Isle of Man Ship Registry

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

2017

Isle of Man Government
Department for Enterprise

Isle of Man Government
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INVESTORS IN PEOPLE | Gold

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Introduction

The Isle of Man Ship Registry (IOMSR) is committed to helping seafarers, managers, owners and operators concerned with all Manx ships in achieving continued high standards of safety and pollution prevention. Occasionally things go wrong, when they do the master, skipper or technical manager is required by law (**Merchant Shipping Accident Reporting and Investigation Regulations**) to notify IOMSR concerning what has occurred.

Also, for ships to which the **Maritime Labour Convention (MLC)** applies MLC Standard A4.3.5 requires:

> *(a) Occupational accidents, injuries and diseases are adequately reported, taking into account the guidance provided by the International Labour Organization with respect to the reporting and recording of occupational accidents and diseases;*
>
> *(b) Comprehensive statistics of such accidents and diseases are kept, analysed and published, and where appropriate, followed up by research into general trends and into the hazards identified; and*
>
> *(c) Occupational accidents are investigated.*

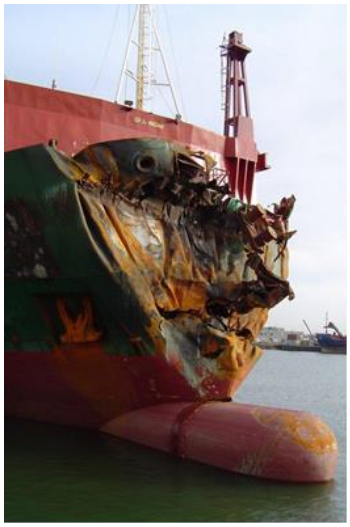
The notification and reporting scheme is reliant upon masters, skippers or operators reporting '**occurrences**' as accurately and in as timely a manner as possible in accordance with the regulations. From these reports we can alert the shipping industry about areas and activities where any additional safety controls may be necessary and hopefully prevent similar occurrences from happening again.

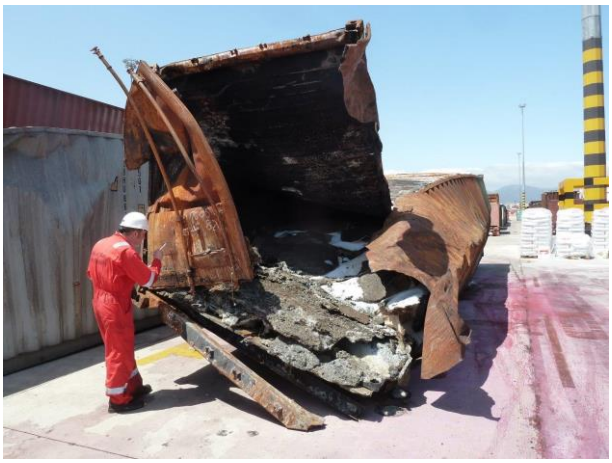
This report aims to provide statistics based on the reporting scheme's findings. Where any trends are identified the Isle of Man Ship Registry aims to work closely with shipping companies and other organisations in an effort to reduce these occurrences on board Isle of Man ships.

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

To submit a report or if you have any questions please contact:
Isle of Man Ship Registry, Department for Enterprise,
St George's Court, Upper Church Street, Douglas, IM1 1EX, Isle of Man, British Isles

Tel +44 1624 688500 Fax +44 1624 688501 Email: marine.survey@gov.im





www.iomshipregistry.com

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Chapter 1 – What is an occurrence?

An 'occurrence' is either a **casualty**, **accident** or an **incident** in the Merchant Shipping Accident Reporting and Investigation Regulations (SD815/01). These are defined as follows:-

Casualty

This means "any contingency which results in:-

(a) loss of life or major injury to any person on board, or the loss of any person from, a ship or a ship's boat;
(b) the loss or presumed loss of any ship or the abandonment of any ship or a ship suffers material damage;
(c) a ship goes aground, is disabled or is in collision;
(d) any loss of life or major injury, or serious harm to the environment, is caused by a ship;
(e) any major damage to the environment brought about by damage to a ship and caused by, or in connection with, the operation of the ship."

Accident

This means "any occurrence of the following type provided that it caused material damage to any ship or structure, or damage to the health of any person, or serious injury:-

(a) the fall of any person overboard;
(b) any fire or explosion resulting in material damage to a ship;
(c) the collapse or bursting of any pressure vessel, pipeline or valve or the accidental ignition of anything in a pipeline;
(d) the collapse or failure of any lifting equipment, access equipment, hatch cover, staging or bosun's chair or any associated load-bearing parts;
(e) the uncontrolled release or escape of any harmful substance or agent;
(f) any collapse of cargo, unintended movement of cargo sufficient to cause a list, or loss of cargo overboard;
(g) any snagging of fishing gear which results in the vessel heeling to a dangerous angle; or
(h) any contact by a person with loose asbestos fibre except when full protective clothing is worn."

Incident

This means "any occurrence, not being a casualty or an accident as a consequence of which the safety of a ship or any person is imperilled, or as a result of which material damage to any ship or structure or damage to the environment might be caused."

Incidents can also be referred to as 'near misses' or 'near accidents'. Vessel inspections by the IOMSR have shown that the type of incidents reported to technical managers range from 'minor incidents', e.g. a person forgetting to wear a safety helmet on deck, to 'major incidents', e.g. narrowly avoiding a swung load suspended from a lifting appliance. The IOMSR encourages the master, skipper or technical managers to use their judgement in determining a 'minor incident' and a 'major incident'. All 'major incidents' should be reported to the IOMSR using the ARF Form. For the remainder the master, skipper or technical manager should use their professional judgement. **If there is any doubt then report to IOMSR.**

IMO Classification

The International Maritime Organisation (IMO) Casualty Investigation Code (IMO Resolution MSC 255(84)) defines occurrences as a Marine Incident, Marine Casualty or Very Serious Marine Casualty. Refer to Chapter 6 of this report for information concerning cases reported to IOMSR classified as per the IMO Casualty Investigation Code.

Chapter2 – Reporting occurrences

2.1 Who has to Report

Under the regulations the master, skipper or technical manager of any Manx registered vessel wherever they may be and the master, skipper or technical manager of any foreign flagged vessel in Manx territorial waters.

A vessel means any description of watercraft ranging from pleasure vessels, fishing boats, commercial yachts, passenger ships and cargo vessels.

Occurrences on board ships in ports, with the exception of those involving stevedores or shore-based workers must be reported. Occurrences involving shore-based workers should also be reported to the country's Health and Safety Department or equivalent body.

2.2 When to report

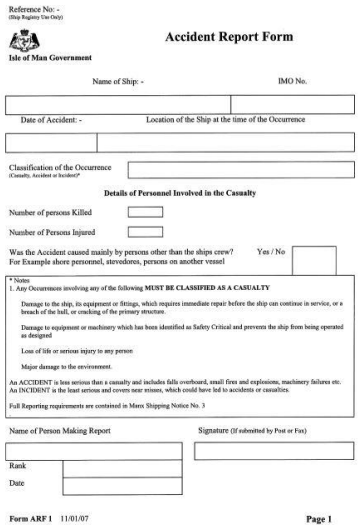
When a **CASUALTY** occurs the master, skipper or technical manager must inform the IOMSR as soon as possible after becoming aware of the casualty. The Master or Skipper must send a report to the IOMSR as soon as is practicable by the quickest means available.

When any **ACCIDENT** occurs the master, skipper or technical manager must inform the IOMSR as soon as is practicable and by the quickest means available. A report must be sent to the IOMSR no later than within 24 hours of the vessel's next arrival in port.

When an **INCIDENT** occurs the master, skipper or technical manager must report the incident to the IOMSR before the vessel departs from the next port.

2.3 How to report

Initial reports can be made directly by telephone, fax or email to the IOMSR. When the occurrence has been investigated on board the master, skipper or operator should complete the Accident Report Form (ARF – see right) and forward it to the IOMSR by fax, email or mail. Any additional report forms used on board to document the occurrence may also be submitted to the IOMSR along with the completed ARF. It is recommended that a copy of the ARF is kept on board as a record.



Reference No: -
(Ship Registry Use Only)

Isle of Man Government

Accident Report Form

Name of Ship: - IMO No.

Date of Accident: - Location of the Ship at the time of the Occurrence

Classification of the Occurrence
(Casualty, Accident or Incident)*

Details of Personnel Involved in the Casualty

Number of persons Killed

Number of Persons Injured

Was the Accident caused mainly by persons other than the ships crew? Yes / No
For Example shore personnel, stevedores, persons on another vessel

* Notes
1. Any Occurrences involving any of the following **MUST BE CLASSIFIED AS A CASUALTY**

Damage to the ship, its equipment or fittings, which requires immediate repair before the ship can continue in service, or a breach of the hull, or cracking of the primary structure.

Damage to equipment or machinery which has been identified as Safety Critical and prevents the ship from being operated as designed

Loss of life or serious injury to any person

Major damage to the environment.

An ACCIDENT is less serious than a casualty and includes falls overboard, small fires and explosions, machinery failures etc. An INCIDENT is the least serious and covers near misses, which could have led to accidents or casualties.

Full Reporting requirements are contained in Manx Shipping Notice No. 3

Name of Person Making Report Signature (If submitted by Post or Fax)

Rank

Date

Form ARF 1 11/01/07 Page 1

The ARF is available on request from the IOMSR or available for download from the IOMSR website.
http://www.iomshipregistry.com/formsdocs/forms/

A brief statement is also required in the Official Log Book Narrative Section where applicable (see MSN004).

All reports received that are "Very Serious Marine Casualties" as defined by the IMO Casualty Code (refer to Chapter 6) are attended for investigation by IOMSR. For all other reports received a decision is made whether or not attendance to the ship for an investigation is warranted.

Not all ships are attended for investigation by IOMSR, this may be because:-

- it has been agreed that investigation is being conducted by another investigation authority; or
- the shipboard staff and/or technical managers have completed a thorough investigation and the underlying cause is clear.

Investigations are carried out in accordance with the Isle of Man Accident Reporting and Investigation Regulations, SOLAS ChI Reg 21 and MLC A4.3.5. It is not the intention of these reports to apportion blame or economic liability.

The initial part of an investigation seeks to establish the causes and circumstances of what has happened, with a view to deciding whether or not a further investigation is warranted. Whenever an occurrence is investigated a report is made. A provision is made for any person likely to be affected by a report to see the draft and comment on the facts and analysis therein before it is finalised. Sometimes due to the circumstances surrounding the investigation it is not always possible to publish the reports.

Published reports are primarily for the benefit of all seafarers, managers and owners concerned with Manx vessels in the hope that lessons learnt may prevent similar occurrences from happening again. The names, addresses and any other details of anyone who has given evidence to an investigator are not disclosed unless a court of law determines otherwise. Any reports published are available on the IOMSR website.

2.4 ISM Code Vessels

Where vessels comply with the International Safety Management (ISM) Code the Safety Management Manual should include procedures for ensuring accidents and hazardous situations are reported (ISM9.1). The IOMSR will accept the vessel's reporting form in lieu of the ARF provided it contains at least all of the information required by the ARF.

If vessels have a safety officer on board as required by the Merchant Shipping Safety Officials, General Duties & Protective Equipment Regulations (SD816/01) then the safety officer should be involved in the investigation on board.

2.5 Safety Investigations by IOMSR in 2017 *(See chapter 7.1 for more information)*

Type of Ship	Nature of Investigation
Bulk carrier	Collision with another ship when departing port.
Gas carrier	Collision with another ship when arriving at port.
Passenger ship	Heavy contact with the quay when arriving in port.
Fishing vessel	Dangerous manoeuvres involving a fishing vessel and a dive boat.
Bulk carrier	Rapid cargo decomposition producing toxic smoke.
Passenger ship	Heavy contact with the quay when arriving in port.

2.6 Reports Published in 2017

Commercial Yacht – Meamina - A crewmember drowned whilst leisure swimming in the sea (2016)
Other cargo ship – Hanjin Green Earth – Cargo hold fire (2015)

Casualty investigation reports are published on the Isle of Man Ship Registry Website.
https://www.iomshipregistry.com/forms-reports/casualty-reports/

2.7 Investigations by external investigation body on Isle of Man vessels in 2017

Type of Ship	Nature of Investigation
Other cargo ship	Investigation by Japanese Coast Guard. Collision with a fishing boat.

Chapter 3 – ARF Reports Received in 2017

3.1 Reports from Isle of Man Registered Ships

In 2017 IOMSR received a total of 81 ARF (30 casualty, 23 accident and 28 incident) reports from Isle of Man registered ships. The table below shows the number of reported occurrences by type in 2017 and the preceding 4 years including a breakdown per ship type for 2017.

Description of Occurrence by Type per Year						2017									
Year	2013	2014	2015	2016	2017	Passenger	Oil Tanker	Chemical Tanker	Gas Carrier	Bulk Carrier	Offshore / Standby	Other cargo Vessel	Commercial Yacht	Pleasure Vessel	Fishing Vessel
Casualties	19	23	36	31	30										
Accidents	39	32	27	12	23										
Incidents	26	21	22	28	28										
	84	**76**	**85**	**71**	**81**	**9**	**10**	**0**	**7**	**11**	**10**	**17**	**14**	**2**	**1**
Collision/Allision - significant damage, foundering, stranding	4	6	9	9	7	1			1	3		2			
Collision/Allision, touch sea bottom - no/minor damage	13	19	8	10	16	4			1	4		4	1	1	1
Fire	6	7	11	6	9		1			1		2	4	1	
Explosion				1											
Pressure vessel: explosion, collapse or bursting	1			1											
Pipe systems: explosion collapse or bursting	1	1	1		2						1		1		
Sudden uncontrolled release of any substance from a system or pressure vessel	3	7	6	5	12		2		3	1	5	1			
Accidental ignition of flammable material			1												
Electrical short circuit or overload	1	2	1		3		1						2		
Failure of any lifting device	4	1	1		2	1	1					1			
Failure of any access equipment		1		1								1			
Involving access to or from the ship				1	2	1									
Slips or falls (same level)	5	7	9	8	5		2				2				
Slips or falls (different levels)	3	5	5	4	2		2					1			
Involving mooring ropes or hawses	8	6	1	2	3	1				1			1		
Involving lifting equipment	1	1	4	3	4							2	2		
Exposure to hazardous or toxic substances	1				1						1				
Man overboard	1		1	1											
Electric shock		1	1	2	1						1				
Violence to the person	1			1											
Other		1													
Closing doors or hatches				2											
Moving about - no fall, no handling	3		2	3	1	1									
Moving about - manual handling	4		2	2	1								1		
Involving rescue boat/lifeboat/liferaft	3	2	2												
Drill - other than survival craft					2							2			
Cargo securing failure	2	1		1											
Maintenance - machinery	5	1	10	2	3		1		1				1		
Maintenance - other	1	3	4	1											
Cargo hold cleaning			1												
Navigation - COLREG infringement	1	1													
Navigation - machinery/equipment failure	5	1	4	2	3				1	1		1			
Navigation - other			1												
Illness	2														
Bunker operations	2														
Cargo operations	1			1	1							1			
Galley operations	2	1													
Mooring/anchoring operations				1											
Unauthorised boarding															
Leisure activity on board		1		1	1										
Total	**84**	**76**	**85**	**71**	**81**	**9**	**10**	**0**	**7**	**11**	**10**	**17**	**14**	**2**	**1**

The table below represents a breakdown of **cases** per ship type reported to IOMSR in 2017.

Type of Vessel	Total	Cas.	Acc.	Inc.	Deaths	Serious Inj	Minor Inj
Passenger	9	4	0	5	0	2	1
Oil	10	5	4	1	0	5	1
Chemical	0	0	0	0	0	0	0
Gas	7	3	2	2	0	1	1
Bulk	11	5	1	5	0	0	1
Offshore/Standby	10	0	6	4	0	0	4
Other cargo Vessel	17	7	5	5	0	3	1
Commercial Yacht	14	5	4	5	0	3	3
Pleasure Vessel	2	1	1	0	0	0	0
Fishing Vessel	1	0	0	1	0	0	0
Cases:	**81**	**30**	**23**	**28**	**0**	**14**	**12**

Nb. More than one injury may have occurred in the same case. See Chapter 5 for information concerning seafarer injuries.

In this report a "***serious injury***" means an injury which is 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 which is not a serious injury.

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

Injuries to passengers, guests or visitors are not counted with seafarer statistics but will be stated in Chapter 5.2 and the report's narrative in Chapters 7, 8 or 9 where relevant.

3.2 Reports from Foreign Flagged Ships in Isle of Man Territorial Waters

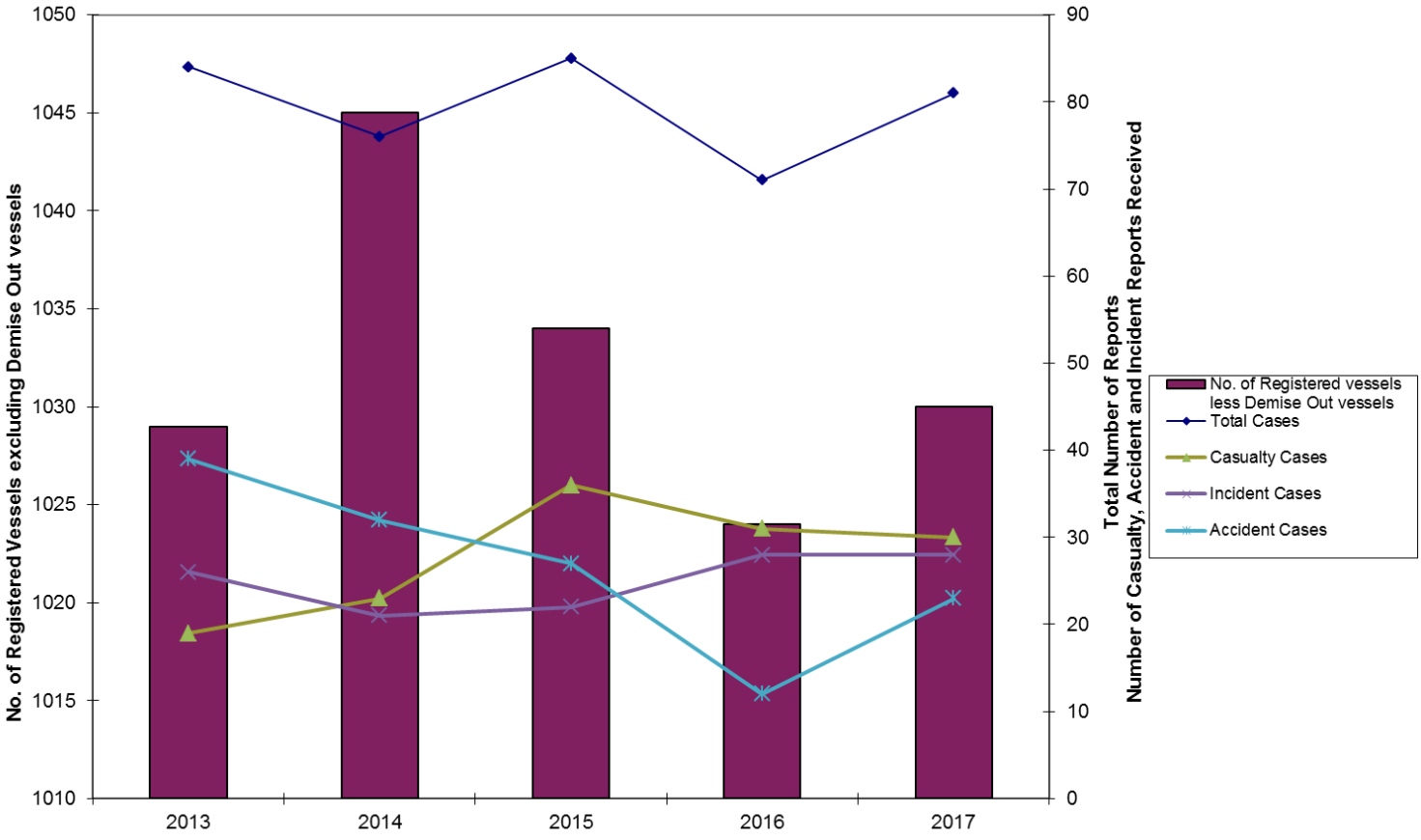
- none

3.3 ARF Annual Fleet Comparison – Total Fleet (excluding DO)

The table below shows occurrences and injury cases on all Isle of Man registered vessels (excluding 'Demise Out' vessels) as a percentage of reports received over 5 years. Isle of Man registered vessels includes merchant ships, small ships, commercial yachts, pleasure vessels, fishing vessels, and 'Demise In' registered ships.

Year	Cases as % of reports received					
	Cas	Acc	Inc	Death	Ser Inj	Min Inj
2013	23%	46%	31%	2%	13%	30%
2014	30%	42%	28%	1%	14%	21%
2015	42%	32%	26%	1%	26%	25%
2016	44%	17%	39%	1%	20%	25%
2017	37%	28%	35%	0%	17%	15%

The graph below shows a comparison between the number of reports received and the number of all Isle of Man registered vessels over the last 5 years. The total number of vessels on the Register each year is calculated as an average from the total number of vessels each month.

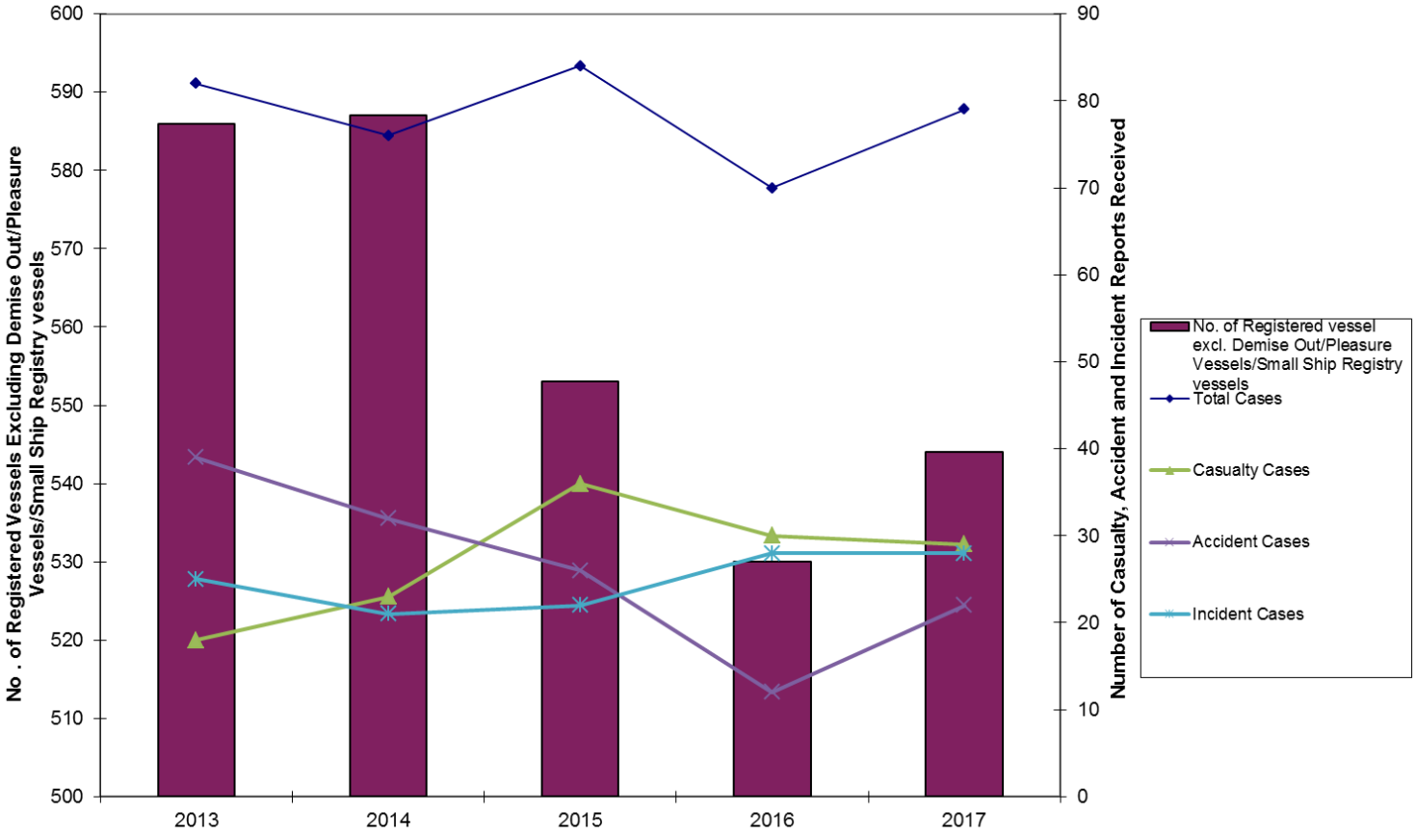


3.4 ARF Fleet Comparison – Total Fleet (Excluding DO/PV/SSR)

The table below shows occurrences and injury cases on Isle of Man registered vessels (excluding 'Demise Out', Pleasure Vessels, and Small Ships Register vessels) as a percentage of reports received over 5 years.

Year	Cases as % of reports received					
	Cas	Acc	Inc	Death	Ser Inj	Min Inj
2013	22%	48%	30%	2%	13%	30%
2014	30%	42%	28%	1%	14%	21%
2015	43%	31%	26%	1%	26%	24%
2016	43%	17%	40%	1%	20%	26%
2017	37%	28%	35%	0%	18%	15%

The graph below compares the number of ARF Reports received with the number of registered vessels (excluding pleasure vessels) over a period of 5 years.



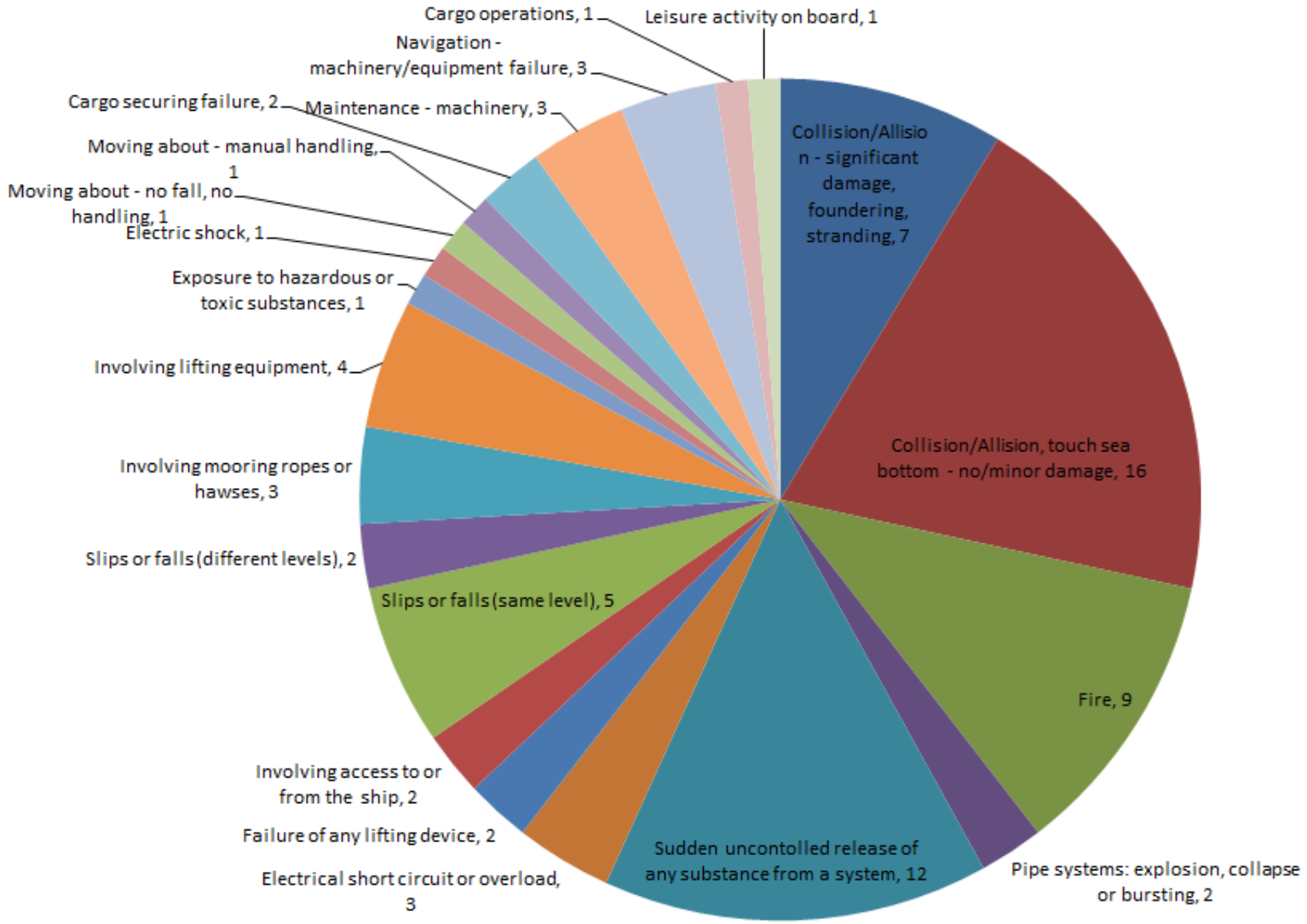
Chapter 4 – Analysis of ARF Reports Received in 2017

The table below summarises the condition the vessels were in at the time of the occurrence.

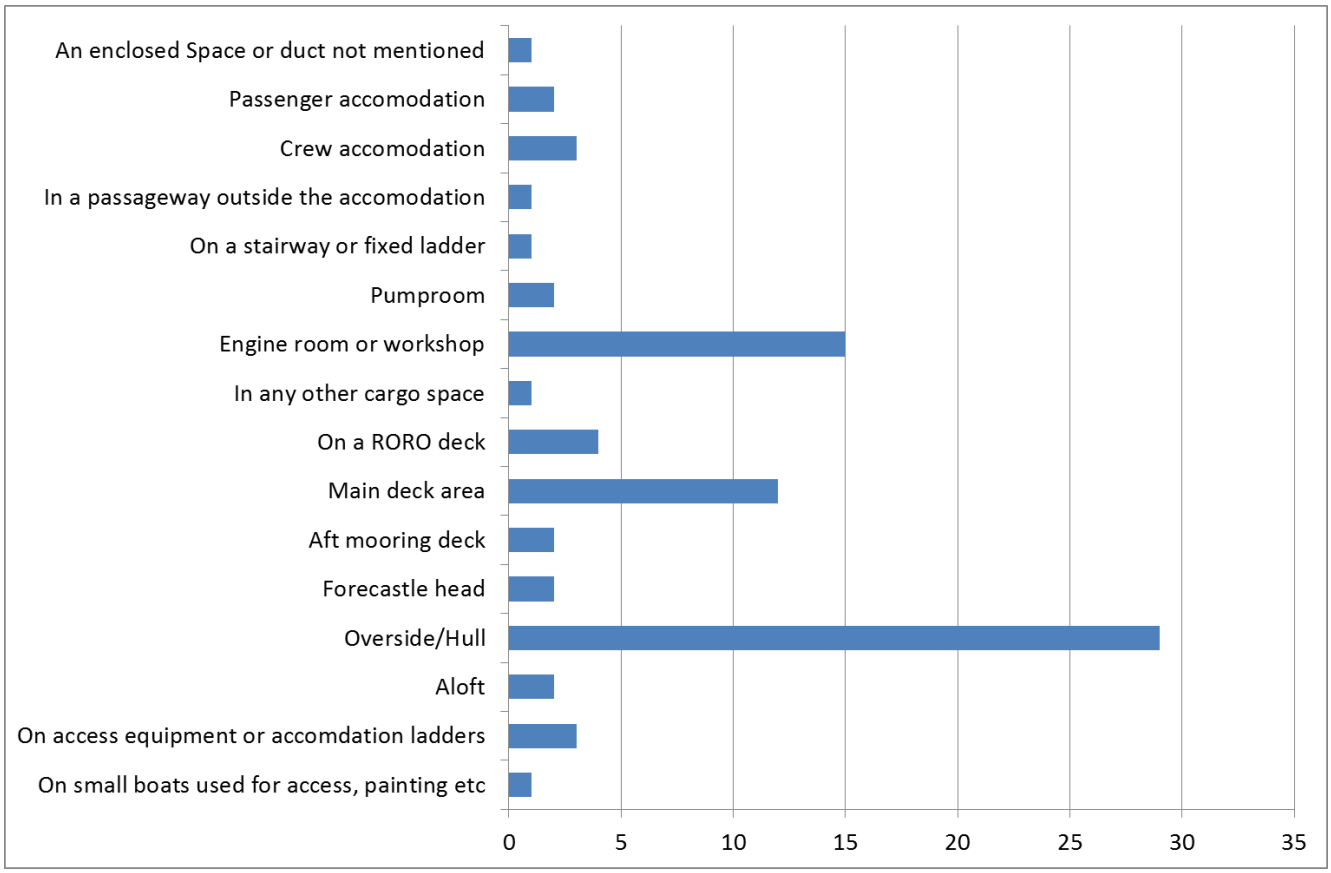
	Total Occurrences			Occurrences involving		
	Cas.	Acc.	Inc.	Death	Serious Injury	Minor Injury
Berthed/Docked	7	9	5	0	5	4
At Anchor/Anchoring/ Weighing Anchor	4	1	5	0	1	1
Mooring/Unmooring	0	0	0	0	0	0
Making Way in Port/ Confined Waters	11	1	9	0	2	0
Making Way Open Sea	8	9	9	0	6	7
Stopped - Drifting/DP	0	3	0	0	0	0
Total	**30**	**23**	**28**	**0**	**14**	**12**

In some cases more than one person may have been injured in the same case. Where a case involves deaths and injuries, this is counted once under a death case.

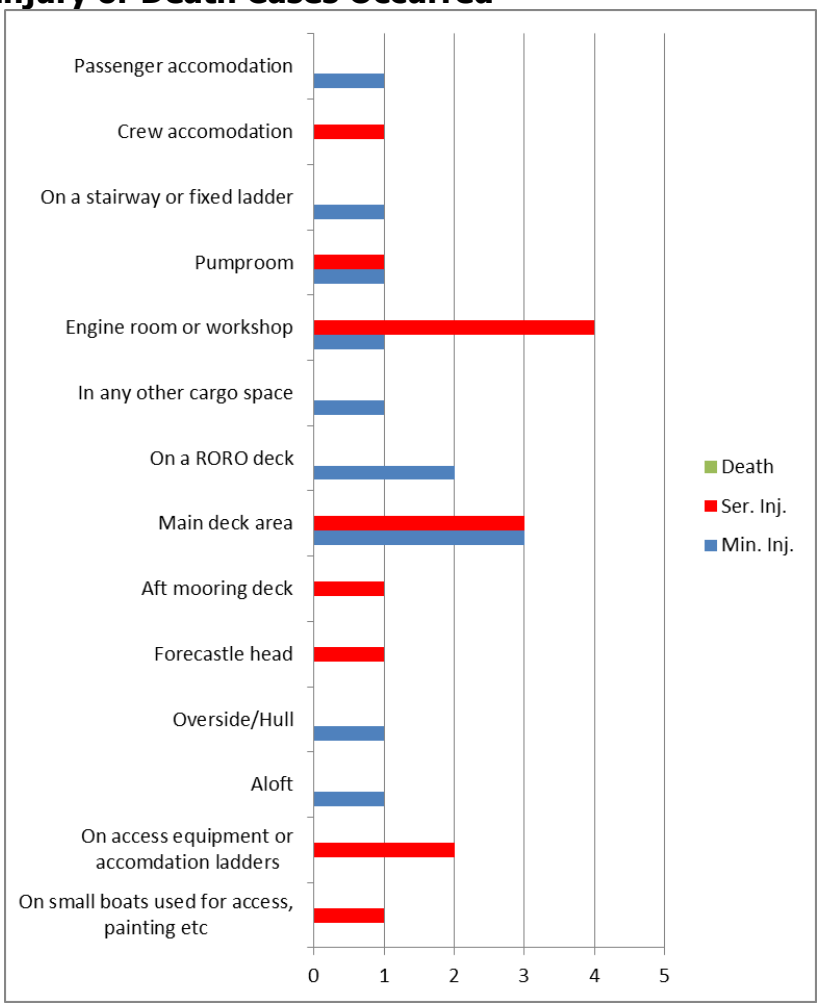
4.1 Type of Occurrences



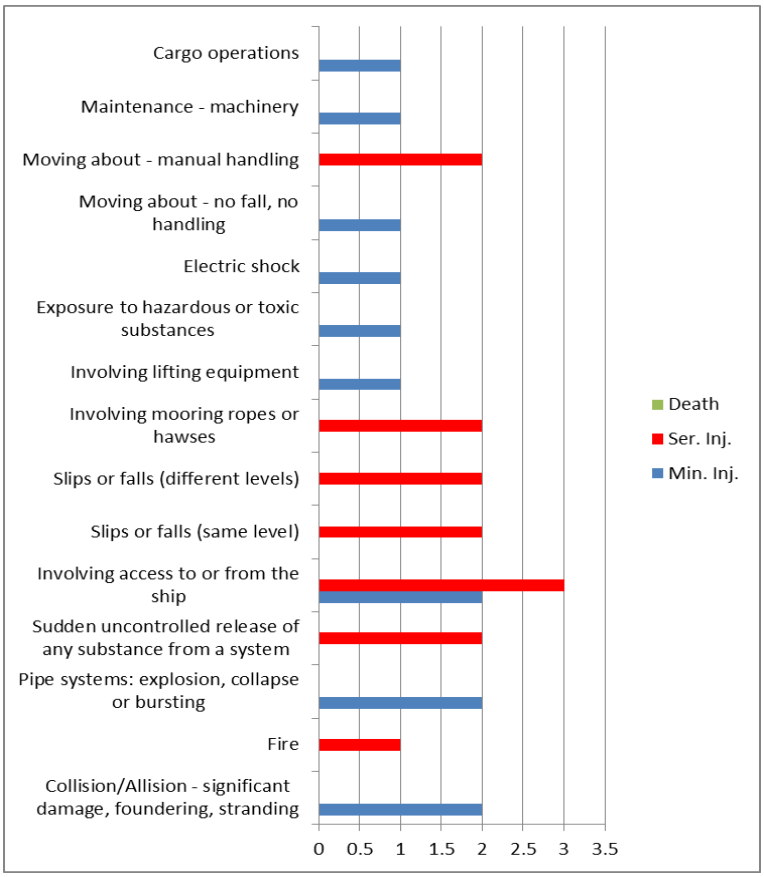
4.2 Place of Occurrences



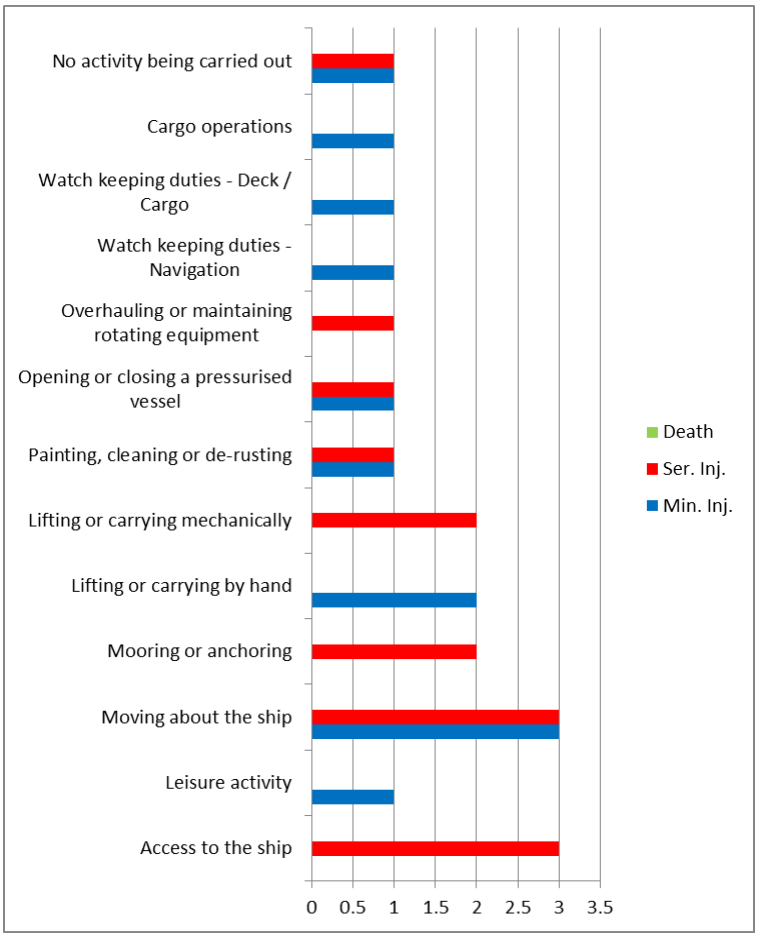
4.3 Places Where Injury or Death Cases Occurred



4.4 Type of Occurrence Leading to an Injury or Death Case



4.5 Type of Activity Leading to an Injury or Death Case



Chapter 5 – Reported Seafarer Injuries

5.1 Seafarer Injury Summary

	All Ships		*MLC Ships		Non-MLC Ships	
No. of Seafarers	**Number**	**Rate**	**Number**	**Rate**	**Number**	**Rate**
Fleet estimate	14803		11573		3230	
Deaths	0	0	0	0	0	0
Serious injuries	14	95	14	121	0	0
Minor injuries	16	108	16	138	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 commercial ship to which the Maritime Labour Convention 2006 applies.
3. Seafarer does not include passengers, yacht guests or visitors to the ship.

5.2 Number of Injuries and Deaths Reported per person

The table below represents the total individual injuries or deaths.

MLC Seafarer:	**Total**	**Min. Inj.**	**Ser. Inj.**	**Death**
Master/Skipper	1	0	1	0
Ch. Off	0	0	0	0
OOW Navigation	2	1	1	0
Ch. Engineer	1	0	1	0
2nd Engineer	1	0	1	0
OOW Engineer	5	4	1	0
ETO / Electrician	2	1	1	0
Deck / Dual Rating	15	9	6	0
Engine Rating	2	1	1	0
Deck / Engine Cadet	0	0	0	0
Cook / Steward / Purser	1	0	1	0
Other Seafarer	0	0	0	0
Total	**30**	**16**	**14**	**0**

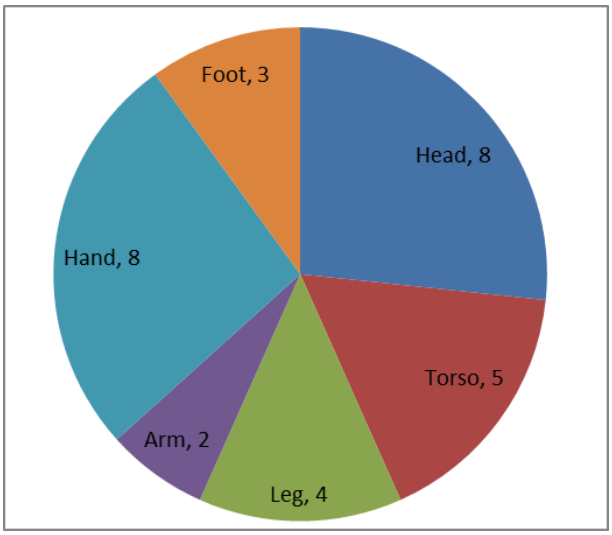
Nb In some cases more than one injury may have occurred in the same case. Cases involving illness, suicide, missing or death due to natural causes are not included.

The following table is provided for information only.
(The number of non-seafarers injured is not included in the statistics elsewhere in this report.)

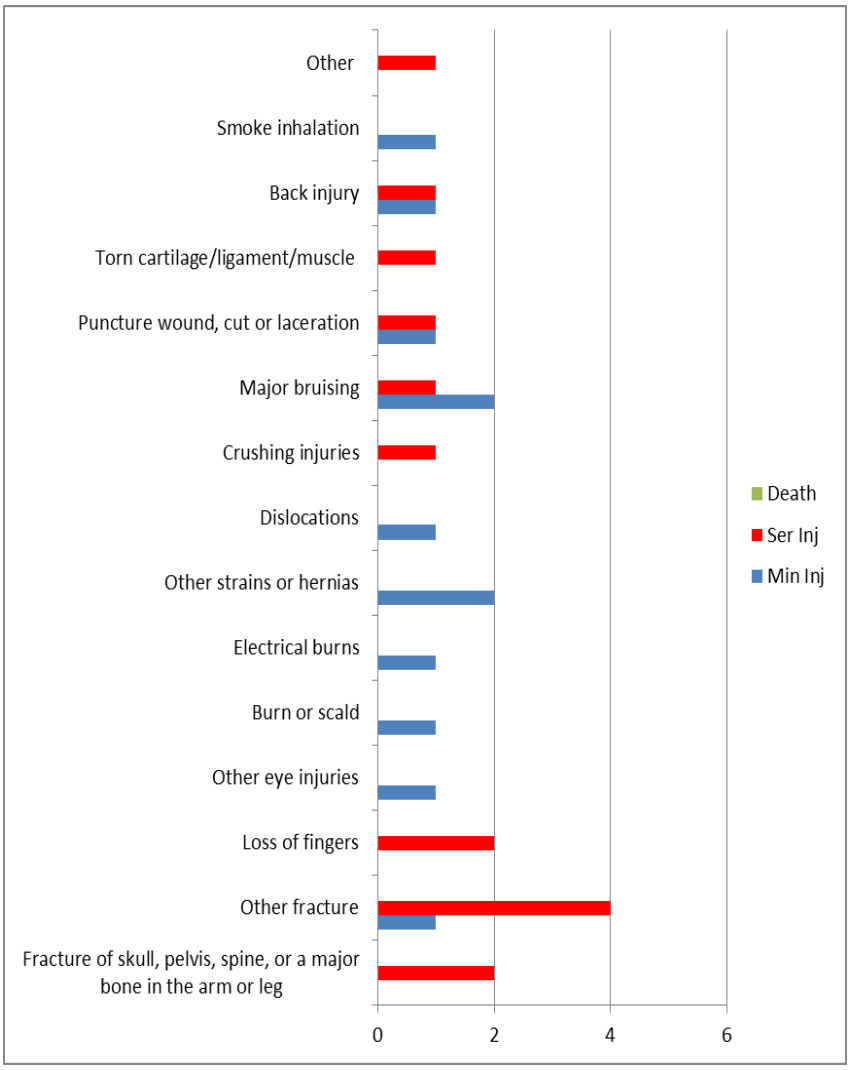
Non-seafarers on board:	**Total**	**Injured**	**Death**
Passenger / Guest	0	0	0
Visitor	0	0	0
Total	**0**	**0**	**0**

5.3 Number of Reported Injuries and Deaths by Age and Area of the Body Injured

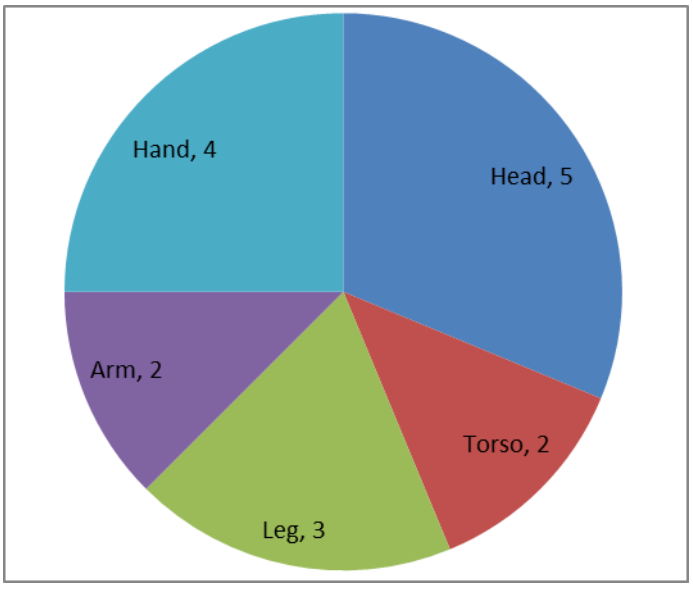
Age Range	Total	Min. Inj.	Ser. Inj.	Death
16-19	0	0	0	0
20-29	14	8	6	0
30-39	4	3	1	0
40-49	6	2	4	0
50-59	5	2	3	0
60+	1	1	0	0
Total	**30**	**16**	**14**	**0**



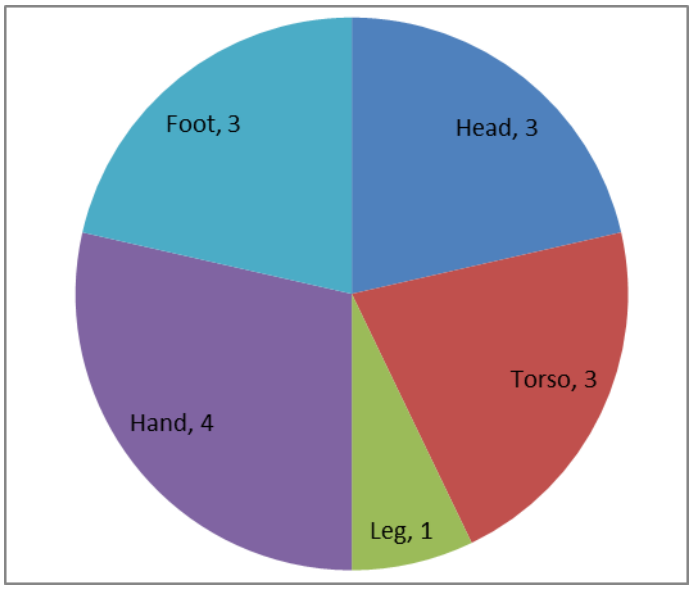
Injuries and deaths per person



Reported injuries or death to individual seafarers



Minor injuries per person



Serious injuries per person

Chapter 6 - IMO Casualty Investigation Code

Reports received by IOMSR in 2017 have been classified in this chapter according to the International Maritime Organisation (IMO) Casualty Investigation Code.

6.1 IMO Casualty Investigation Code Definitions

A **marine incident** means an event, or sequence of events, other than a marine casualty, which has occurred directly in connection with the operations of a ship that endangered, or, if not corrected, would endanger the safety of the ship, its occupants or any other person or the environment. However, a marine incident does not include a deliberate act or omission, with the intention to cause harm to the safety of a ship, an individual or the environment.

A **marine casualty** means an event, or a sequence of events, that has resulted in any of the following which has occurred directly in connection with the operations of a ship:

.1 the death of, or *serious injury* to, a person;
.2 the loss of a person from a ship;
.3 the loss, presumed loss or abandonment of a ship;
.4 *material damage* to a ship;
.5 the stranding or disabling of a ship, or the involvement of a ship in a collision;
.6 material damage to marine infrastructure external to a ship, that could seriously endanger the safety of the ship, another ship or an individual; or
.7 severe damage to the environment, or the potential for severe damage to the environment, brought about by the damage of a ship or ships.

A marine casualty does not include a deliberate act or omission, with the intention to cause harm to the safety of a ship, an individual or the environment.

Serious injury means an injury which is 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.

Material damage in relation to a marine casualty means:

1. damage that:
    a. significantly affects the structural integrity, performance or operational characteristics of marine infrastructure or a ship; and
    b. requires major repair or replacement of a major component or components; or
2. destruction of the marine infrastructure or ship.

A **very serious marine casualty** means a marine casualty involving the total loss of the ship or a death or *severe damage to the environment*. (*NB this does not include death by natural causes*). A marine safety investigation shall be conducted into every very serious marine casualty.

Severe damage to the environment means damage to the environment which, as evaluated by the State(s) affected, or the flag State, as appropriate, produces a major deleterious effect upon the environment.

6.2 Reported Cases Classified as per IMO Casualty Investigation Code

The tables below represent the cases reported to IOMSR in 2017 classified as per the IMO Casualty Investigation Code for different vessel types.

	Total	Passenger	Oil Tanker	Chemical Tanker	Gas Carrier	Bulk Carrier	Offshore/ Standby	Other Cargo	Comm. Yacht	Pleasure Vessel	Fishing Vessel
Very Serious Marine Casualty:	**1**					**1**					
Death	**0**										
Severe Damage to Environment	**0**										
Loss of Ship	**1**					1					

Marine Casualty:	**29**	**4**	**5**		**3**	**4**		**7**	**5**	**1**	
Death	**0**										
Serious Injury	**14**	2	5		1			3	3		
Material Damage to Ship	**6**	1						3	1	1	
Stranding, Disabled, Collision	**9**	1			2	4		1	1		

Marine Incident:	**51**	**5**	**5**	**0**	**4**	**6**	**10**	**10**	**9**	**1**	**1**

Year	**2017**	**2017 Cases**
Number of Reports Received	**81**	

Very Serious Marine Casualty	Death	0	
	Severe Damage to Environment	0	
	Loss of Ship	1	See Chapter 7.1 case 1
	Total Cases	**1**	

Marine Casualty	Death	0	
	Serious Injury	14	See Chapter 5.2 – injuries by rank See Chapter 7.1 cases 2-15
	Material Damage to the ship	6	See Chapter 7.1 cases 16-21
	Stranding, Disabled, Collision	9	See Chapter 7.1 cases 22-30
	Total Cases	**29**	

Marine Incident	**Total Cases**	**51**	See selected cases in Chapters 8 and 9

The numbers of Marine Incident, Marine Casualty and Very Serious Marine Casualty cases are reported by IOMSR to the International Maritime Organisation annually.

Chapter 7 – Casualties in 2017

A total of 30 casualty cases were reported in 2017 and are outlined below.

Casualties	Berthed/ Docked	At Anchor/ Anchoring/ Weighing Anchor	Mooring/ Unmooring	Making Way in Port/Confined Waters	Making Way Open Sea	Drifting	Total
Passenger	2	0	0	2	0	0	**4**
Oil	0	0	0	1	4	0	**5**
Chem	0	0	0	0	0	0	**0**
Gas	0	0	0	1	2	0	**3**
Bulk	0	1	0	3	1	0	**5**
Offshore/Standby	0	0	0	0	0	0	**0**
Other cargo Vessel	2	1	0	3	1	0	**7**
Comm Yacht	3	2	0	0	0	0	**5**
Pleasure Vessel	0	0	0	1	0	0	**1**
Fishing Vessel	0	0	0	0	0	0	**0**
Total	**7**	**4**	**0**	**11**	**8**	**0**	**30**

7.1 Brief Summary of All 30 Casualty Cases in 2017

1 Bulk Carrier – cargo fire (cargo thermal decomposition), potential loss of ship

Whilst on passage the ship's crew noticed increasing amounts of water and "light dust/smoke" accompanied by a "foul smell" emanating from a cargo hold. After contacting the manufacturers for advice, the master was advised that a cargo thermal decomposition was most likely occurring and he was instructed to open the cargo hold openings and if possible the hatches for maximum ventilation/gas dispersion purposes.

With rising temperatures and increasing quantities of toxic gas and attempts at cooling the decomposition front with water failing the situation was worsening. The Master reported his ongoing concerns to the vessels managers, cargo suppliers and local harbour authorities. The manufacturer dispatched a cargo surveyor to render expert assistance on board the vessel in dealing with what was now known to be a cargo thermal decomposition.

With the prevailing still weather conditions and danger to personnel caused by the toxic gas cloud the Master broadcast a Mayday call requesting evacuation from the vessel. The local MRCC responded using two search and rescue helicopters and successfully landed the crew and cargo expert ashore. Four seafarers were sent to hospital for suspected toxic gas inhalation but were soon released.

The vessel being no longer under command or power, drifted (under MRCC supervision) in a direction further from land whilst the decomposition continued. The vessel was eventually salvaged under towed to port for repair assessments.

- This case was the subject of an Isle of Man Ship Registry investigation.

2 Passenger ship – serious injury case

During preparations to depart port a seafarer requested permission to release an aft spring line made fast to the bitts in a figure-of-eight. Permission was granted and the seafarer began to release the spring line and soon realised there was a lot of tension on the spring line. Whilst removing the last turns of line from the bitts the line 'snatched' and hit the seafarer's hand causing injury. The seafarer was sent to shore hospital with a suspected broken hand.

This case highlights the fact that mooring lines under are prone to suddenly move due to the ship's movement when alongside.

3 Other cargo ship – serious injury case
Prior to unmooring operations the accommodation ladder was being heaved up from the quayside. A seafarer removed a stanchion using considerable force causing the stanchion to subsequently hit the seafarer in the face causing significant facial injury.

4 Commercial yacht – serious injury case
Whilst preparing to discharge sewage ashore through the standard discharge connection a seafarer was struck in the face by a sewage pipe discharge plug under pressure causing significant skull and eye injury. The plug was not designed to be released under pressure. The pressure build up was likely the result of anaerobic decomposition of sewage residue.

This case highlights the importance of work planning and knowing the limitations and risks of the equipment on board. In this case a build-up of pressure in the line was not anticipated and the design of the line and plug meant it was not possible to relieve the pressure build up in the line.

5 Passenger ship – serious injury case
Whilst a seafarer was boarding the ship via the gangway she misjudged her footing as she stepped foot on the gangway and ruptured a tendon.

6 Commercial yacht – serious injury case
Whilst retrieving a jet ski to the yacht's garage using the extendable crane a yacht rating trapped his hand between lifting block and crane rail causing crushing injuries. The chief officer operating the crane did not notice where the rating had placed his hand during the lift.

This case highlights the need for effective communication and supervision during lifting ops.

7 Oil tanker – serious injury case
Whilst on passage at sea a pumpman seriously cut his back on a rotating shaft when conducting maintenance in the pump-room. The pumpman was placed in the ships hospital and radio medical advice was sought.

This case highlights the need for effective work planning and for seafarers to pay attention when working in the vicinity of rotating equipment.

8 Commercial yacht – serious injury case
A yacht rating's finger became trapped between mooring line and cleat when securing the tender boat. As his finger was trapped the mooring line came under tension and severed the top of his finger off. The rating was given emergency first aid treatment on board and sent to hospital for treatment.

This case also highlights the need for particular attention to be made by seafarers when working with mooring lines likely to come under tension.

9 Oil tanker – serious injury case
An engineer officer slipped from the bottom step of a stairway in the engine room and fell breaking his ankle. The engineer did not take account of the ship's rolling when moving about the ship.

10 Other cargo ship – serious injury case
When securing the anchor a wave crashed over the fo'c'sle deck knocking a deck rating into a bollard breaking his leg. The boson and ratings were instructed to secure the anchor earlier in the day by the chief officer immediately following the pilot's departure in anticipation of heavy weather. The deck crew ignored this instruction and attempted to secure the anchor later in the day when the ship was in heavy weather.

This case highlights the importance of heavy weather procedures being followed.

11 Oil tanker – serious injury case
Whilst on passage at sea the ship's master was found in his cabin suffering an apparent stroke. The vessel was diverted to the nearest port, anchored and the master airlifted to hospital.

12 Oil tanker – serious injury case
While the ship was at anchor the electrician was fetching stores from the top shelf in the engine room store. The electrician climbed the shelves without using a ladder to enable him to reach the shelf. As he climbed his foot slipped from the shelf and he fell 1.5m to the deck landing on his back causing injury. The electrician was transferred to shore hospital by launch boat.

13 Oil tanker – serious injury case
Whilst at sea on passage a deck rating was stepping off a stairway onto the main deck when he misjudged the distance and landed awkwardly on his foot breaking a bone in his foot.

14 Gas carrier – serious injury case
Whilst replacing the flame eye of the ship's incinerator the chief engineer isolated the power by pushing the emergency stop button. As the chief engineer checked the fly wheel for abnormal wear or defects and the v-belt. A large fan assembly connected to the belt system caused the belt to turn and accidentally caught the chief engineer's hand, severing the end of his finger off.

15 Other cargo ship – serious injury case
Whilst on passage the motorman was instructed to assist the 2nd engineer and fitter with transferring a cylinder head to another storage position in the engine room using the gantry crane. The 2nd engineer left to check on another job and asked the motorman to continue with lifting the cylinder head. As the cylinder head was lifted the stand tilted causing one of the stands' padded feet to swing into the motorman's chest and fractured his sternum.

16 Passenger ship – material damage to the ship case
Prior to berthing the vessel commenced its swing with a tug boat in attendance when a strong gust of wind set the vessel towards the shallower water towards within the confines of the basin. The vessel briefly touched bottom before manoeuvring away from the shallower water area. The vessel then attempted to manoeuvre onto the berth in the strong wind conditions. As the vessel approached the berth the vessel struck a quayside platform structure causing damage to the port structure and the ship's deck fittings and equipment.

- This case was the subject of an Isle of Man Ship Registry investigation.

17 Commercial yacht – material damage to the ship case
Whilst the yacht was in a ship yard an electrical surge caused a fire in a switchboard in the crew accommodation area. The yacht's emergency team responded, the power was isolated and the fire extinguished. No-one was injured.

18 Other cargo ship – material damage to the ship case
Whilst conducting descent rate test for a lifeboat davit the winch brake failed when the holding brake was applied. As the life boat continued to descend the aft fall wire released from the release hook. The lifeboat loading on the forward davit arm caused the davit structure to fail and the lifeboat to fall to the water. No-one was injured.

19 Pleasure vessel – material damage to the ship case
The vessel departed port and began to navigate a buoyed channel with considerable vessel traffic. The steering system was switched from manual steering to autopilot. As course adjustments were made to the auto pilot (steering pump) alarm sounded with and manual steering engaged. At this time the master attempted to alter course to avoid passing too close to an underwater obstruction but the stabiliser fin and propeller made contact causing damage. The vessel anchored to assess the damage. No water ingress or pollution occurred.

20 Other cargo ship – material damage to the ship case

Whilst the ship was moored alongside another ship was manoeuvring in the vicinity and collided with ship causing structural damage.

21 Other cargo ship – stranding, disabled or collision case

Whilst navigating in confined waters under the command of the master the vessel was advised by VTS that the course would lead to the grounding of the ship. The advice was ignored and the vessel subsequently grounded.

The police boarded the ship to investigate why the grounding occurred and blood samples were taken from the master and chief officer. The vessel was later refloated and detained at anchorage while an underwater inspection of the hull was carried out. No damage to hull or pollution to the marine environment.

The blood samples proved positive for alcohol misuse and the master and chief officer were arrested by the police.

22 Bulk carrier – stranding, disabled or collision case

After departing an anchorage the ship proceeded to the pilot station to embark a pilot in preparation to arrive in port. Whilst approaching the pilot station the ship was involved in a collision with another ship causing structural damage to both vessels. No injuries and no damage to the marine environment were incurred.

- This case was the subject of an Isle of Man Ship Registry investigation.

23 Gas carrier – stranding, disabled or collision case

Prior to departing port the pre-departure checklist was completed and all navigation equipment was found operational. The vessel departed port with a pilot on board and tug fast without incident. Prior to the pilot leaving the ship the pilot advised the master of a suggested route for the vessel to take in the vicinity of the buoyed channel. A short time later the ship was involved in a collision with another ship arriving at the port causing significant structural damage to both ships. No injuries and no damage to the marine environment were incurred.

- This case was the subject of an Isle of Man Ship Registry investigation.

24 Gas carrier

Whilst making way on passage in heavy swell the vessel began rolling heavily at times. During the rolling secured drums on the bridge deck became loose when the lashings failed causing the drums to roll from side to side. Realising the risk of the drums spilling into the sea the crew attempted to lash the drums. Unfortunately 17 x 200ltrs oil drums were damaged and around 3000 litres of turbine and hydraulic oil was spilt to sea.

This case highlights the importance of adequate lashings for deck stores, particularly in heavy weather. The crew also put themselves at risk in attempting to secure the loose drums rolling across the deck.

25 Other cargo ship – stranding, disabled or collision case

During passage through the Kiel Canal, the vessel made contact with another vessel leading to shell plating deformation and longitudinally torn open. After making contact with the other vessel, the vessel was advised to proceed to a repair berth with the tug made fast at her stern.

During her passage to the repair berth the vessel was stopped in a siding area by the Pilot. No reason was advised by the pilot for this. While stopped in the siding area the vessel drifted under the influence of strong north-westerly winds and made contact with some steel dolphins with rubber fenders and the side wall of the canal. An additional tug was ordered to control the vessel. As a result of the contact with the dolphin's side a section of the vessel's shell plating got

indented and tips of the propeller blades were damaged.

There was no injury or pollution caused due to this incident.

This case highlights the importance of adequate bridge team communication and anticipating the effects of the prevailing tidal streams when a ship commences a large turn in a narrow channel.

26 Passenger ship – stranding, disabled or collision case

Whilst manoeuvring within the confines of the harbour the vessel experienced steering problems where one of the steering 'buckets' was found to have stuck ahead during the manoeuvre. While attempting to regain control using back-up systems and speed controls the vessel made contact with the quay wall in a void space above the waterline. The impact caused the hull to be holed thus requiring repairs before departing port.

- This case was the subject of an Isle of Man Ship Registry investigation.

27 Commercial yacht – stranding, disabled or collision case

Whilst at anchor in strong winds the yacht observed another yacht dragging its anchor on a track towards the yacht. The other yacht made no attempt to correct the drift and anchor dragging subsequently collided with the yacht causing structural damage before drifting away.

This case highlights the importance of an effective anchor watch to monitor and check the ship's and vessel's position in the prevailing wind conditions whilst at anchor

28 Bulk carrier – stranding, disabled or collision case

The vessel arrived at port and proceeded along a buoyed channel with the intention of anchoring in the designated anchorage area. As the vessel arrived at the anchorage the master observed strong currents and wind acting on the vessel's stern affecting the vessel's manoeuvrability. The master proceeded to the planned anchor position when the vessel's stern made heavy contact with another vessel at anchor causing significant structural damage to both vessels.

This case highlights the importance of an effective passage plan that is flexible and the master's decision making process to continue with anchoring based on distance to other vessel in the prevailing weather and tidal conditions.

29 Bulk carrier – stranding, disabled or collision case

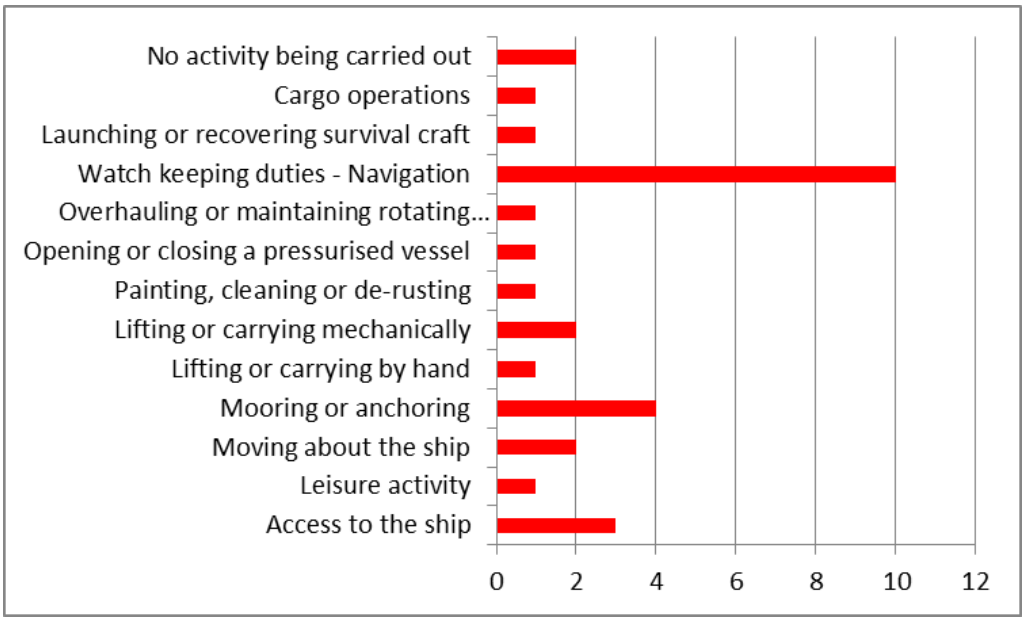
Whilst navigating the Amazon river on the planned track with a pilot on board the bridge team noticed the speed suddenly reduce and the vessel come to a stop. The echo sounder indicated the vessel had grounded. The river depth was different to that indicated on the chart. After informing the local authorities an investigation on board determined there was no damage and the vessel was refloated on the next high tide and resumed her passage.

This case highlights the importance of using all navigation equipment effectively in the prevailing circumstances and conditions, particularly the echo sounder in this case when navigating in areas where chart depths are known to vary.

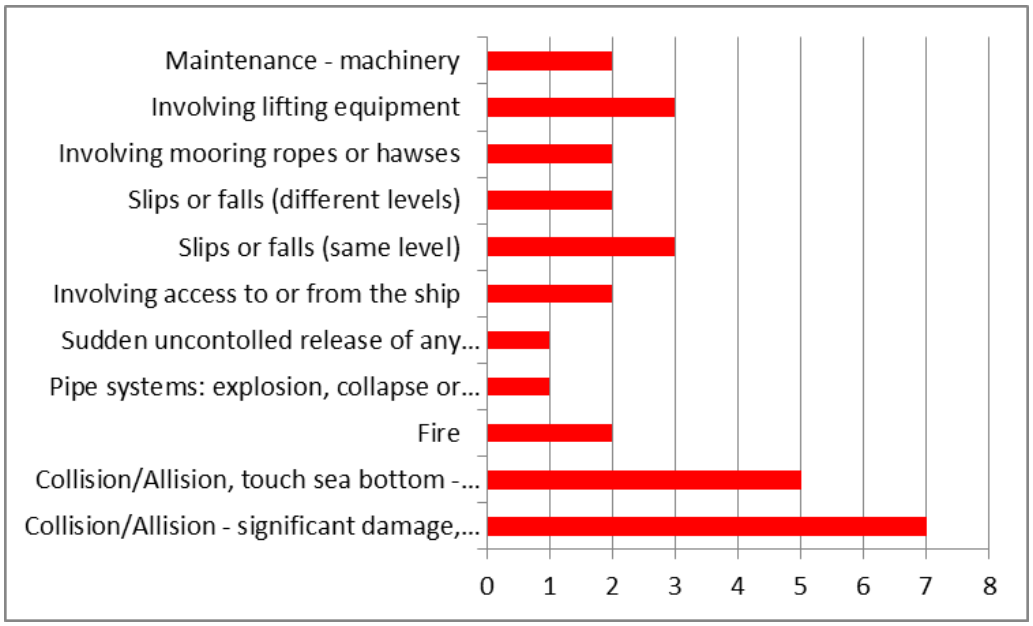
30 Bulk carrier – stranding, disabled or collision case

Whilst the vessel was the only vessel at anchor in the designated anchorage area another vessel was observed to be approaching the vessel at close range despite much open sea room available. Attempts to contact the other vessel failed so the anchor party and engine was readied. The other vessel anchored in close proximity and as it swung the other vessel's stern made contact with the ship's bow causing structural damage.

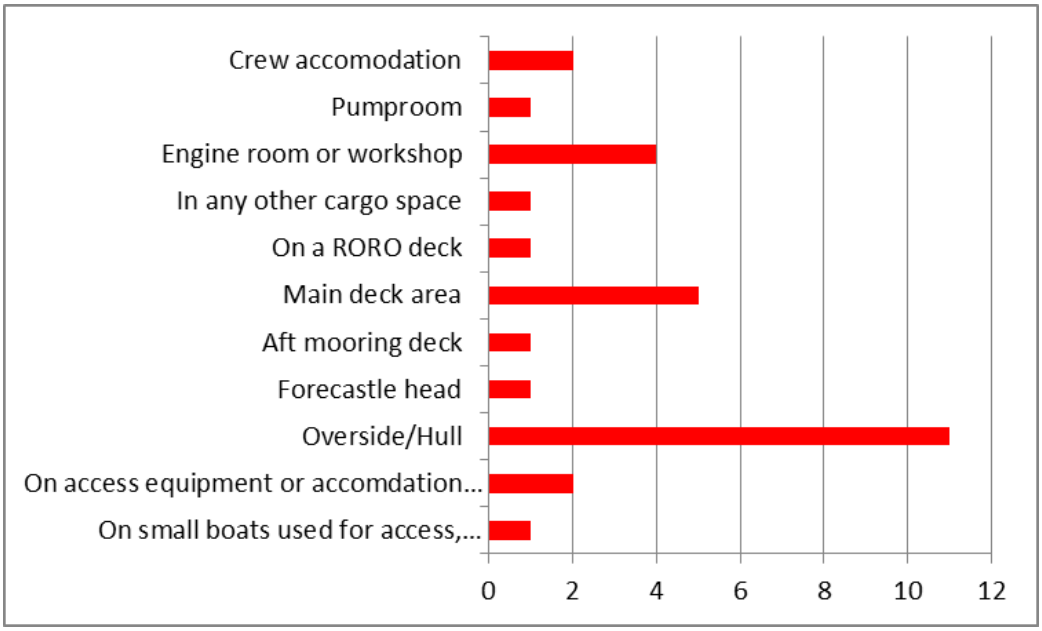
7.2 Casualty Chart Representations



2017 Casualty Activities



2017 Casualty Types



2017 Casualty Places

Chapter 8 – Accidents in 2017

A total of 23 accident cases were reported in 2017 and are outlined below.

accidents	Berthed/ Docked	At Anchor/ Anchoring/ Weighing Anchor	Mooring/ Unmooring	Making Way in Port/ Confined Waters	Making Way Open Sea	Drifting	Total
Passenger	0	0	0	0	0	0	**0**
Oil	2	0	0	0	2	0	**4**
Chem	0	0	0	0	0	0	**0**
Gas	2	0	0	0	0	0	**2**
Bulk	0	0	0	0	1	0	**1**
Offshore/Standby	0	0	0	0	3	3	**6**
Other cargo Vessel	1	0	0	1	3	0	**5**
Comm Yacht	3	1	0	0	0	0	**4**
Pleasure Vessel	1	0	0	0	0	0	**1**
Fishing Vessel	0	0	0	0	0	0	**0**
Total	**9**	**1**	**0**	**1**	**9**	**3**	**23**

8.1 Brief Summary of selected Accident Cases in 2017

1 Other cargo ship

Whilst on passage the fire alarm was activated and initial investigation found there was fire in the engine room. The ship's crew mustered, the engine room fire contingency plan was carried out and the emergency fire team entered the engine room with breathing apparatus and fire hoses. The fire was soon extinguished and engine flaps and dampers reopened. A short time later the fire reignited and was soon extinguished again. An investigation found that a defective oil pipe serving the domestic boiler was spraying a steam/oil mix.

2 Offshore vessel

Whilst conducting the annual dynamic position trial a film of oil could be seen emanating from a ship's thruster. The trial was halted and an investigation found a foreign object had penetrated the seal of the thruster causing the seal to fail.

3 Offshore vessel

Whilst conducting ROV operations the ROV was using a cutting tool powered by hydraulic pressure. During the operation it was observed that the ROV had leaked a small amount of hydraulic fluid. The operation was suspended for an investigation and repair and the local authorities informed.

4 Commercial yacht

The fire detection system sounded after identifying smoke in the owner's suite. The initial responders noticed that a tall standard lamp was laying on the deck with a towel wrapped around the bulb for stowage. The towel was smouldering and had transferred to the carpet. The general alarm was then activated and the crew mustered. A fully dressed BA team then entered the extinguished area and monitored the space while the engineers increased ventilation to clear the area.

Damage caused tarnishing to the lamp and a burn to the carpet. The carpet itself performed well and did not ignite and the underlay beneath it remained untouched.

When the incident happened the deck crew were washing the yacht and hoses were run and the slippery decks. During the emergency response ne deckhand slipped, sustained a cut to his leg and landed awkwardly hurting his hip. As a precautionary measure he has been sent to the hospital for a check-up.

5 Commercial yacht
While stowing the liferafts after their annual service a crewmember injured his back after pulling on the cradle for a long time.

6 Pleasure vessel
Whilst in port the fire alarm on-board activated and the crew responded immediately. Upon investigation the initial responders discovered smoke in the guest corridor and main saloon. Crew mustered, fire doors and watertight doors were closed. The stewardess departed the vessel and alerted local authorities. The chief mate secured the vessel, departed to the dock, and awaited the arrival of the fire department. The sprinkler system deployed automatically and extinguished the fire, which was later discovered to be located in the electrical sub panel outside the guest cabin corridor. No crew were injured, no pollution was caused.

7 Other cargo ship
On approach to port the engine room staff noticed a drop in the main engine sump tank level. On investigation they discovered, and repaired a broken pipe in the main engine lube oil cooler. As the cooler is SW cooled, approximately 280 litres of oil was lost. No reports of oil in the water or any other pollution was observed.

8 Offshore vessel
Whilst at sea on station the bridge was notified of an oil sheen on the water. On investigation the engineers quickly discovered the tank of a thruster had a lower level of oil than 30 minutes previous. The header tank was isolated to prevent further loss. An estimated 220 litres of lubrication oil was lost to sea.

9 Offshore vessel
During crane manoeuvres supporting subsea operations an oil leak from one of the knuckle boom cylinders was noticed by the dive team on deck. The crane was facing outboard with the knuckle boom fully extended while no load was on the hook. Approximately 5 litres of hydraulic oil was spilled to sea. The crane was put out of service for further checks and investigation. On inspection it was noticed that a defective O-ring caused the leak.

10 Gas carrier
During discharge of anhydrous ammonia the emergency shutdown (ESD) alarm activated. After a check of all gas plant the crew managed to restart discharging but a cargo leak was spotted on a pressure gauge flange. The duty watchman with face mask immediately activated the ESD, informed duty officer and started spraying water from hire hose towards ammonia cloud. The cargo terminal was informed and additional personnel were called on station to deal with emergency.

Chemical suits and a firefighting team were prepared and the area was protected with a water curtain. The cargo system was immediately checked including pressure in all gas plant compartments and control air. The cargo line was drained and residue of cargo evaporated to allow a gasket change. The harbour master boarded as a precautionary measure. The gasket was soon replaced and the cargo terminal was informed regarding ship's readiness. After a pressure test was done in presence of the loading master discharging cargo resumed.

11 Oil tanker
After departing port an economiser water wash was carried out to remove soot accumulation. Later that day the navigation lookout noticed a small fire and smoke on the ship's basketball court on the outside deck. The fire had started from the funnel sparks from the vessel's funnel falling onto the court matting. The fire was extinguished using a portable fire extinguisher and the area cooled using a charged fire hose.

12 Gas carrier

The vessel arrived in port and moored to the jetty for cargo discharge. The pilot insisted all stern lines had to be moored to one mooring buoy instead of the multiple mooring buoys. Reluctantly the master agreed to this.

After pre-discharge safety checks had been completed cargo discharge started. During the night the master, chief engineer and other ship's crew returned to the main gate after shore leave during the evening. At this time a sudden onset of heavy rain and strong winds (force 9) occurred causing the mooring buoy holding the stern line to drag subsequently causing the vessel to break away from the jetty. This drag caused the vessel to shift out to approximately 20-25 degrees from the terminal and approximately 20 meters forward. The loading arm had been detached from the terminal piping and was now resting on the vessels hose rail. One forward spring line had also parted after the vessel moved out.

The agent representative on board informed the terminal immediately of the situation via VHF. The duty officer returned to the cargo control room and noticed through the window a cargo vapour cloud and immediately activated Emergency Shut Down system from the Cargo Control Room. After the Emergency Shut Down System had been activated the duty officer and duty rating both ran to the bridge where they saw the vessel move away from position dragging the buoy and pull off the Loading Arm. The general alarm was sounded followed by a public address announcement.

Port control was advised and tugboats requested through the on-board agent representative. A short time later the bad weather had passed the area and soon weather was calm again.

Gas release from shore manifold was minimised and gas leakage was stopped by terminal. During the incident no activation of the water spray or any other protection / firefighting system took place at the terminal side.

A short while later the master, chief engineer, and other ships crew were back on board where the Master took command of the vessel.

During the break away and while at the gate the master had assisted the chief officer in his duties by using the security guard's radio and mobile phone.

After checks were made to ensure safe atmosphere in the accommodation block the ship later moved to the port's anchorage area for investigation and damage assessment. The damage to the vessel were later found to be of a broken mooring line and dents and scratches on the hose railing. An underwater survey was carried out confirmed no further damages found to the hull.

An investigation found the mooring buoy's anchor chain had broken and the terminal manifolds Automatic Emergency Release System (Dry Break System) had failed to release and thus causing the loading arm to detach from the piping system. None of the vessels stern lines had parted.

This incident caused no injury to any persons and only minor damage to the vessel

13 Offshore vessel

During an ROV dive approximately it was noticed that there was a reduction of main ROV hydraulic pressure. Operations were suspended and the ROV returned to the ship. On return it was noticed that a jetting tool hose on the ROV was damaged and approximately 3 litres of hydraulic oil was released at depth.

14 Oil tanker

Whilst connecting a reducer to the manifold using the hose handling crane a chain block was suspended from the crane hook with the other end connected to the reducer to allow smaller and finer movement of the reducer for alignment. While aligning the reducer to manifold using the chain block strain came onto the chain block and the chain parted. The reducer was already in position with 2 nuts and bolts hence no movement of the reducer.

The parting of chain caused the chain block to detach from the web-sling and fall onto the deck about 2.5 metres inboard of the point where it was suspended and clear of the working party. Weather conditions were good and no rolling. There were no injuries.

15 Other cargo ship

The vessel departed port with a cargo of Ro-Ro trailers and sailed into gale force winds. The vessel was broaching and rolling in the weather conditions when the vessel took a larger than normal roll to starboard. Following the large roll it was reported to the bridge that some cargo had shifted on the aft part of main deck.

The chief officer and a rating proceeded to the main deck to assess the damage from a safe position. The chief officer determined there was no issue with the watertight integrity of the vessel/hull and informed the master that it was safe to proceed to port.

The vessel continued towards its destination with various course alterations to minimize rolling.

16 Commercial yacht

Whilst in port an oil leak sprayed over a generator and sound enclosure. The oil spray produced excess smoke in the engine room activating the fire alarm. The emergency party mustered and investigated the fire. Non-essential crew were evacuated ashore. The generators were shut down to allow the smoke to clear and repairs to be made.

17 Oil tanker

Whilst cleaning an automatic back-flushing hot fuel (HFO) filter chambers the filter unit was drained and all pressure released through manufactures designed vent. On completion of venting a container used to capture drained oil was being repositioned when a seafarer made inadvertent contact with the fitted pressure equalizing cock, moving it from the closed position to approximately 10% open.

Approximately 1 litre of hot fuel oil escaped from the vent and made contact with the hands of 2 engineer officers. The attending Second Engineer immediately identified the incorrect position of the equalizing cock and returned it to the closed condition. The injured parties were escorted to the ships hospital for first aid.

18 Other cargo ship

The vessel departed port with a pilot on board in good weather conditions and followed the track of an ice breaker. The vessel was fully loaded with a timber deck cargo of spruce logs. The cargo had been loaded and stowed as per the respective cargo securing manual for timber deck cargo ("Baltic stowage").

As the vessel reached open waters the wind strength was noticed to severely increase.
In order to stop the drift from track rudder was set hard to port and vessel started to turn rapidly to port after a few moments. Correspondingly, the rudder was set hard to starboard to stop the turn to portside.

At that time seawater sprayed all over the vessel due to strong winds and due to the previous hard-over to hard-over rudder commands the vessel was rolling heavily to both sides port and starboard. The deck cargo was observed to suddenly start shifting over the deck and finally most of deck cargo was lost over board.

The pilot informed the vessel traffic centre and authorities accordingly and Master immediately ordered a check for any damage to the vessel.

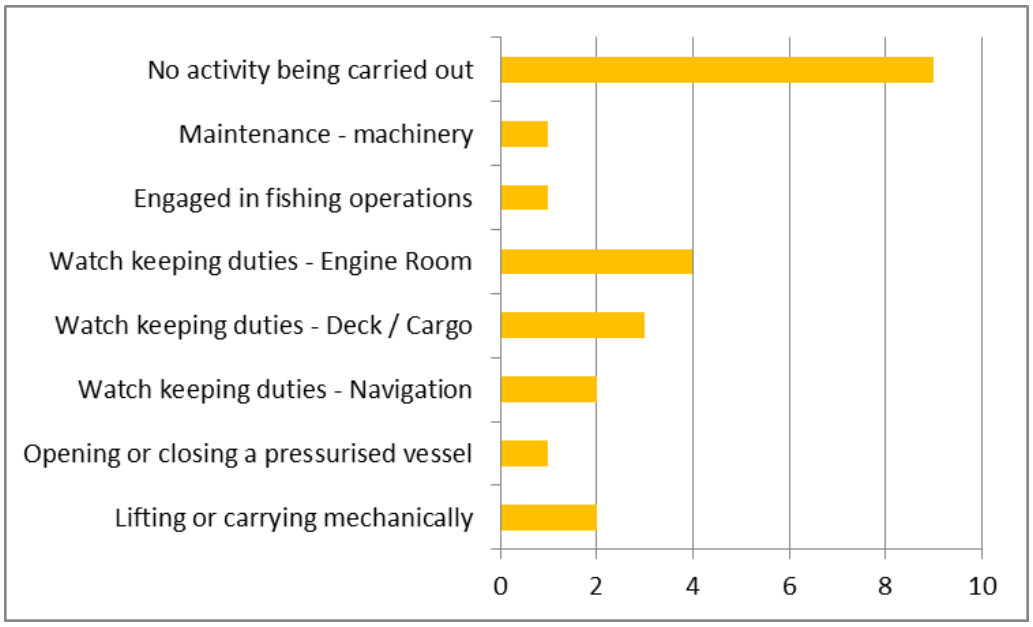
As the vessel was found without any damage, the passage towards the next port resumed.

19 Commercial yacht

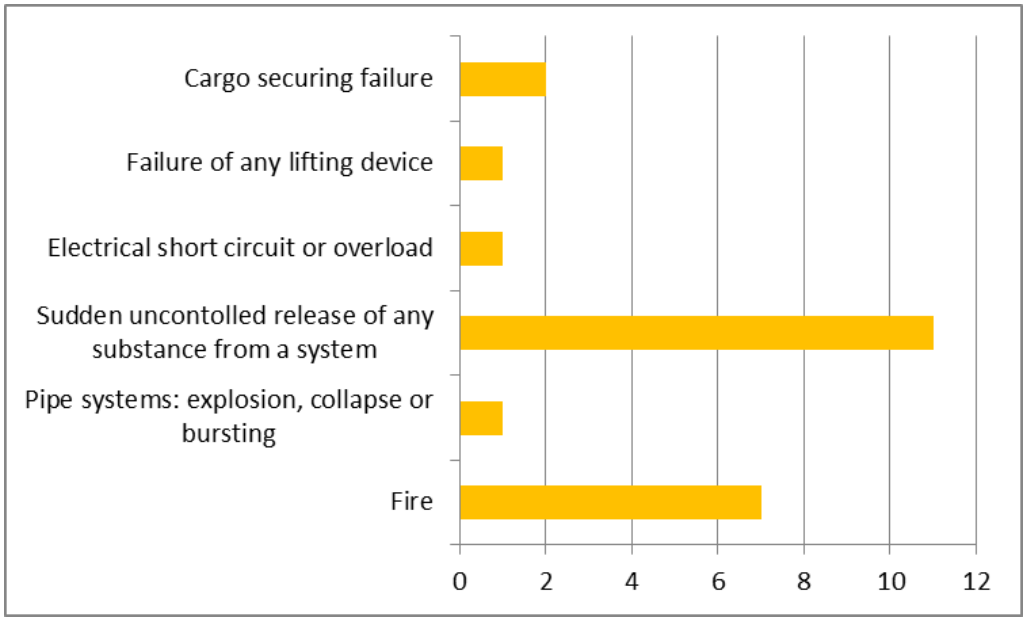
Whilst at anchor a lightning storm was observed to be approaching the yacht and most of the yachts breakers were switched off in anticipation. The yacht was subsequently struck by lightning.

Most of the lightning was transferred by the yachts newly modified lightning conductors however a number of electrical equipment was damaged as a result of the lightning strike.

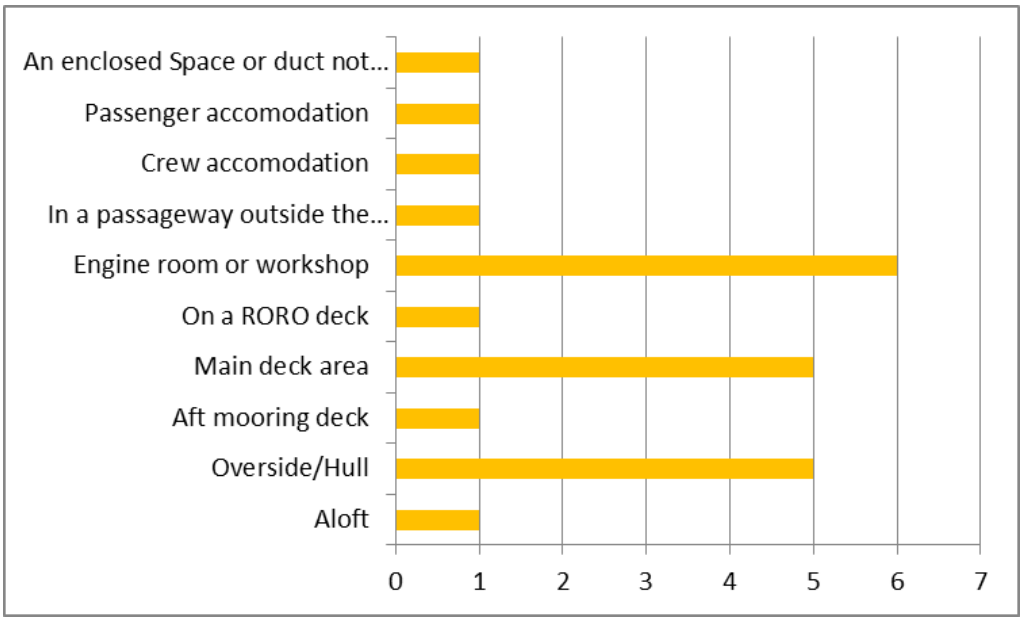
8.2 Accident Chart Representations



2017 Accident Activities



2017 Accident Types



2017 Accident Places

Chapter 9 – Incidents in 2017

A total of 28 incident cases were reported in 2017 and are outlined below.

incidents	Berthed/ Docked	At Anchor/ Anchoring/ Weighing Anchor	Mooring/ Unmooring	Making Way in Port/Confined Waters	Making Way Open Sea	Drifting	Total
Passenger	1	0	0	2	2	0	**5**
Oil	0	0	0	1	0	0	**1**
Chem	0	0	0	0	0	0	**0**
Gas	0	0	0	1	1	0	**2**
Bulk	0	2	0	2	1	0	**5**
Offshore/Standby	1	0	0	0	3	0	**4**
Other cargo Vessel	1	0	0	3	1	0	**5**
Comm Yacht	2	3	0	0	0	0	**5**
Pleasure Vessel	0	0	0	0	0	0	**0**
Fishing Vessel	0	0	0	0	1	0	**1**
Total	**5**	**5**	**0**	**9**	**9**	**0**	**28**

9.1 Brief Summary of Selected Incident Cases in 2017

1 Passenger ship

Whilst arriving in port on a flood tide the master observed the vessel was further to one side of the planned track than anticipated. Efforts were made to correct the track using the engines and steering however this did not produce the desired effect in time and the vessel made contact with the port structure at the entrance of the harbour. On inspection of the vessel's hull only minor superficial damage to the hull paintwork was noted only.

2 Bulk Carrier

Whilst swinging in a turning basin with a pilot on board and tug boat in attendance the vessel made minor contact with another moored vessel and sustained minor paint damage only. The other vessel sustained minor structural damage to the other vessel only.

3 Ship – minor injury case

The third engineer suffered a minor electrical shock and minor burn via an arc to his finger when resetting a breaker following a pump failure. The pump was isolated for further investigation before reinstating into operational use.

4 Commercial yacht

While the crane was being used to retrieve the tender boat for stowage on board the lifting rope parted causing the boat to fall 1.5m to water. A crew member was in the boat at the time but was uninjured. The boat was recovered by other crew members using the attached painters. Upon investigation it was determined that he lifting rope (a bit frayed) had been rubbing against a sharp edge on the sheave.

Proper inspection should be made to lifting ropes and lifting equipment at appropriate intervals to determine they are fit for purpose.

5 Offshore vessel – minor injury case

A rating was walking along the main deck where he slipped on some mud that had been left by previous offshore equipment. The rating suffered a twisted ankle and was given light duties.

Risks caused by potential slippages on deck should be removed as soon as possible.

6 Gas carrier

Whilst in port the vessel was changing berth with a pilot on board and was assisted by a tug boat. During the manoeuvre the vessel set towards another moored vessel in the prevailing wind conditions. The vessel made slight contact with the moored vessel causing minor damage to each ship's paint work.

7 Bulk carrier

Whilst the vessel was drifting in the East China Sea awaiting to arrive in port the officer of the watch observed a fishing boat (not displaying fishing signals as prescribed by the COLREGS) approaching at slow speed off the port bow and subsequently make contact with the port side of the vessel. The fishing boat was then observed to drift clear down the port side and attempts to contact the boat were unsuccessful. An initial inspection of the ship's hull indicated only minor paintwork damage.

Officers in charge of a navigation watch are urged to fully comply with COLREGS Rule 17(a)(ii) and Rule 34(d) when other vessels are observed not taking appropriate action to avoid collision.

- This case was the subject of a Japanese Coastguard investigation.

8 Offshore vessel

Whilst on passage the fire alarm was activated by observed oil mist from an auxiliary generator. The water-mist system was activated and the generator was shut down. Later inspection confirmed the leak had come from a previous repair to a steel pipe on the lubrication oil filter line.

9 Other cargo ship – minor injury case

Whilst on passage a deck rating was removing lashing chains from a trailer in preparation for arrival in port. Whilst throwing the lashing chain to one side the hook caught another trailer and stopped suddenly. The rating still holding the chain strained his shoulder in the process.

10 Bulk carrier

The vessel arrived at anchorage with a pilot on board in order to conduct cargo operations. When the vessel was anchoring the master expressed concerns to the pilot about the distance to other vessels. The concerns were dismissed stating "this is normal for here". Whilst at anchor other vessel at anchor in the vicinity shifted their position closer to the vessel. The master raised concerns with the port authority and again was told "this is normal for here". Later the wind gained strength causing another vessel to swing and make contact causing minor damage.

Following the contact the vessel eventually changed anchorage position with a pilot on board to another position. Notably with the distance to other vessels was the same as before.

11 Commercial yacht

The fire alarm sounded whilst the vessel was in port. On investigation it was found that smoke from an overheating UPS unit in the main saloon activated the fire alarm. It was found that the UPS unit had many boxes stored around it and the lack of ventilation caused the UPS unit to overheat.

12 Bulk carrier

Whilst at weather was observed to deteriorate so the master decided to heave the anchor and drift. While heaving the anchor the clutch disengaged and the entire cable ran out and was held on to the bitter end causing damage to the bitter end plate. The anchor cable was heave up again when the anchor flukes were observed to be damaged.

13 Bulk carrier

Whilst departing port the vessel suffered a main engine failure. The main engine was tested satisfactorily prior to the vessel's departure from the berth. When the main engine was started after unmooring, a main engine slowdown was triggered due to high deviation of exhaust gas temperature and shaft torque over acceptable limits. As result the main engine RPM could not increase, local authorities were informed and the vessel was ordered to return her berth with the assistance of additional tugs for investigation.

14 Other cargo ship

Whilst on passage the vessel suffered a main engine failure and was drifting 1.5nm away from land subject to the local tidal streams. The company's emergency response team was activated while the cause was investigated. On investigation it was found that the main engine suffered fuel starvation due to a blocked valve connecting the daily service tank to the strum box. After removing the blockage and the fuel system was reactivated and the vessel resumed passage.

15 Gas carrier

After the ship departed port the bridge team noticed a fishing boat manoeuvring off the port bow. After attempting to signal to the vessel using the ship's horn the fishing vessel continued to approach the vessel on a collision course. The master reduced the speed of the vessel and the fishing vessel was observed to cross close to the bow and proceed underway down the starboard side of the vessel. The master proceeded on voyage to the next port assuming no collision had occurred. Later that day the vessel was contacted by the local coast guard enquiring about a collision with a fishing boat. The ship was then ordered to port were the coast guard conducted an investigation.

16 Oil tanker

Whilst on passage at night in confined waters the vessel suffered an electrical failure affecting the ship's main switchboard. The main engine continued to run and the navigation equipment continued to run on the ships emergency power supply. The master informed the local authorities of the situation later the vessel then suffered main engine failure and began to drift.

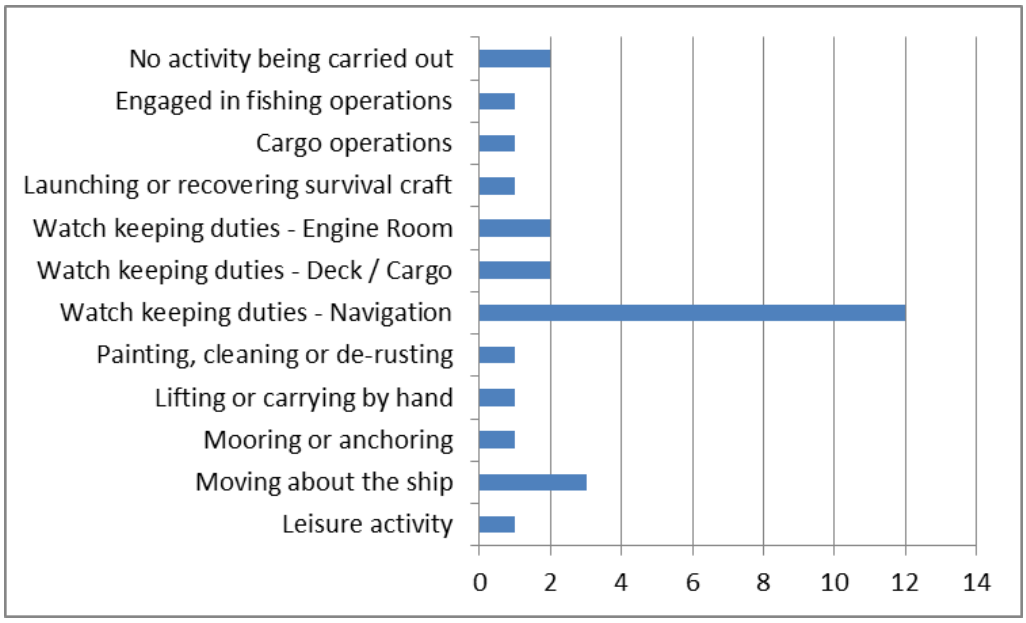
As the ship was drifting towards the shore the engineers could not find the fault so the master decided to anchor the ship in a safe position and tugs were ordered to standby the ship. Later the fault was determined to be a faulty power breaker supplying power from the generators to the main switchboard. The electrical power and main engine were soon restored and after testing of the system the ship continued on passage.

17 Fishing vessel and dive boat

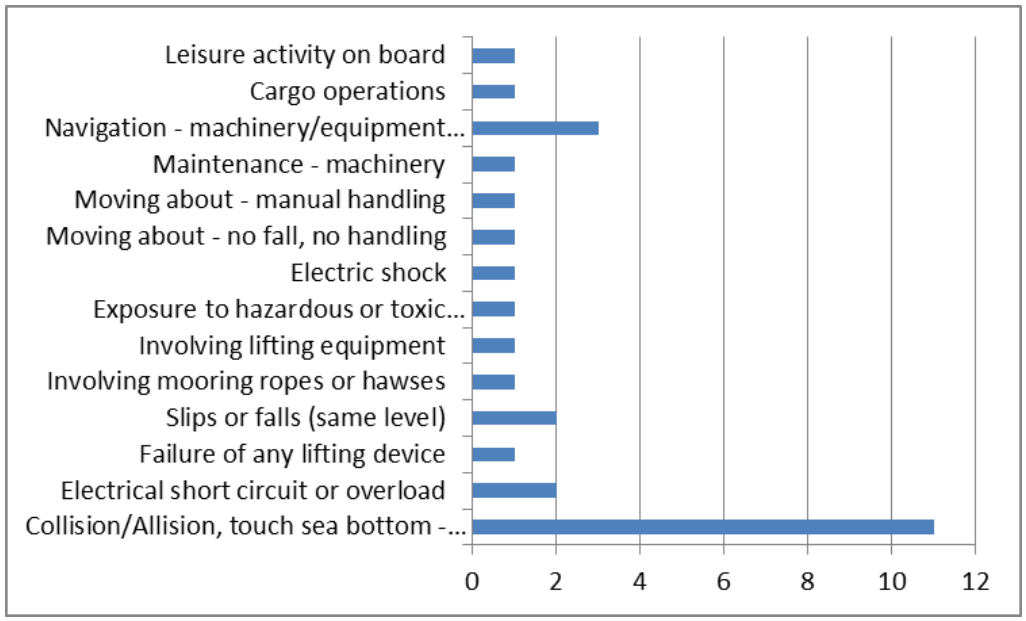
The Isle of Ship Registry received a complaint regarding fishing boat conducting dangerous manoeuvres in the area of diving operations. An investigation concluded ineffective means of communication and means to attract attention were used. Diving boats should also give due consideration when diving in the vicinity of deployed fishing gear and, fishing boats should also give due consideration when manoeuvring in an area where diving operations are being conducted.

- This case was the subject of an Isle of Man Ship Registry investigation. Report CA129 is published on the Isle of Man Ship Registry website.

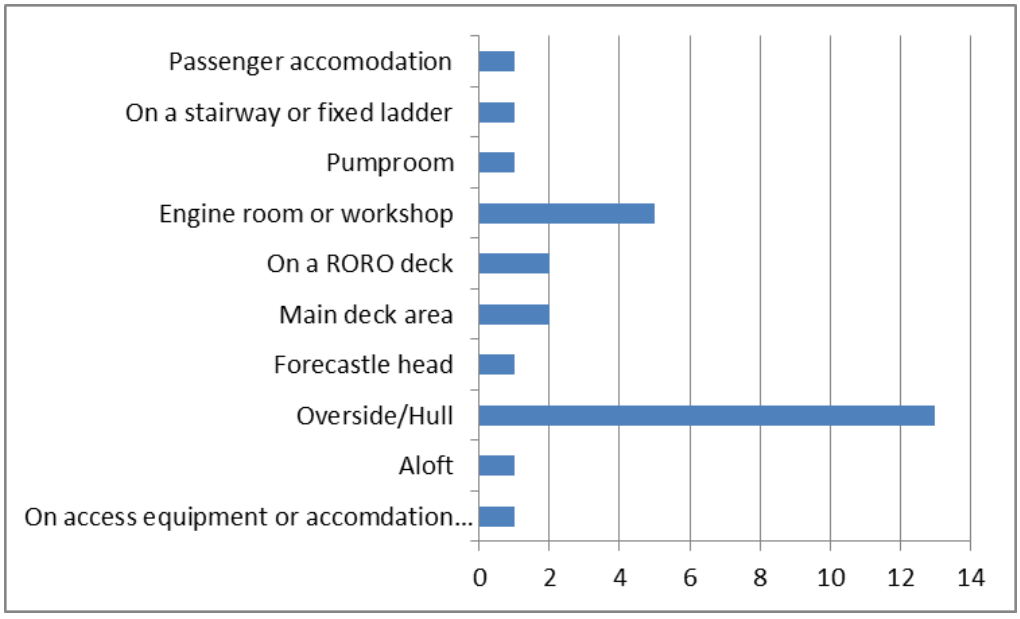
9.2 Incident Chart Representations



2017 Incident Activities



2017 Incident Types

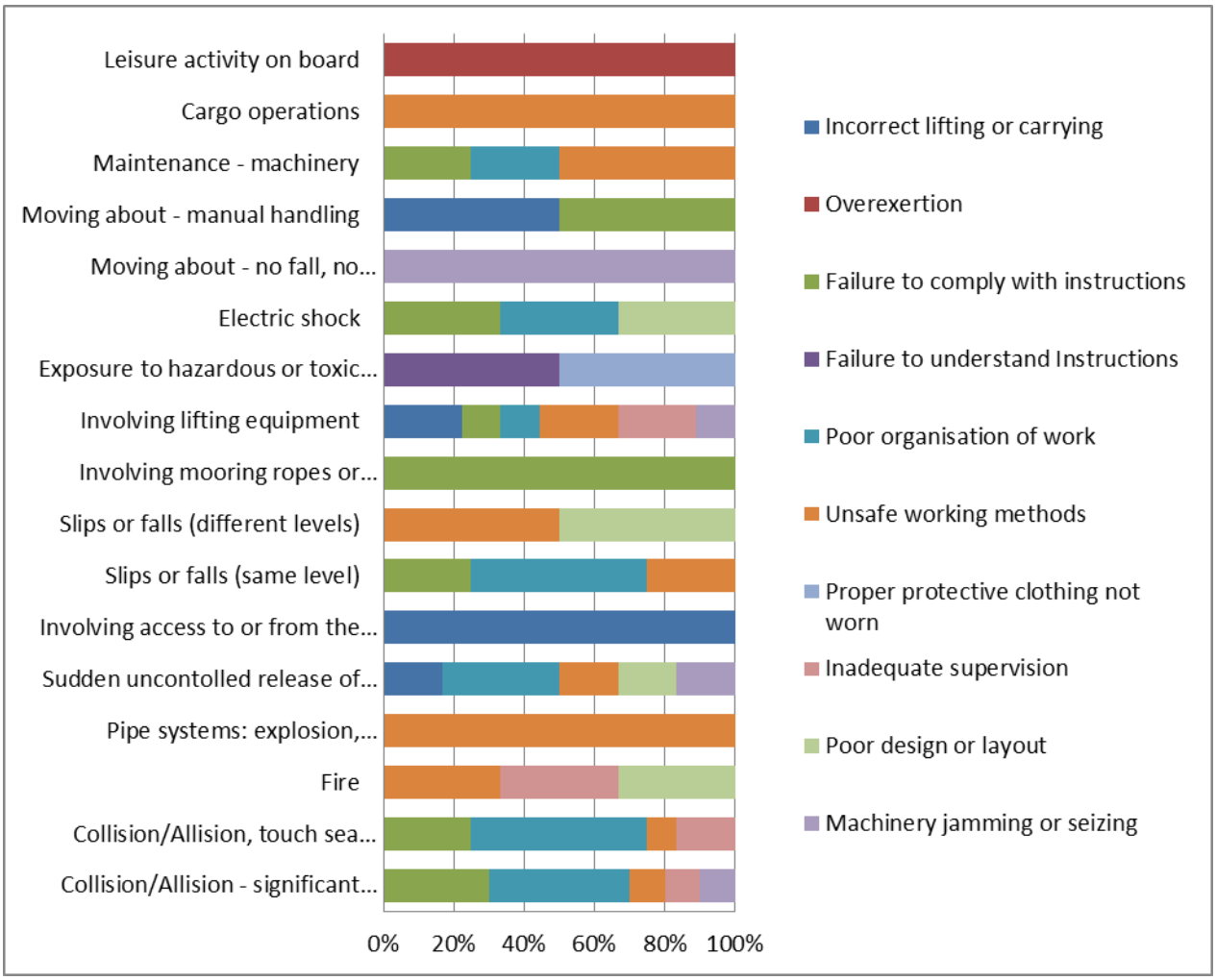


2017 Incident Places

Chapter 10 – Breakdown of Occurrences in 2017 by Cause

The following charts represent a breakdown of all the occurrences by cause divided into several categories represented on the ARF Form. Determination of the various causes is following an investigation into the occurrence by the ship's staff, company investigators or an external investigating body and indicated on the ARF forms submitted. **It is important to remember that an occurrence may be the result of several causes across different categories**.

10.1 Occurrences by Working Method



The chart above shows that the predominant working method cause has been attributed to "poor organisation of work" (in 17 cases) followed closely by "failure to comply with instructions" (in 12 cases) and "unsafe working methods" (in 12 cases).

In 2017 vessel collisions, allisions, groundings, or stranding (damage or no damage incurred) were the predominant cases were poor organisation of work was a significant causal factor.

Seafarers should adequately plan their work including appropriate safety precautions. This highlights the importance of effective risk assessment. Taking shortcuts in safety in order to get the job done more quickly must be avoided. 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. Where "poor organisation of work" led to a collision or grounding this highlights the need for effective bridge team management.

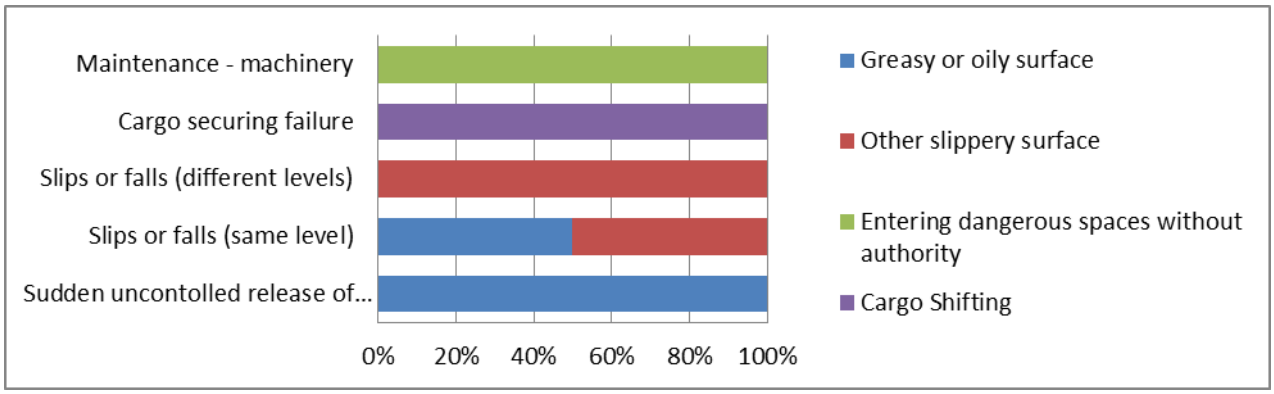
10.2 Occurrences by Ship Access Equipment

There were no reported incidents, accident or casualties in 2017 where the ship's access equipment was a causal factor.

Any person seeking to board vessel is required by the regulations to use the means of access provided. The master is required to ensure that a safe means of access is provided to the vessel at all times and ensure it is maintained in a safe condition. Everyone intending to board or leave the vessel should be strongly encouraged by the ship's staff to use the safe means of access provided even if a shortcut appears to be an easier or shorter journey.

Any person seeking to board or disembark the vessel from a launch boat are strongly encouraged to wear appropriate lifejackets and only consider the transfer under suitable conditions taking into account the weather and vessel motion.

10.3 Occurrences by Movement about the Ship



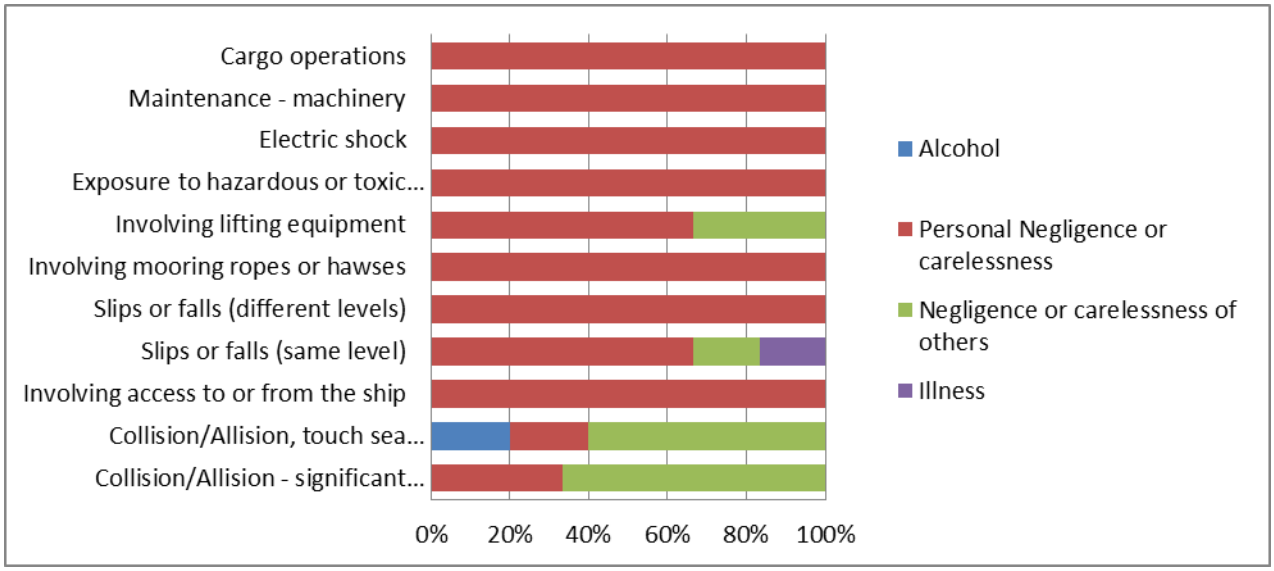
The chart above shows an approximate even split over a variety of causes associated with moving about the vessel.

Seafarers should also take note of warning signs highlighting risks and dangers. Slips and falls on slippery surfaces was the predominant cause in 2017. Seafarers should be aware of any associated risks of slipping when moving about the ship under various living and working conditions.

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.

Injuries sustained through unprotected openings can be avoided by effective barriers, signs and communication.

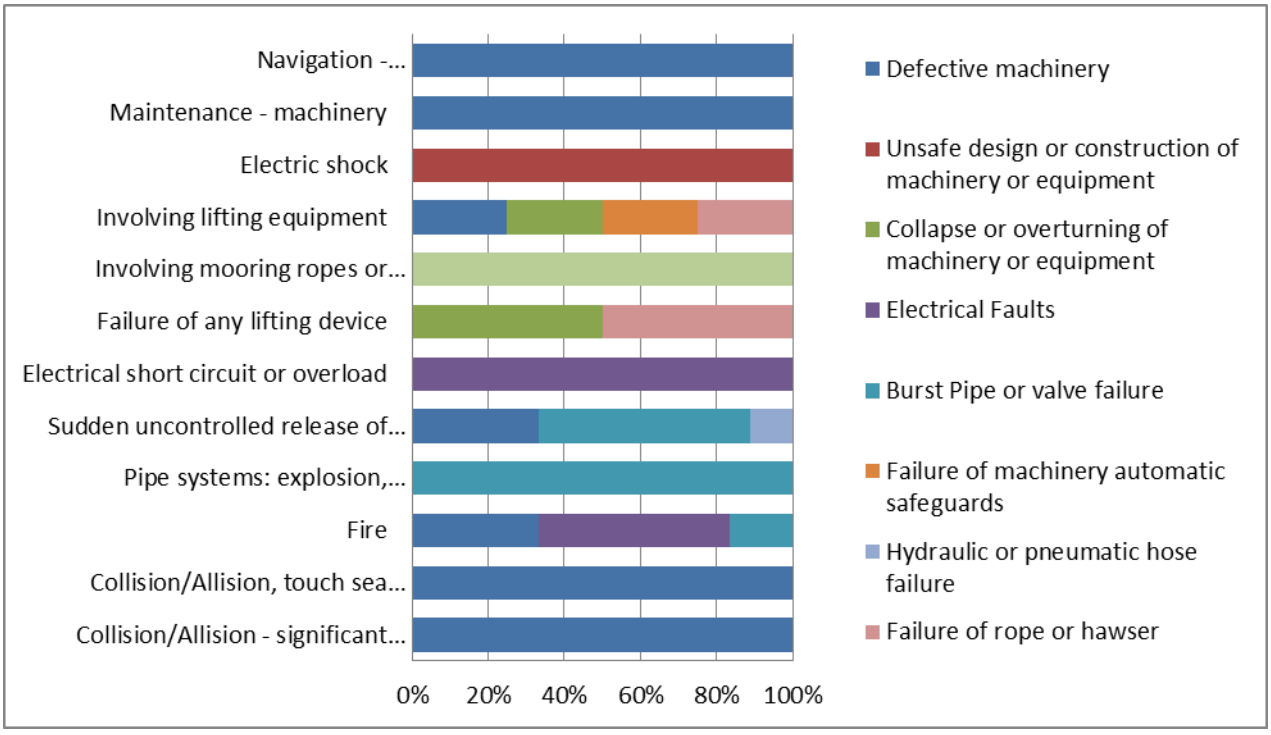
10.4 Occurrences by Human Factor



The chart above shows the predominant human factor cause has been attributed to "personal negligence or carelessness" (19 cases in 2017). In 2017 vessel collisions, allisions, groundings, or stranding (damage or no damage incurred) and slips/falls were the predominant cases were the 'human factor' was a significant causal 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 crew member to be made aware of any associated risks and for crew members to pay attention to what they are doing.

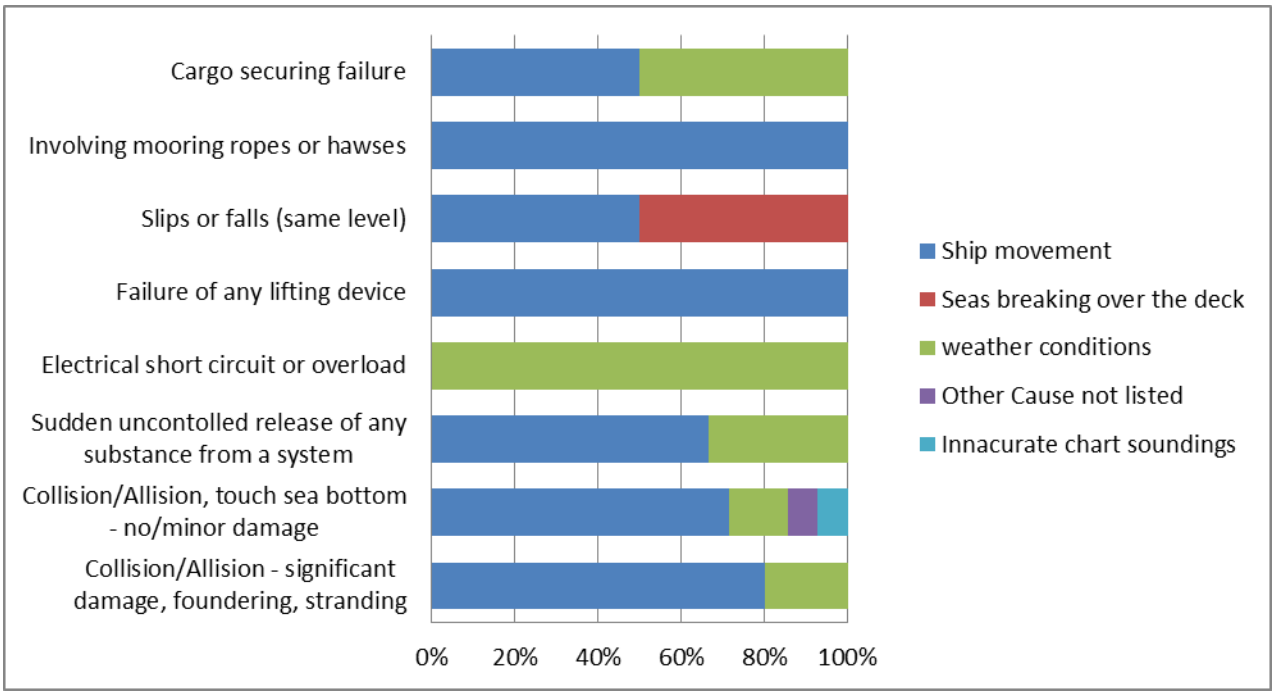
10.5 Occurrences by Mechanical & Other Equipment



The chart above shows a variety of causes associated with mechanical and other equipment. "Defective machinery" (13 cases in 2017) followed by "burst pipe or valve failure" (8 cases in 2017) was the predominant cause in 2017. In 2017 "sudden uncontrolled release of any substance from a system" was the predominant case and "defective machinery" was the significant causal factor.

Equipment failure stresses the need for effective inspection and maintenance to ensure they are in good condition and fit for purpose.

10.6 Occurrences by Other Miscellaneous Causes



The chart above shows the predominant 'other miscellaneous cause' has been attributed to "ship movement" (21 cases in 2017). In 2017 "vessel collisions, allisions, groundings, or stranding (damage or no damage incurred)" was the predominant case were mechanical or other equipment failure was the significant causal factor.

Seafarers should take into consideration the movement of the vessel in the prevailing sea and weather conditions when planning and carrying out work activities. If the movement of the vessel is too great the work activity should not be attempted or consideration should be given to manoeuvring the vessel to reduce the vessel's movement to an acceptable level.

Chapter 11 – Conclusions

2017 saw more ARF reports submitted with approximately the same number of casualty cases compared to the previous year but also saw a rise in accident cases. (Chapter 3.1)

The most prevalent cases in 2017 were cases involving collision/grounding/stranding (damage or no damage) followed by sudden uncontrolled release of a substance from a system then fire on board. (Chapter 4.1)

The place where most occurrences happened was over-side/hull followed by the engine room/workshop. The place where most minor injuries occurred was on the main deck. The place where most serious injuries occurred was in the engine room/workshop. (Chapter 4.2 and 4.3)

Slips or falls on the same/different levels and access to the ship caused the most minor and serious injuries. Moving about the ship also lead to the most minor and serious injuries being incurred. (Chapter 4.4 and 4.5)

Most injuries occurred whilst the ship was making way in open sea. Injury to the head and hands were the most common. The most common injury involved minor fractures. (Chapter 4, 5.3)

Many of the ARFs received show that a large proportion of occurrences attributed to poor organisation of work (working method), defective machinery (mechanical factors), slippery surfaces (movement about the ship), personal negligence and carelessness remains prevalent (human factor) and ship movement (other factors). (Section 10)

It is the responsibility of the master or skipper to ensure that all activities carried out on board are conducted safely, with an acceptable level of risk. Where vessels have technical managers ashore, then the technical managers should ensure that the master or skipper is given the necessary support and resources on board to determine the risk and to reduce the risk to an acceptable level.

Seafarers should be aware of their own abilities and limitations and the limitations of the equipment they use. Seafarers should not attempt any work activity where they perceive the risks to be unacceptable. If the vessel has an appointed safety officer then he or she should be informed and the circumstances investigated.

Should unacceptable risks present themselves risk assessments are designed to analyse the current risk and aid risk mitigation to an acceptable level. It is important to remember that if the risks cannot be reduced to an acceptable level then the work activity should not go ahead. Should this occur, then specialist advice should be sought.

Seafarers should not take any unnecessary risks with their safety in order to get the job done or take unsafe shortcuts in order to get the job done more quickly. Safety on board a vessel should be everyone's concern. Seafarers should be able to observe and monitor their own safety effectively and where possible the safety of those around them.

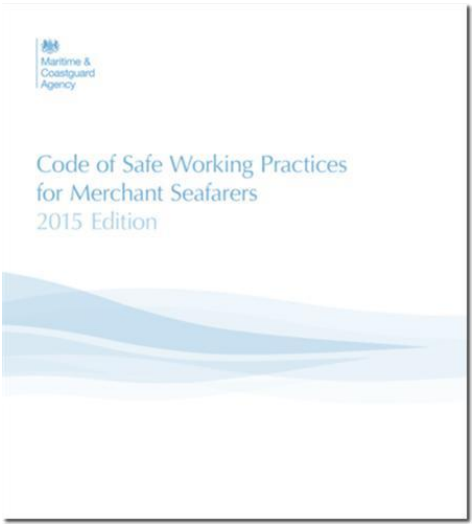
Where a vessel has established safety procedures, it is important the procedures are implemented properly. Appropriate personal protective equipment (PPE) should always be worn and used correctly. Any dedicated safety equipment should be regularly maintained and inspected before use.

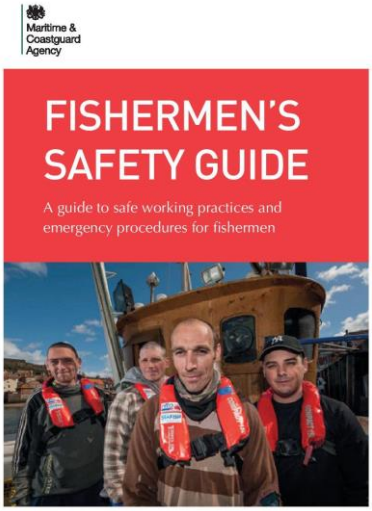
The Code of Safe Working Practices for Merchant Seafarers and Fishermen's Safety Guide are valuable references depending on the ship type for most work activities conducted on board and should be consulted frequently.

Risk assessments, Permits to Work and plain old common sense are all important factors in reducing the level of risk posed by work activities. 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 – www.iomshipregistry.com
- 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.

The information in this report can be provided in large print or on audio tape, on request.

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