

Isle of Man Ship Registry

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

2021

**Isle of Man Government
Department for Enterprise**



**Isle of Man
Government**

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Executive Summary

- There were 40 Accident, 27 Incident and 24 Casualty reports in 2021
- The most common occurrences in 2021 were Collision/Allision and Fire
- Watchkeeping duties and mooring operations were the most common activity reported on the ARF forms
- There were 2 fatalities, 14 serious injuries and 6 minor injuries reported in 2021
- Mooring Operations were the most dangerous activity for seafarers
- Incidents involving lifting equipment and moving about the ship were less frequent but had a significant likelihood of severe injury when they did occur
- The most common causal factor was the working method used followed by issues with machinery and other equipment
- The most common causes identified for each causal factor were:
 - Working method – Poor organisation of work and unsafe working methods
 - Mechanical and other equipment – Defective machinery
 - Human factor – Personal negligence and carelessness
 - Other miscellaneous causes – Ship movement
 - Movement about the ship – Inadequate signage

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Chapter 1 Introduction

The Isle of Man Ship Registry's 2021 Casualty Summary report provides statistics and analyses the trends identified from the Accident Report Forms (ARF) submitted to the registry over the course of 2021. 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.

This report does not include statistics relating to fatalities or injuries from natural causes 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.

Death or injury from natural causes or suicide are not counted in this report unless directly related to an occurrence.

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 2021

Type of Ship	Nature of Investigation
Fishing Vessel	Fire
Cargo Ro-Ro	Tug Operations – Investigation Ongoing

2.2 VSMC Safety Investigations conducted by UK MAIB for IOM in 2021

Name of Ship	Type of Ship	Nature of Investigation
Mona Manx	Bulk Carrier	Mooring Ops (Fatality) – Currently under Investigation
Teal Bay	Cargo Ship	Mooring Ops (Fatality)

2.3 Reports Published by IOMSR in 2021

Ship Name	Type of Ship	Nature of Investigation
None		

2.4 Investigations on IOM Vessels by other investigation bodies in 2021

Type of Ship	Nature of Investigation	Investigation Authority
None		

Chapter 3 ARF Reports Received in 2021

3.1 Reports from Isle of Man Registered Ships

In 2021, the Isle of Man Ship Registry received 90 ARF reports from Isle of Man registered ships. The table below shows the number of reported occurrences in 2021.

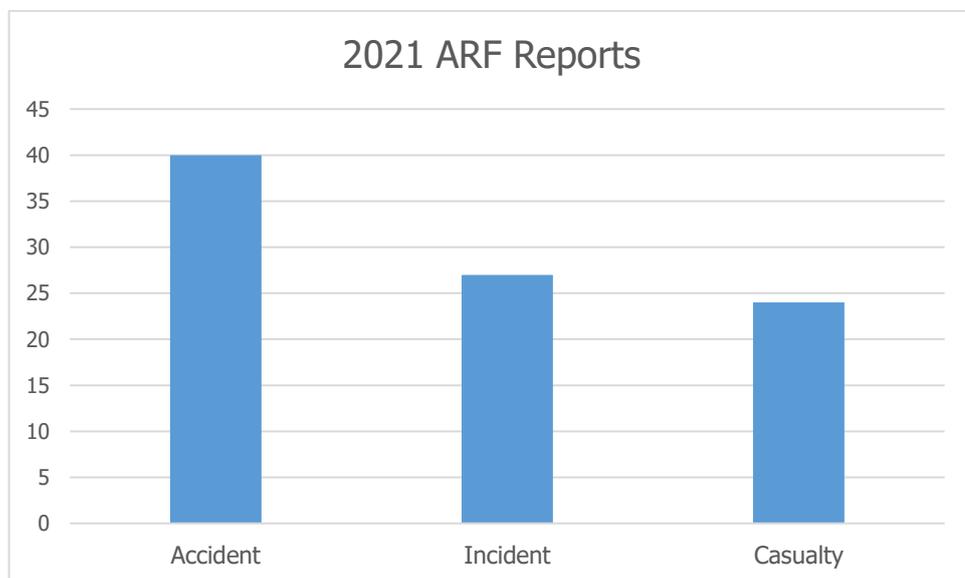


Figure 1 – ARF reports received in 2021

The table below gives a breakdown of cases reported per ship type in 2021.

	Casualty	Incident	Accident
Bulk Carrier	7	1	0
Oil/Chemical Tanker	2	4	0
Gas Carrier	1	3	2
Oil Tanker	2	1	0
Other Cargo Ship	5	5	3
Offshore/Standby	1	6	33
Fishing Vessel	1	1	0
Passenger Ship	0	1	0
Commercial Yacht	4	5	1
Pleasure Yacht	1	0	1

Of the 33 accident ARF reports submitted from Offshore/Standby vessels, 25 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.

There was an additional casualty incident involving the grounding of a foreign-flagged bulk carrier in Isle of Man territorial waters in 2021. This was not reported via ARF but is highlighted here to benefit the report. Investigation by the Latvian authorities is ongoing.

Chapter 4 Analysis of ARF Reports Received in 2021

The most common occurrences reported to the Isle of Man in 2021 were Fire and Collision/Allision (fig.2).

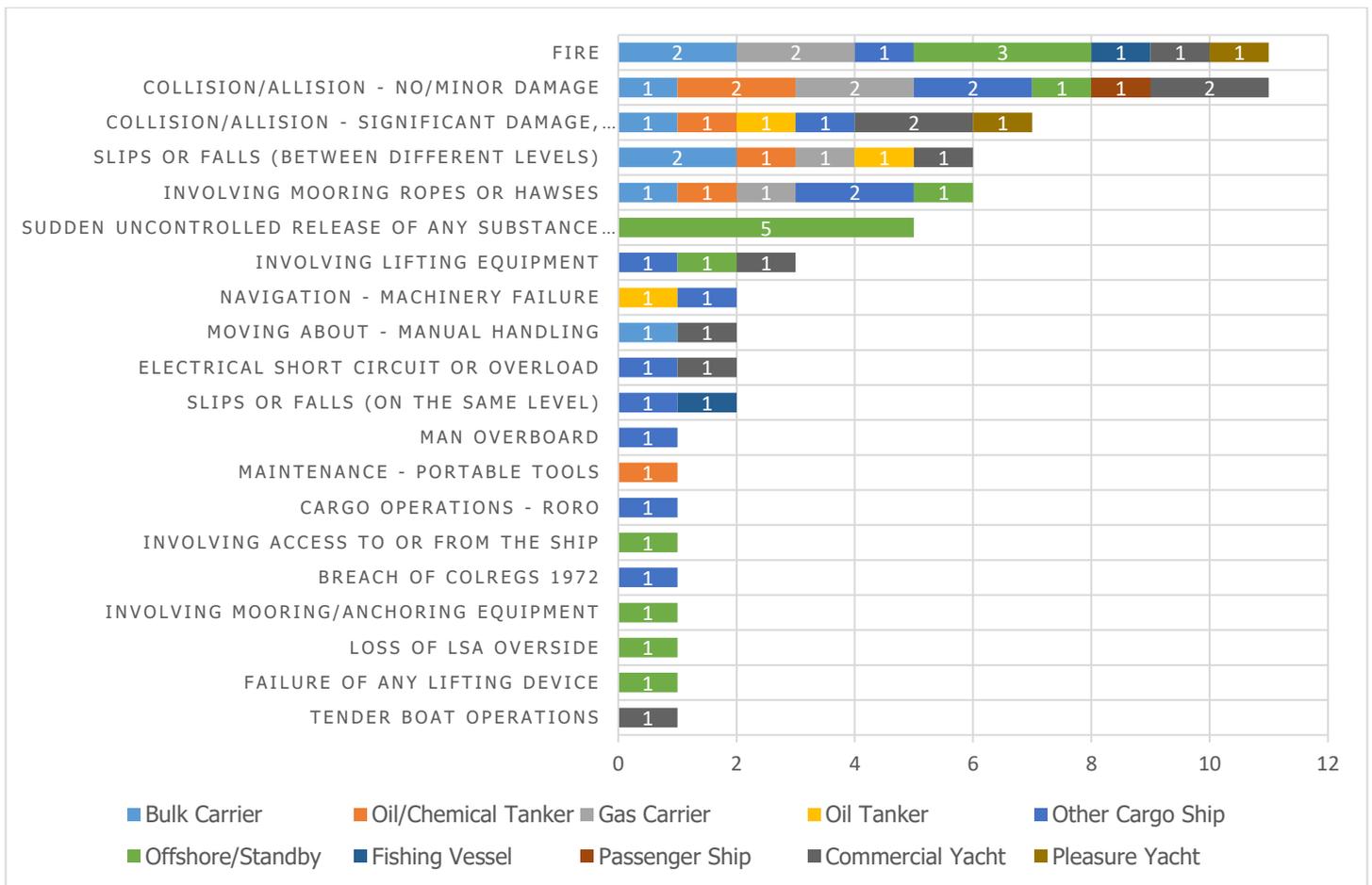


Figure 2 - ARF Occurrence by Ship Type

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.

Fire can happen on board any vessel at any time. It is imperative that crew are trained to recognise and respond to signs of fire and remain vigilant of the risk. Appropriate mitigation steps such as regular cleaning of all areas, strict adherence to the planned maintenance schedule and establishing fire watches wherever a fire risk is present should form part of regular duties.

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

Figure 3 below shows the ARF reports received in 2021 broken down by the activity being performed at the time of the accident:

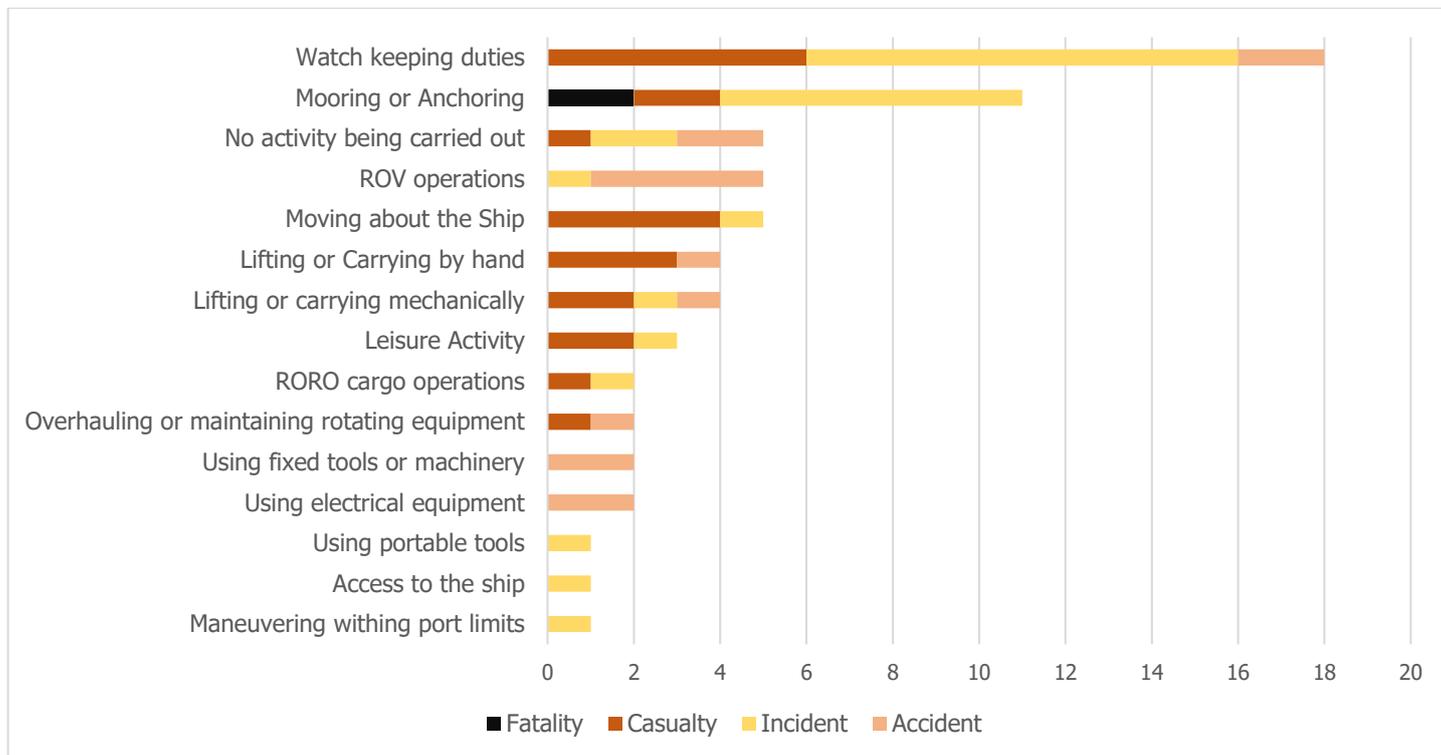


Figure 3 - ARF Reports by Activity Performed

Watch keeping duties and Mooring/Anchoring were the most prevalent activities being performed at time of incident. It can be easy for complacency to set in during mooring as it can be considered a part of everyday seafaring duties; however, it is one of the most dangerous activities on board when a marine accident does occur. 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.

It should be noted that lifting activities and moving about the ship, although not reported as frequently, primarily resulted in a casualty whenever they occurred.

Chapter 5 Reported Injuries and Fatalities

This section of the report analyses only the ARF reports received in 2021 that resulted in injury to a seafarer. In 2021, there were a total of 2 fatalities, 14 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).

Seafarers Injured	All Ships		MLC Ships		Non-MLC Ships	
	Number	Rate	Number	Rate	Number	Rate
Fatalities	2	19	2	26	0	0
Serious injuries	14	132	12	157	2	68
Minor injuries	6	170	5	65	1	34

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	0	0	0
Chief Officer	1	0	1	2
OOW Nav.	0	1	1	2
Chief Engineer	0	0	0	0
2nd Engineer	0	1	0	1
OOW Engineer	1	0	0	1
ETO	0	0	0	0
Deck Rating	2	6	0	8
Engine Rating	1	1	0	2
Deck/Eng. Cadet	0	1	0	1
Cook/Steward	0	1	0	1
Others	0	1	0	1
Total	5	12	2	19

Non-MLC Seafarer Injuries

Non-MLC Seafarers	Minor	Serious	Fatality	Total
Passenger / Yacht Guest	0	0	0	1
Visitor/Contractor/stevedore	0	2	0	1
Fishing Vessel crew	1	0	0	1
Total	1	2	0	3

The data shows that deck ratings were the biggest risk rank for receiving an injury in 2021.

5.3 Injury by Activity

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

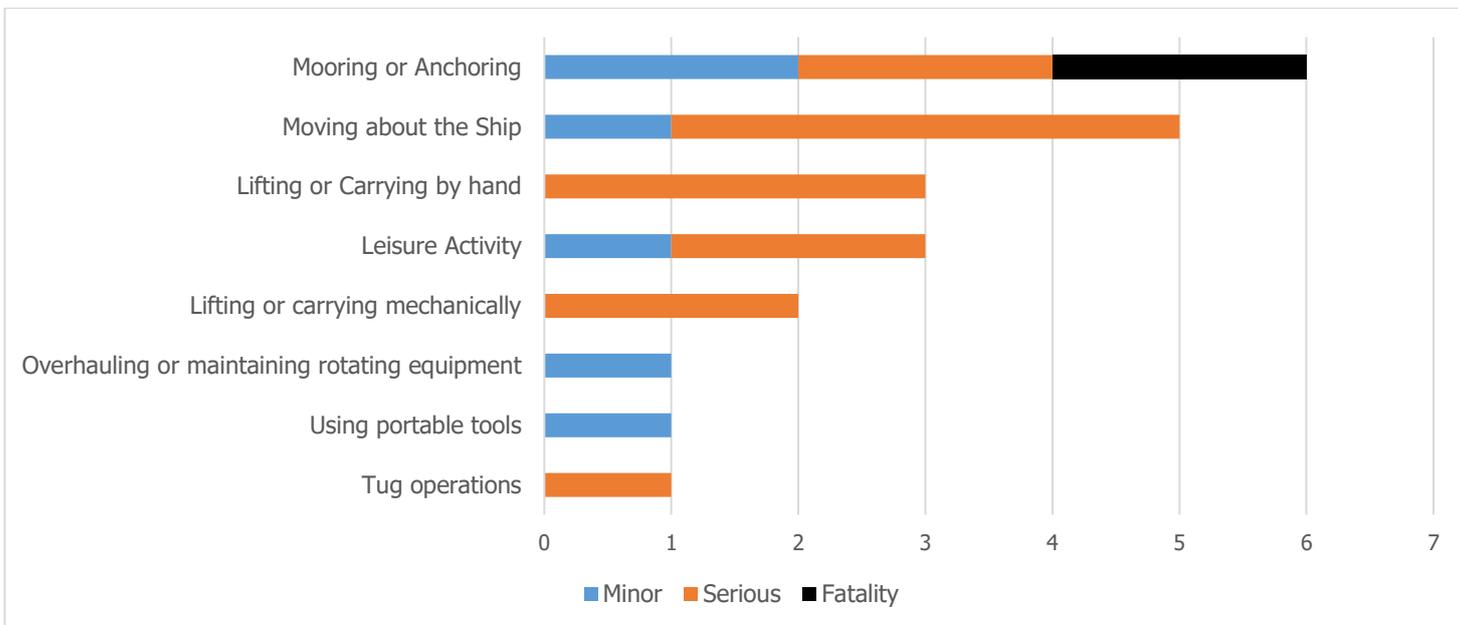


Figure 4 - Injury Activity by Activity

The most dangerous activities for seafarers were mooring/anchoring and moving about the ship. Mooring has been addressed elsewhere in this report. The design and materials used for construction of most ships combined with the movement of all surfaces from the motion of the ocean means that the risk of injury during a slip or trip can be significant. Care should be taken by all crewmembers when moving about the ship, especially if they are focused on another task.

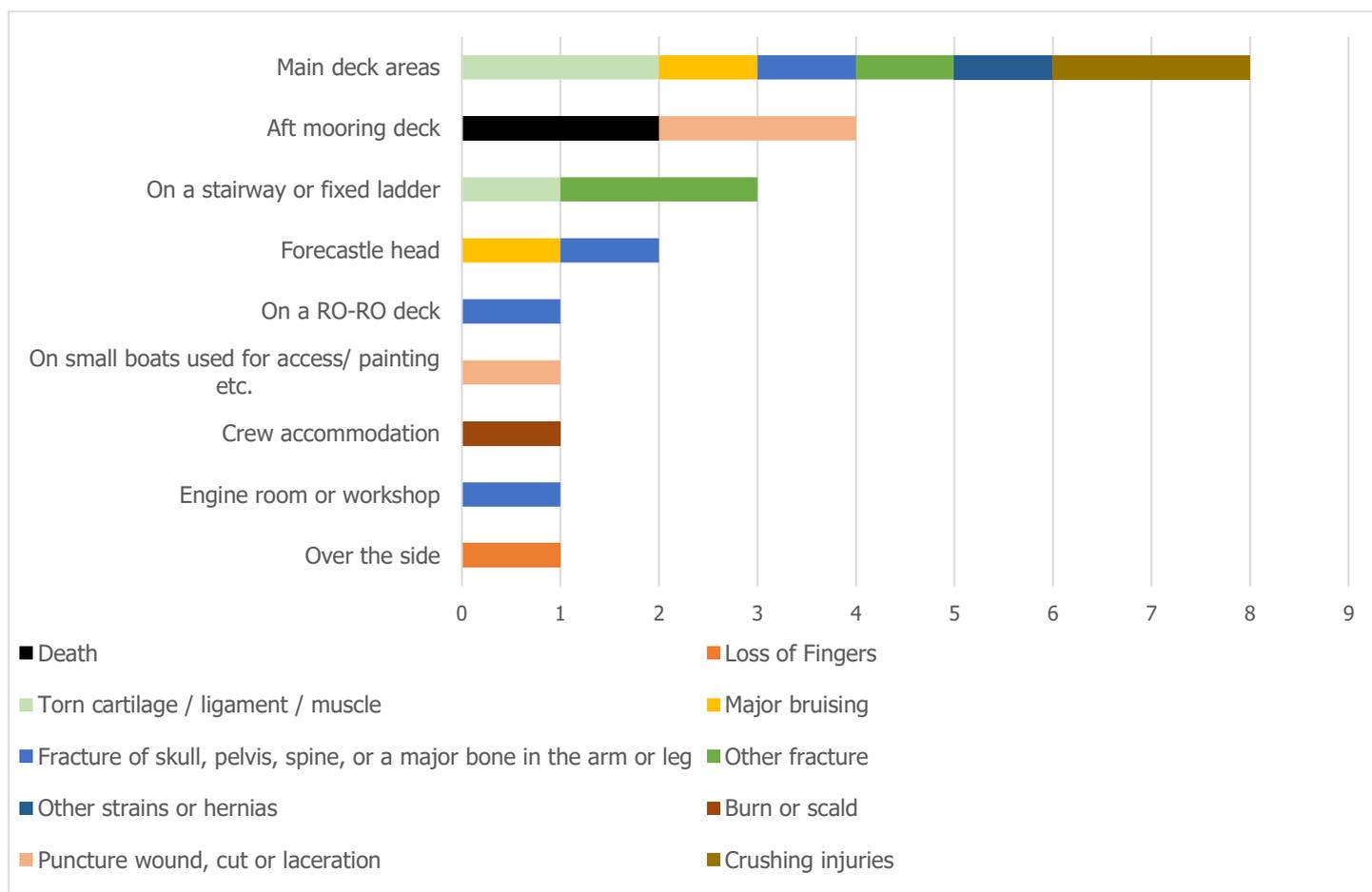


Figure 5 - Injury Caused by Location about Ship

Consistent with the activities data, deck areas and transit areas between different levels carried the greatest risk of injury. The most common injuries were fractures of skull, pelvis, spine or major arm/leg bones.

Chapter 6 IMO Casualty Investigation Code

Figure 6 represents the cases reported to IOMSR in 2021 classified as per the IMO Casualty Investigation Code for different vessel types.

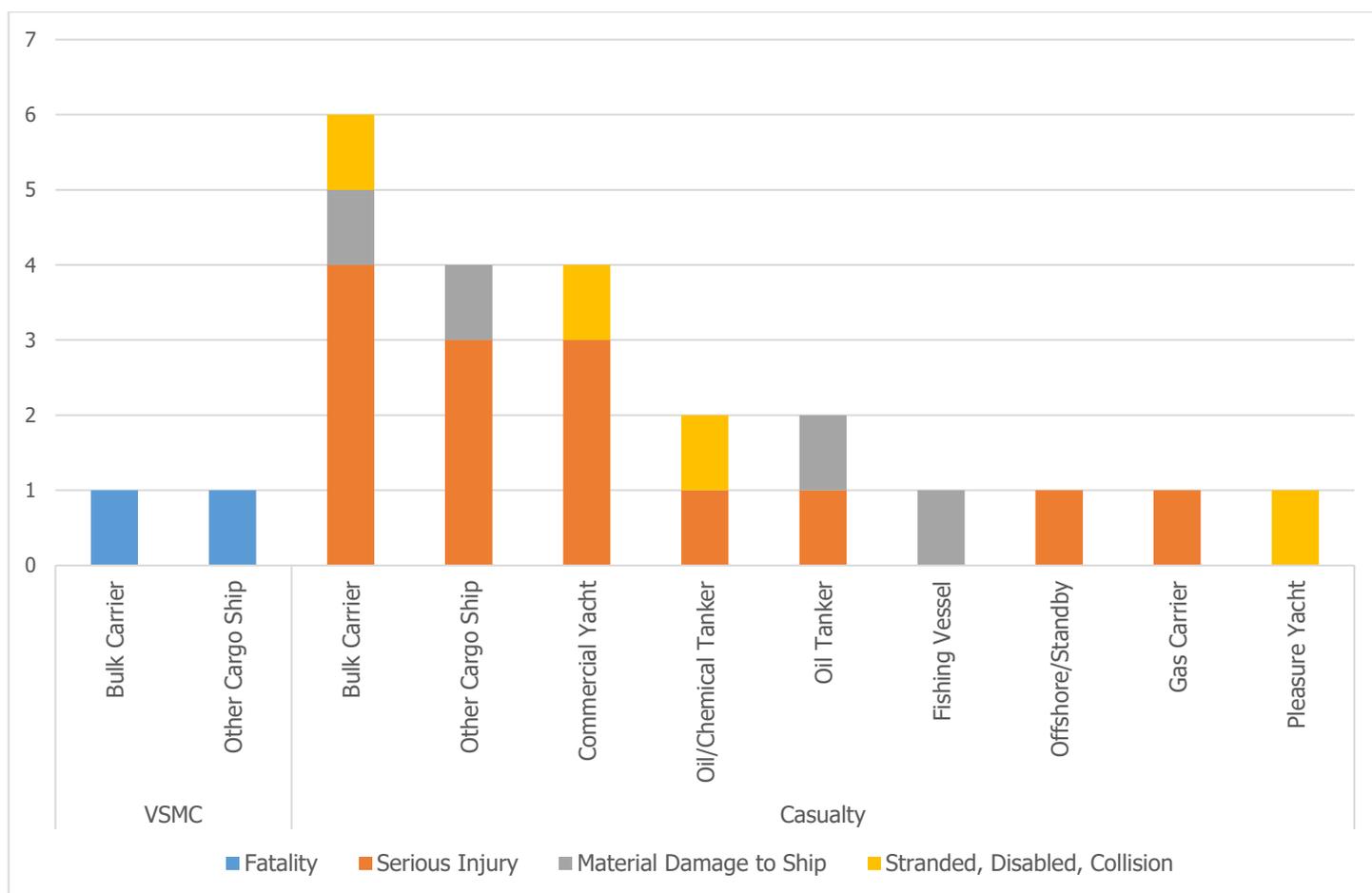


Figure 6 - Casualty Cases by Ship Type

Casualties resulting in 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 2021 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.

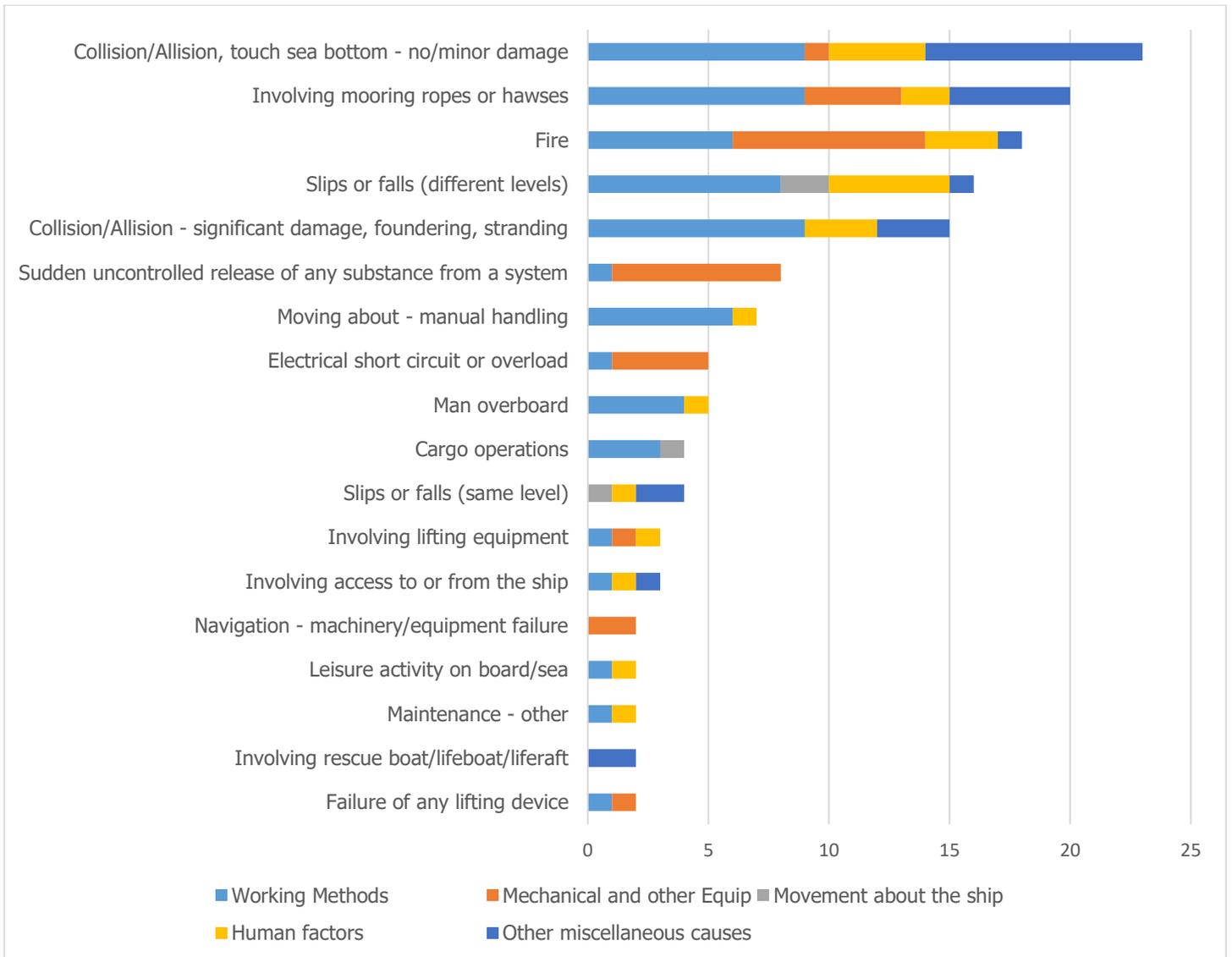


Figure 7 - Occurrence by Causal Factor

The most common causal factor was the working method used, followed by issues with mechanical and other equipment.

7.1 Occurrences by Working Method

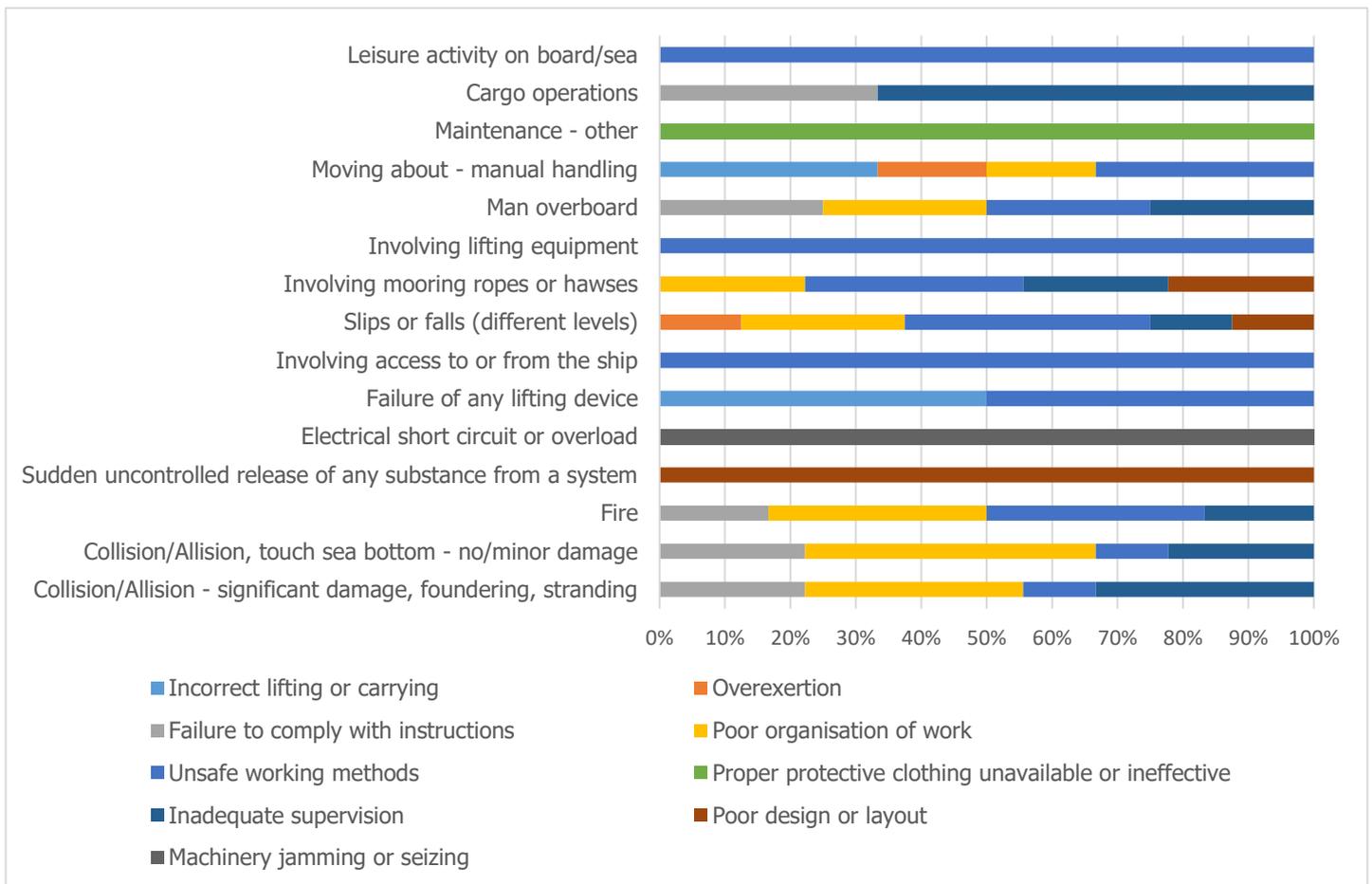


Figure 8 - Occurrences by Working Method

In 2021, the predominant working method causes were reported to be “poor organisation of work” and “unsafe working methods”

Seafarers should plan their work and safety precautions adequately and avoid taking shortcuts in order 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.

Poor organisation of work stresses the need for effective planning and execution with good communication.

Unsafe working methods highlights the importance of continuous training, rigorous risk assessment and detailed procedures.

7.2 Occurrences by Movement about the Ship

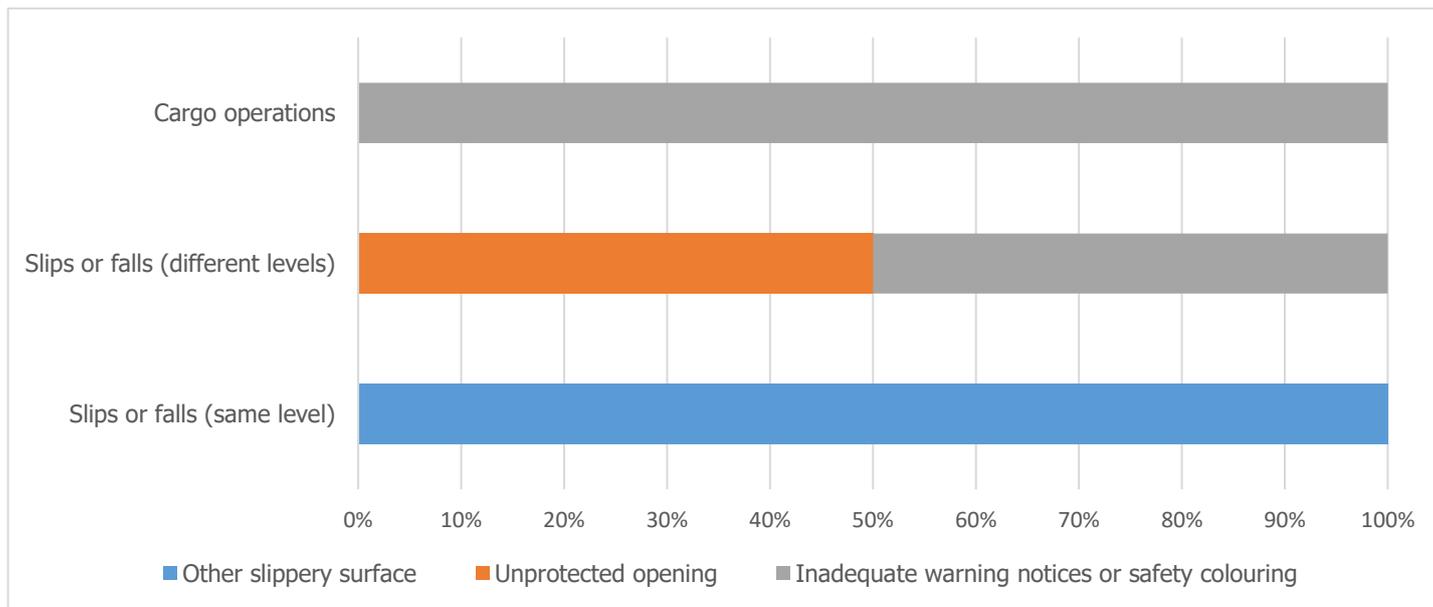


Figure 9 - Occurrences from Moving about the Ship

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

Crewmembers should also take note of warning signs highlighting risks and dangers. Crewmembers should be aware of any associated risks of slipping when moving about the ship under various conditions. Whenever work is being undertaken that creates a fall risk (lifting of grates, hatch covers etc.) then these areas should be adequately signed and cordoned off to prevent injury. An effective risk assessment is key to identifying these areas.

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

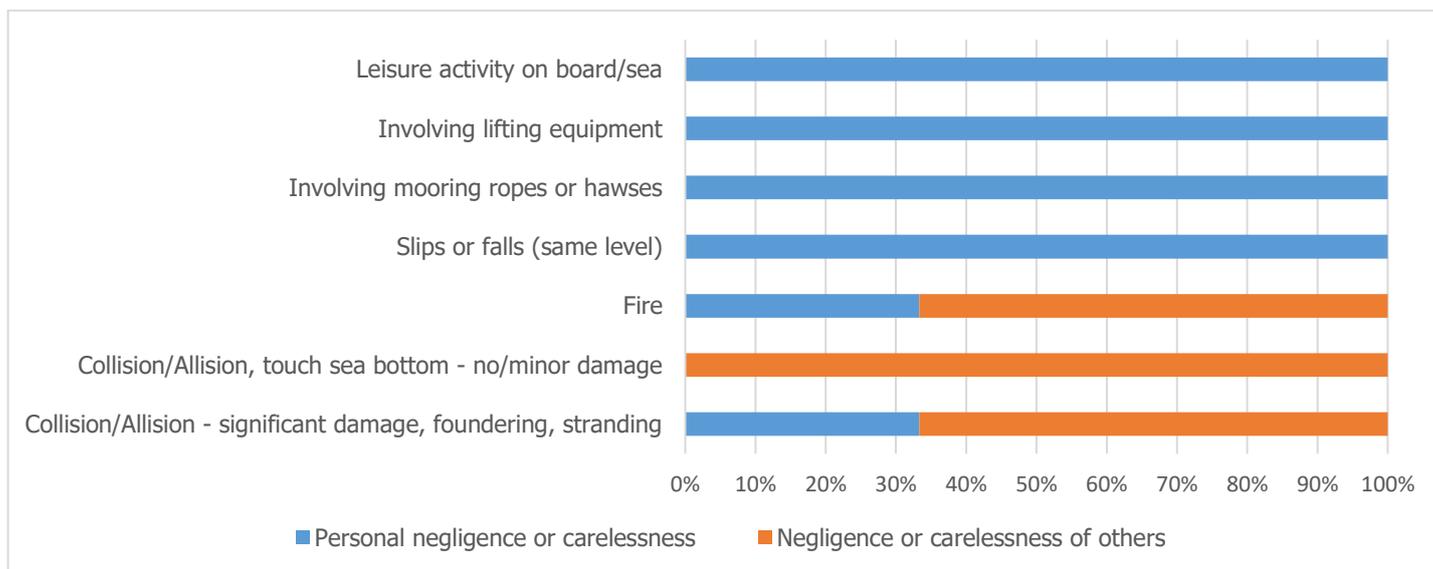


Figure 10 - Occurrences by Human Factor

In 2021, the predominant human factor cause was reported to be “personal negligence or carelessness”.

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

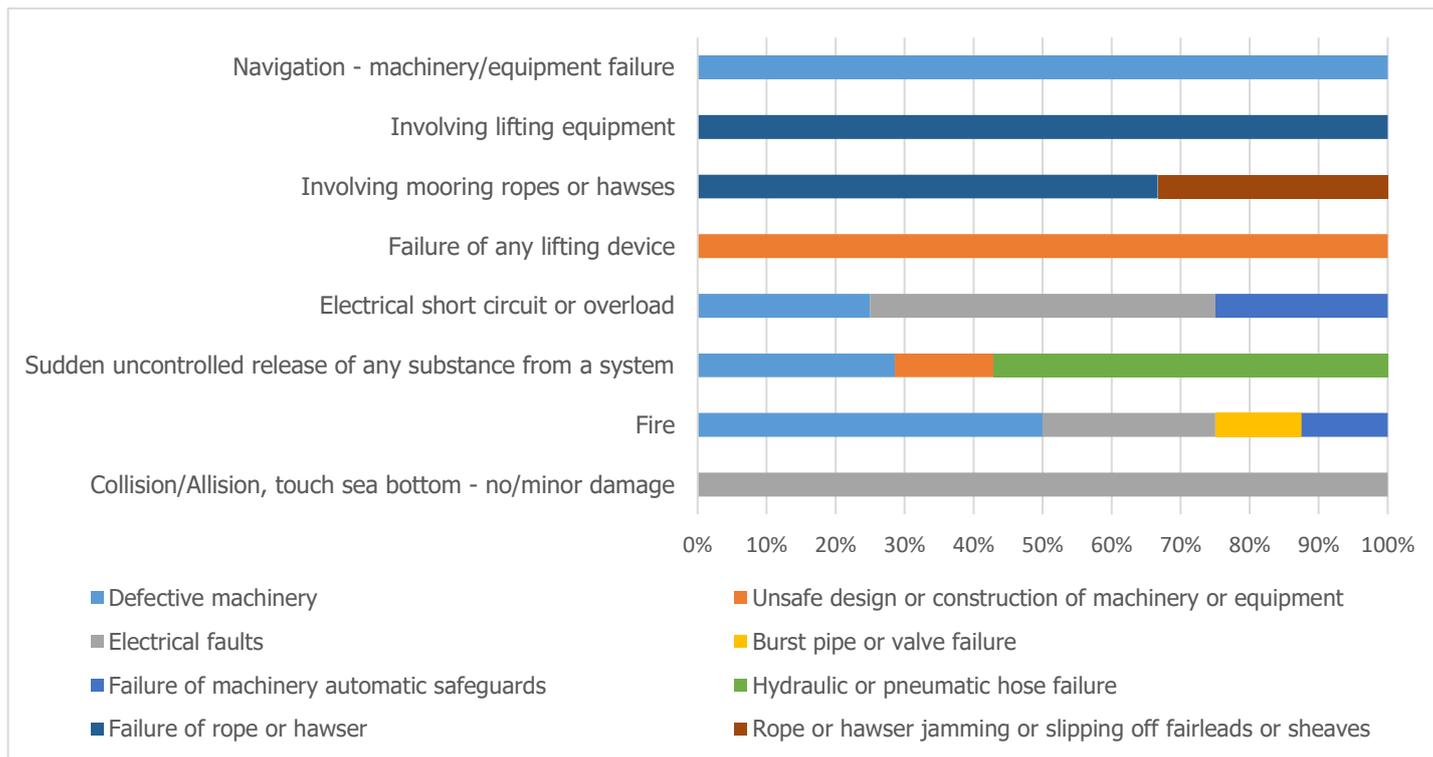


Figure 11 - Occurrences by Mechanical Factors

In 2021, the predominant mechanical & other equipment cause was reported to be “defective machinery”. All machinery should be regularly inspected and maintained according to the schedule outlined by the manufacturer to ensure the risk of unplanned failure is minimised.

7.5 Occurrences by Other Miscellaneous Causes

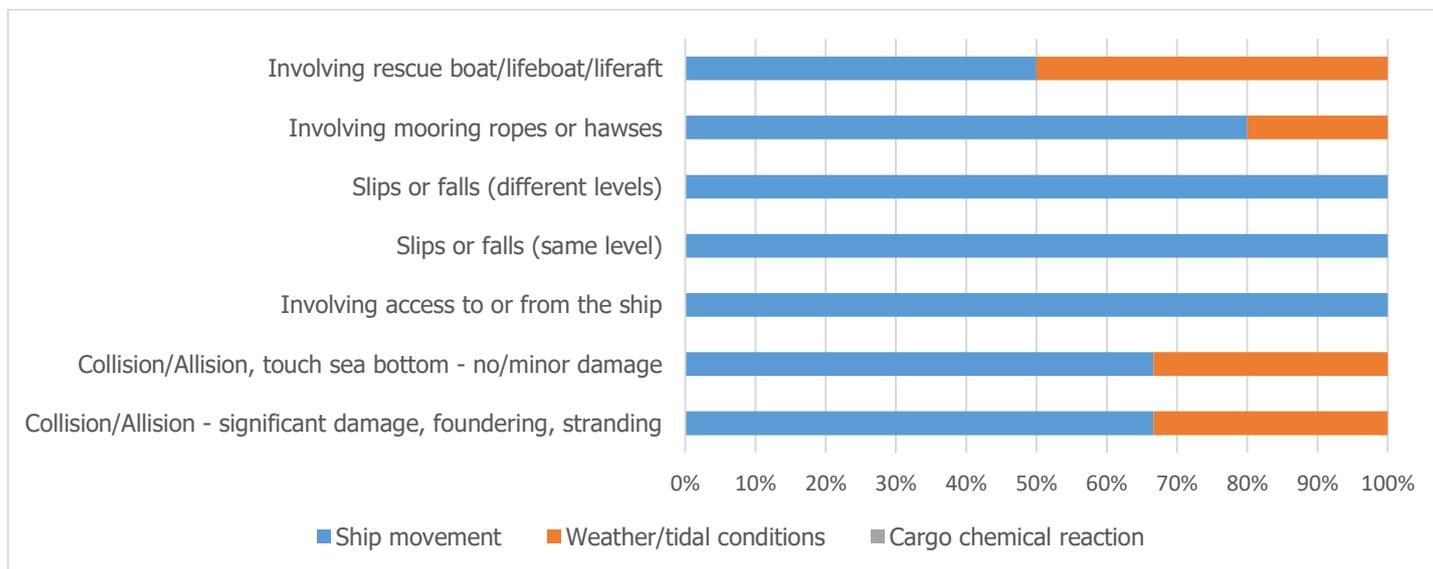


Figure 12 - Occurrences by Miscellaneous Causes

In 2021, 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 2021 were collision/allision and fire.

There were 2 fatalities, 12 serious injuries and 5 minor injuries to MLC seafarers reported in 2021 along with 2 serious injuries and 1 minor injury to non-MLC seafarers.

The most common serious injury was fractures to major bones. The most common minor injuries were wounds, cuts and lacerations.

Mooring Operations resulted in the most severe injuries in 2021.

The ARFs received highlight the causes identified when occurrences happened. The most common causes identified for each ARF theme in 2021 were:

- Working method – poor organisation of work and unsafe working methods
- Mechanical and other equipment –defective machinery
- Human factor – personal negligence and carelessness
- Other miscellaneous causes – ship movement
- Movement about the ship – inadequate signage

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

Ship Type	Event Description
Bulk Carrier	<p>14 April 2021 / 0900 - 3rd engineer and motorman started dismantling bilge pump for overhauling in Engine Room Workshop.</p> <p>1330 Pump overhauling completed. Bilge pump was boxed up and ready to transfer to ER Bottom Deck. 3rd Engineer prepared the ER crane to lift the pump. While preparing, they found that the crane breaker is off. Motorman told 3E that he would switch ON the breaker, so he went to engine room 3rd platform to switch ON the power. After switching on the power, he removed the grating plates. He then felt thirsty and get his water bottle from engine control room (3 meters away from the open gratings) to fill it up from water fountain. After doing so, he forgot that he open up the grating plates and after drinking water he move forward without noticing the plates is remove and he fell down (approximate distance 5 m).</p>
Bulk Carrier	<p>Vessel was berthing with a pilot on board. Mooring plan was discussed between the master and the pilot. Tug boats to be made fast fore and aft to assist turning and mooring.</p> <p>As the vessel approached the berth, heaving lines were sent ashore and fore and aft spring lines made fast ashore. The vessel then needed to be re-positioned 25m astern for cargo operations. As the vessel moved back the 2nd Officer on the aft mooring deck was asked to monitor the tension of the aft spring and to keep the line (wire mooring line) out of the water the whole time and to keep clear of fenders.</p> <p>The pilot was advising the distance to go astern while the master instructed the forward mooring party to slacken the forward anchor cable until the anchor was "up-and-down". A loud "bang" was heard from the aft of the vessel followed by a crewmember from the aft mooring party calling the master on the VHF radio informing the 2nd Officer was lying unconscious and bleeding.</p> <p>The 2nd Officer was pronounced dead at the scene by attending paramedics.</p>
Other Cargo Ship	<p>Vessel was alongside a transhipper, carrying out loading operations. Vessel required to shift forward by 2 metres, hence mooring stations called for shifting by mooring ropes only. During shifting, the spring line in Aft mooring station jumped from fairlead roller during high tension. At this time, the Chief officer was standing very close to the mooring line, which hit him on the face when the line jumped from the fairlead roller, which made him unconscious.</p> <p>Once reached ashore, the chief officer was checked by paramedics, local police and was "Declared Dead".</p>
Other Cargo Ship	<p>During un-mooring operation while recovering spring line the spliced eye whip from the fair-lead and hit Deck Cadet</p> <p>While retrieving rope released from shore bollard that was lead around fairlead, the splice eye or the rope apparently catch on the fairlead rope guide. Pulling force bent the rope guard until release the line that whipped and carry on swinging out to hit Cadet.</p>
Bulk Carrier	<p>AB got injured on his right thumb while heaving up the bunker hose. While the hose was almost heaved up and was getting obstructed due to bunker flange getting stuck in ship side railings. In order to clear the flange off railing, AB pushed the bunker hose flange away which suddenly overturned and caught his right hand thumb in between ships railing and bunker hose flange.</p>