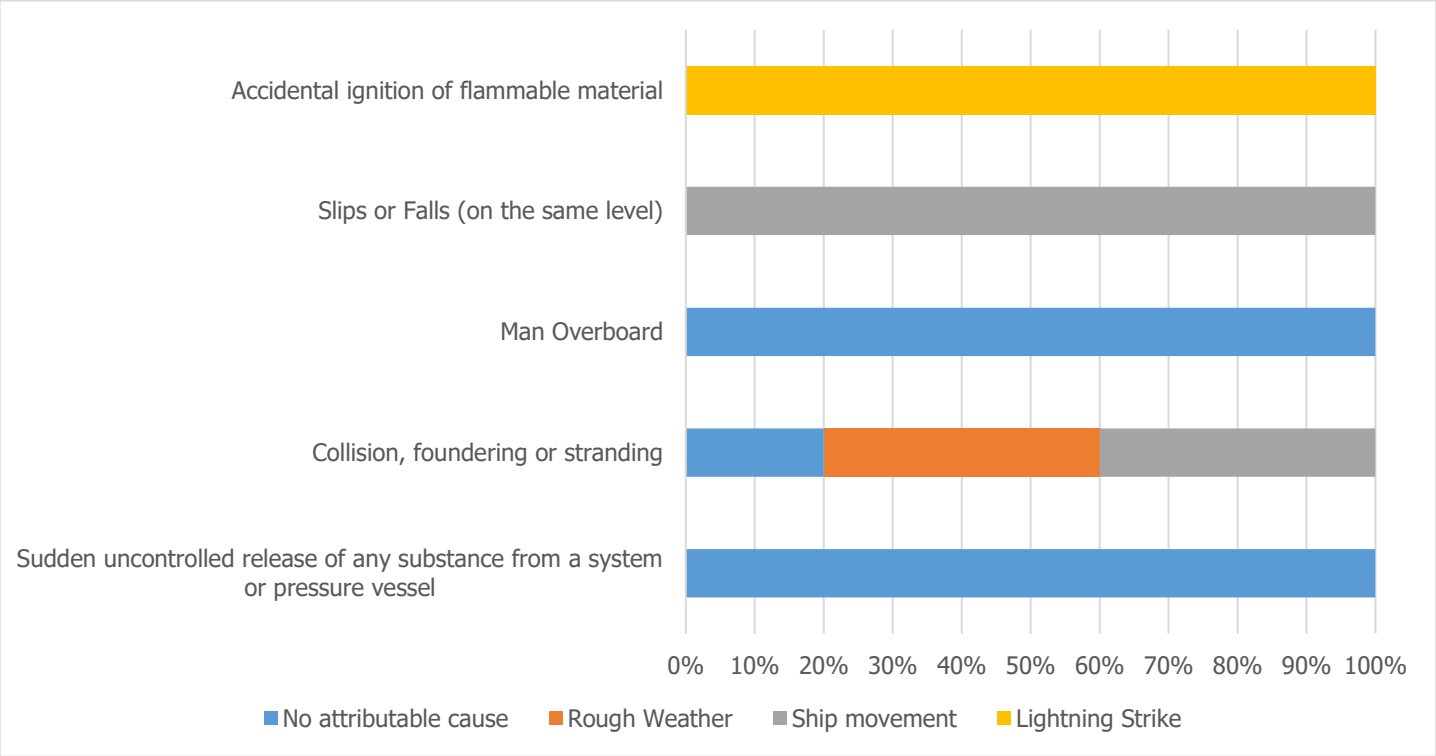

Figure 12 - Occurrences by Miscellaneous Causes

In 2022, the predominant 'other miscellaneous cause' was reported to be "ship movement". Crewmembers should take account of the movement of the vessel in the prevailing sea and weather conditions when planning and carrying out work activities. If vessel movement is too great the work activity should not be attempted, if the activity cannot be avoided then consideration should be given to manoeuvring the vessel to reduce the movement to an acceptable level.

Chapter 8 Conclusions

The most prevalent occurrences reported in 2022 were collision/allision and sudden uncontrolled release of substances from a system.

There was 1 fatality, 9 serious injuries and 6 minor injuries to MLC seafarers reported in 2022 along with 1 serious injury to non-MLC seafarers.

The most common serious injury were fractures. The most common minor injuries were wounds, cuts and lacerations.

Using portable tools and moving about the ship resulted in the most severe injuries in 2022.

The ARFs received highlight the causes identified when occurrences happened. The most common causes identified for each ARF theme in 2022 were:

- Working method – Unsafe working methods
- Mechanical and other equipment – Fire
- Human factor – Negligence or carelessness of others
- Other miscellaneous causes – Ship movement
- Movement about the ship – Dropped objects

A significant number of the reports received could have been prevented by putting in place effective controls ahead of the work such as thorough risk assessments and toolbox talks prior to the job commencing. Seafarers should not become complacent because a job has been done many times before, the risk is still present.

When the parameters of a job change, it should be treated as a new job and the crew should stop work and reassess the risk.

Wherever work is being undertaken, there should be effective barriers and signing of the area in place, even if no one is expected in the area except the workers themselves.

All machinery should maintained and regularly inspected, any issues identified should be rectified as soon as practical.

If you are in any doubt about the safety concerned with a particular work activity, stop and re-evaluate.

Additional Information

- Manx Shipping Notice 003 – Accident Reporting
- Maritime Labour Notice 4.3E
- Code of Safe Working Practices for Merchant Seafarers and Fishermen's Safety Guide published by the UK Maritime and Coastguard Agency
- Master's / Yacht Master's Handbook (available free on the IOMSR website)
- Merchant Shipping (Accident Reporting and Investigation) Regulations 2001 SD815/01 (available free on the IOMSR website)
- Isle of Man Ship Registry website
- Contacting the Isle of Man Ship Registry – email marine.survey@gov.im

The Isle of Man Ship Registry welcomes any feedback concerning this report. If you have any comments or suggestions for future reports please contact the Isle of Man Ship Registry at the email address above.

Appendix Summary of Select ARF Cases

Subtype	Event Description
Other Cargo Ship	Fuel Tank damage caused by the mechanical bobcat bucket penetrating the tank during discharge - Stevedores trained Driver operating equipment but swung into the tank plating whilst turning, causing a 12mm tear in the tank plating. Resultant leakage damaging adjacent cargo. Crew observed incident and immediately plugged damaged area with wooden bung and commenced fuel transfer operations to another tank. Max fuel wastage estimated at 120-150 litres.
Oil/Chemical Tanker	The Fitter was checking steel plates in the workshop; the plates were unsecured due to his checks. The plates lacked sufficient support and started shifting. The plates pressed onto both arms of the Fitter. Both forearms suffered broken bones.
Other Cargo Ship	While embarking the pilot, the pilot was observed to fall from the pilot ladder onto the deck of the Pilot Vessel.
Bulk Carrier	Initial reporting outlined that while loading Coal, three shore stevedores wrongfully entered CH #8 instead of entering CH #7. Loading in CH #8 had been completed 2 days ago and entry in CH #7 was required for cargo trimming purposes. Despite no permission from ship staff, the shore stevedores made an unauthorized entry by opening the booby hatch of CH #8 leading to them falling unconscious due to asphyxiation. It should be noted that subsequent preliminary investigations identified that 2 of the stevedores entered the CH some time after the entry of the initial stevedore, possibly in an attempt at rescue after noticing the first lying unconscious. The stevedores were promptly rescued and CPR was administered by ship staff. They were taken ashore for further medical treatment. P&I and flag were notified and required assistance was provided to the vessel. Unfortunately, the shore medical team could not revive the three stevedores, who passed away due to asphyxiation.
Commercial Yacht	C/E was working on the bow, launching jet skis, he was holding a painter, while another crewmember launched the jet skis, all procedures were being followed. In order to get a clear view of the jet ski, you must stand on the step surrounding the foredeck, after completing the task, CE stepped down from platform. The paintwork below was wet, and he slipped and jolted his knee.
Oil/Chemical Tanker	The 2E was conducting maintenance on the BWM system valve with a ratchet spanner. This slipped and struck the engineers left eye area, resulting in bruising and a laceration.
Offshore / Standby	Crane operator (IP) was busy on the BOS crane boom at the boom rest area working on boom rest pads, which involved drilling bores. IP decided to change his position in order to drill a bore in a safe manner. All required tools including the drill needed to be relocated as well. IP took a drill with his left hand and wanted to pass it to his right hand behind his bag. During this process he accidently activated the drill, which caught his right hand glove by the drill bit and by turning force ripped tip of the thumb and fractured 2 fingers.
Oil/Chemical Tanker	Cadet transiting stairs between decks lost footing and fell towards main engine exhaust trunking. Arm used to arrest fall which resulted in the forearm being burned
Pleasure Yacht	Chief engineer was working on the swim platform with the ETO, using a ladder to access the vessel name board. The ladder feet slipped backwards resulting in the chief engineer falling from the ladder. He fell from a distance of around 100-150cm.

	Assistance immediately called by the ETO. Onboard registered nurse immediately attended with officer and master. Ambulance called. On first inspection it appears one or both wrists could be dislocated/ fractured. Ambulance arrived and took casualty to hospital.
Oil/Chemical Tanker	3/O, OS1 and OS2 were shifting two metal drums on a pallet on the deck to put them in a more secure position on the pallet. The drum was rotated from the top of the drum with hands on the top edges. As the drum rotated, the 3/O's finger was caught between the two drums on the pallet.
Other Cargo Ship	The ship was loading her hatch covers by ship's crane from the barge and placing on position on hatch coaming. The hatch cover were loaded one top of the other then shifted on to position by gantry crane. Chief Officer supervising, crew wearing appropriate PPE. During loading the crew were holding the hatch in order to put exactly on designated position. A/B's left foot was under a hatch cover when a crane operator was ordered to lower it down. Hatch cover crushed three toes on A/B's left foot. The agent was informed and ambulance sent. Master informed company DPA about the accident. A/B was taken to hospital. The doctor statement is 3rd toes distal phalanx fracture plus first and second toes soft tissue damage.