

## Marine Safety Forum – Information Note 15-02



### Annual Summary of 2014 Marine Safety Reports

For the purposes of this report, the following codes are used:

The categories are as follows:

- 1 Collision (contact between vessels moored or underway).
- 2 Contact (contact between vessels and fixed objects and structures).
- 3 Grounding.
- 4 Near miss or misc.
- 5 Fire, explosion, flooding.
- 6 Pollution.
- 7 Person overboard.
- 8 Other on board incident.
- 9 Machinery failure, mechanically disabled or hull failure.
- 10 Capsized, sinking or listing.
- 11 Accidents resulting in injury, or worse, to Board's staff or port users whilst vessels are underway within the waters of the port

**Table 1, Summary of Incident Types 2014**

| Incident Type |  | Count of Incidents |
|---------------|--|--------------------|
| 1             | Collision                              | 6                  |
| 2             | Contact                                | 4                  |
| 3             | Grounding                              | 1                  |
| 4             | Near Miss or Misc.                     | 11                 |
| 7             | Person Overboard                       | 1                  |
| 8             | Other on board incident                | 4                  |
| 11            | Accidents resulting in injury or worse | 1                  |
| <b>Total</b>  |  | <b>28</b>          |

**Table 2, Summary of Incident Causes 2014**

| Incident Cause              | Count of Incidents |
|-----------------------------|--------------------|
| Human Factors (On Board)    | 19                 |
| Human Factors (Third Party) | 2                  |
| Machinery/Equipment failure | 5                  |
| Other                       | 2                  |
| <b>Total</b>                | <b>28</b>          |

This equates to 1.10 incidents per 1000 vessel movements.

Notes

Total movements is the sum of arrivals, departures, shifts and non-statutory movements between the date of the December Board meeting in the reported year and the last Board meeting of the previous reported year. In 2014 this amounted to 25,565 movements.

**Table 3, Incident Details**

| Code | Incident ID | Incident Description  | Cause (If known)   |
|------|-------------|---|--|
| 2    | 01-14       | An AHTS berthed port side to at a river berth suffered parting of her forward mooring lines as another OSV passed up river. The AHTS then swung to starboard under the influence of the river.  | Machinery/Equipment failure.<br><br>The mooring ropes appeared to be in good condition but had suffered UV degradation while the vessel had been operating in the tropics.   |
| 4    | 02-14       | As an OSV, with a pilot embarked, was manoeuvring towards her berth the Master changed the conning station from forward to aft. The azimuth thrusters stopped responding to commands.<br><br>Control was regained when conning was transferred back to forward. The conning changed to aft successfully after all controls had been zeroed. | Human Factors (On Board).<br><br>The controls had not been zeroed properly prior to change of conning position. A circular with new change over procedures has been sent to the fleet.   |
| 4    | 03-14       | An OSV was proceeding up river to berth at a supply base, passing a tanker which was berthed port side to at a river berth.<br><br>After the OSV cleared the tanker, the tanker master of contacted VTS to advise that one headline had parted and the other had rendered causing the bow to swing off the berth.                           | Human Factors (On Board).<br><br>The speed of the OSV was not found to be excessive. A subsequent report received from the master of the tanker identified shortcomings in the way the vessel was moored and the type of mooring lines used. In order to prevent a reoccurrence, additional mooring lines will be deployed in future and an officer will be on standby on the bridge when other vessels are passing.   |
|      | 04-14       | An OSV with a Pilot embarked, was being assisted by a tug to move 'dead ship' to a nearby quay.<br><br>During the manoeuvre the tug at the stern of the OSV ran out of space and collided with the ship and the cross berth.  | Human Factors (On Board).<br><br>Three factors contributed to the incident: a lack of situational awareness on behalf of the tug master and the pilot, weather conditions having a greater than anticipated effect on the vessel due to the high superstructure and helideck, poor communication from the berthing master.<br><br>A checklist 'Barge Operations/Vessels without Power' which had been in preparation due to changes made to the Port Marine Safety Code will now be used prior to these manoeuvres taking place. |

| Code | Incident ID | Incident Description   | Cause (If known)   |
|------|-------------|--|--|
| 1    | 05-14       | <p>An AHTS was manoeuvring, with a pilot embarked, from the upper dock between other moored ships. As the vessel was about <math>\frac{3}{4}</math> of the ship's length out from the other ships, the master changed the conning position from aft to forward. The pilot noticed that the bow was swinging to port under the action of the bow thruster, which was unresponsive to control inputs.</p> <p>The bow thruster was eventually stopped from the engine room local control.</p>   | <p>Machinery/Equipment failure.</p> <p>A subsequent report from the master on indicated that a fault had been identified in a control valve, which was replaced and all tests had proved satisfactory.</p>   |
| 11   | 06-14       | <p>As the pilot boarded an ERRV he slipped and fell on the deck. The pilot carried on work, but subsequently was signed off due to back pain.</p>  | <p>Human Factors (On Board).</p> <p>The pilot boarding arrangements were not in compliance with IMO standards and this was the cause of the fall</p>   |
| 1    | 07-14       | <p>The OSV with a pilot embarked, was manoeuvring to berth at a supply base.</p> <p>During the passage from the fairway buoy the pilot had noticed that the master did not seem to be using the vessel thrusters in the optimum way. As the ship was going alongside the master applied too much astern power and, while this was quickly corrected, the stern of the vessel made contact with the forward mooring lines of another OSV berthed at the next berth.</p> <p>The pilot, with the permission of the master, took the controls and completed the manoeuvre.</p> | <p>Human Factors (On Board).</p> <p>The master was experienced and had worked with azimuth propelled vessels in the past, but not one with the weight and characteristics of this particular vessel.</p>   |
| 4    | 08-14       | <p>The OSV with a pilot embarked, was manoeuvring to berth at supply base. The conning station was changed from forward to aft and it was realised that rotational control for the port azimuth thruster had been lost.</p> <p>The vessel was safely berthed utilising the remaining thrusters.</p>  | <p>Human Factors (On Board).</p> <p>A subsequent report received from the master indicated that small adjustments had been made to the system. There seemed to be a suggestion that unfamiliarity with the procedure for command transfer may have been a contributory factor.</p> |
| 8    | 09-14       | <p>The pilot cutter was approaching a general cargo vessel inbound. The weather conditions had recently changed and it was decided to board the pilot on the starboard side.</p> <p>As the cutter went alongside, a combination of weather and interaction caused the cutter to roll under the fendering of the cargo vessel and the after hand rails of the cutter were damaged.</p>  | <p>Other (Weather).</p> <p>Pilot Cutter Coxswains have been reminded to be more vigilant when approaching this particular vessel because the boarding position is further aft than normal and the heavy belted fendering poses unique challenges.</p>                              |

| Code | Incident ID | Incident Description   | Cause (If known)  |
|------|-------------|--|---|
| 3    | 10-14       | <p>The pilot cutter was inbound having boarded a pilot onto an OSV. Visibility deteriorated to just a few metres and the cutter coxswain requested assistance from VTS to enter the Harbour.</p> <p>With guidance from VTS the cutter entered the harbour and advised that assistance was no longer required. A few minutes later VTS was advised that the cutter had run aground between the South Breakwater and the Old South Breakwater.</p> | <p>Human Factors (On Board).</p> <p>The subsequent investigation found that the coxswain had become disorientated and lost situational awareness in the fog, despite his navigational equipment being in working order.</p>   |
| 1    | 11-14       | <p>An OSV was manoeuvring to enter the River Dee to berth at a supply base, the master applied full bow thrust to starboard.</p> <p>The vessel sheered to starboard and its port quarter made heavy contact with another OSV berthed at the same supply base.</p>  | <p>Human Factors (On Board).</p> <p>The manoeuvring mode that the vessel was in automatically caused the main thrusters to rotate, creating a rapid swing to starboard which the master was unable to control before making contact with the OSV.</p> <p>A comprehensive report was received from the vessel owners which found that human error was the root cause of the incident. The ship owners have arranged azimuth manoeuvring training for their masters utilising the AHB simulator facility.</p> |
| 4    | 12-14       | <p>As an OSV was approaching the breakwaters with a pilot embarked, the starboard anchor began to run out.</p> <p>The vessel was stopped about 200m from the South breakwater after approximately 5 shackles (135m) of cable had run out. The anchor and cable were recovered and the ship berthed without further incident.</p>   | <p>Machinery/equipment failure.</p> <p>The report identified that an adjustment screw on the windlass brake had wound itself back over time with the result that the brake could not be fully applied.</p> <p>The master recognised that this should have been discovered during monthly maintenance and it was included in the incident report feedback to the fleet.</p>  |
| 4    | 13-14       | <p>As a pilot was about to disembark from an OSV, transiting the navigation channel, the ship began to sheer to starboard.</p> <p>The pilot called for the master to correct the swing but nothing appeared to happen. The pilot took the controls and ordered an anchor to be dropped. The vessel was stopped and after the anchor was recovered the vessel departed without further incident.</p>  | <p>Human Factors (On Board).</p> <p>The master admitted that although he was experienced in the use of azimuth propulsion systems, he was unfamiliar with the controls of that vessel.</p> <p>The Harbour Master discussed this unsatisfactory situation with the ship owner's local representative. It was agreed that an additional experienced master would be appointed to the ship and that simulator training would be undertaken.</p>  |

| Code | Incident ID | Incident Description  | Cause (If known)  |
|------|-------------|---|---|
| 2    | 14-14       | <p>A cargo vessel with a pilot embarked, was manoeuvring with the assistance of two tugs to go alongside.</p> <p>The pilot suddenly realised that the bow was swinging too fast to port and despite the use of rudder and engines the vessel made heavy contact with quay.</p>                                  | <p>Human Factors (Third Party).</p> <p>The incident was discussed with both the ships master and the pilot. The pilot agreed that he had become overly concentrated on the aft tug and had been momentarily distracted from the overall situation and that this had caused the incident.</p>  |
| 2    | 15-14       | <p>An ERRV had entered the port in reduced visibility with a pilot embarked. The visibility then reduced further necessitating a change to the planned berth.</p> <p>Controls were being switched from the starboard side to the port side when the stern of the vessel made light contact with Pocrá Base.</p> | <p>Human Factors (On Board).</p> <p>The incident was discussed with the master and pilot. The severely restricted visibility had caused the passage plan to be changed and a move to the port side control station was justified, given the bridge layout and the decision to berth port side to the quay.</p> <p>Although all the controls were set to zero during the short changeover, it was not recognised that the vessel was moving slowly astern and contact was made.</p> <p>The decision to change from berthing starboard side alongside to port side meant that the deck crew were involved working with the rescue boats and were unable to keep a lookout, which may have prevented the incident from occurring. Damage to the vessel was slight.</p> |
| 1    | 16-14       | <p>An ERRV with a pilot embarked, was manoeuvring to depart a berth, the vessel made light contact with an OSV berthed close by.</p>  | <p>Human Factors (Third Party)/Human Factors (On Board).</p> <p>The incident was discussed with the pilot. The ERRV had very little space between the vessel ahead and the vessels astern. The pilot could have risk assessed the manoeuvre to include a request to move the vessel ahead to give more sea room.</p> <p>Other contributory factors to the incident were that the master was new to the vessel and unfamiliar with the controls and initially a lack of confidence that the bow thruster was fully operational. Damage to the vessels was slight.</p>  |
| 7    | 17-14       | <p>A crew member from an ERRV fell into the harbour whilst transferring from one of the ship's Fast Rescue Craft (FRC).</p>   | <p>Human Factors (On Board).</p> <p>The crewman, whose lifejacket immediately inflated was quickly brought back on board the vessel by his colleagues and was uninjured. It was evident that the incident had occurred because company and vessel procedure for this activity had not been followed.</p>  |

| Code | Incident ID | Incident Description  | Cause (If known)  |
|------|-------------|---|---|
| 8    | 18-14       | <p>An OSV was securing alongside at river berth when a mooring rope was lost overboard.</p> <p>It was estimated that about 80m of rope, some of which had entered the vessels port azimuth propulsion unit, was in the water.</p> | <p>Human Factors (On Board).</p> <p>The after deck crew had sent two mooring ropes ashore at the same time, in direct contravention of the master's stated procedures.</p> <p>The master called a safety meeting with the ship's crew and made it clear that a failure to observe his instructions was the cause of the incident. The master will also recommend to the vessel owners that the mooring procedure in their safety management system be reviewed.</p>     |
| 4    | 19-14       | <p>While an ERRV was transiting the Tidal Harbour, the master reported to VTS that he had lost steering. With assistance from the pilot cutter the vessel berthed at a close by vacant berth without incident.</p>                | <p>Machinery/Equipment failure.</p> <p>Shortly afterward the vessel reported that control had been regained and proceeded to her intended berth. Steering had been regained while alongside by switching to a different mode of operation.</p> <p>After berthing electricians had attended the vessel. No fault could be found and the condition could not be replicated.</p>   |
| 1    | 20-14       | <p>As an ERRV with a pilot embarked was manoeuvring towards the quay, the vessel made light contact with an OSV berthed at an adjacent berth. Damage to both vessels was superficial.</p>   | <p>Human Factors (On Board).</p> <p>As the ERRV was moving into her berth the ship began to swing slightly to starboard. The pilot called for ahead pitch on the starboard engine to correct this.</p> <p>The master, on the after controls, applied ahead pitch on the port engine thus exacerbating the swing. The master almost immediately recognised his error and corrected it, but it was too late to prevent light contact being made with the OSV</p>          |
| 4    | 21-14       | <p>As an OSV with a pilot embarked, was departing from her berth, the vessel's main engines became uncontrollable with propeller pitch being applied without input from the bridge.</p>   | <p>Machinery/Equipment failure.</p> <p>The main engines were stopped and the starboard anchor was let go. The vessel was then held in position off the pilot jetty using side thrusters.</p> <p>The main engines were restarted and the vessel sailed without further incident.</p> <p>A report subsequently received from the vessel master found that a faulty solenoid valve had been the cause of the control failure and that it had been replaced and tested.</p> |

| Code | Incident ID | Incident Description  | Cause (If known)  |
|------|-------------|---|---|
| 4    | 22-14       | As an OSV was manoeuvring off a supply base, with a pilot embarked, control of the main propulsion systems was lost as a change of conning position was being made.   | <p>Human Factors (On Board).</p> <p>The master was able to operate a secondary system which restored control within 2 minutes and the vessel berthed without further incident.</p> <p>The second officer had been instructed to carry out planned maintenance of the control systems after the ship had been secured alongside. The officer however, decided to carry out this work during the port entry thus disabling the changeover system.</p> |
| 2    | 23-14       | <p>As an ERRV with a pilot embarked was manoeuvring to go alongside the vessel suffered a total loss of electrical power.</p> <p>The power loss caused the controllable pitch propellers to default to astern. Emergency stops were operated but the ship's stern made light contact with a jetty.</p>  | <p>Other.</p> <p>With assistance from the pilot cutter the vessel was made fast alongside. It was established that the generator failed because its cooling water intakes had become blocked by debris (leaves) picked up from the water. No damage was caused to the vessel or jetty.</p>  |
| 4    | 24-14       | A Tanker assisted by a tug and with a pilot embarked, was swinging in the Tidal Harbour. The towline became caught under the stern of the tanker and when it pulled free the shock of its sudden movement caused it to jump out of the towing hook.   | <p>Human factors on board the tug</p> <p>The towline was quickly reconnected and the operation to proceed to her berth continued.</p>   |
| 8    | 25-14       | A Tanker had berthed but as the ship let go the towline to the tug the line was cut by the still turning propeller of the ship.   | <p>Human Factors (On Board).</p> <p>The report from the tug master indicates that the towline was dropped from the ship in an uncontrolled manner which allowed the slack line to enter the propeller of the ship before the tug crew could recover it.</p>   |
| 8    | 26-14       | <p>A Tanker was outward bound in the Navigation Channel, having just disembarked a pilot. As the vessel entered the rougher seas east of the north Breakwater it was noticed that the starboard anchor was running out.</p> <p>Shortly afterwards the master reported that the onboard end of the anchor cable had been released and the ship proceeded to sea.</p> | <p>Human Factors (On Board).</p> <p>A report was received from the vessel owners which found that the root cause of the incident was the condition of the anchor brake mechanism, in that it was not able to be tightened fully.</p> <p>The company also agreed that due to the weather conditions at the time, the decision to slip the cable rather than try to secure the cable was the correct one.</p>   |

| Code | Incident ID | Incident Description   | Cause (If known)   |
|------|-------------|--|--|
| 4    | 27-14       | An OSV with a pilot embarked, was bound for a supply base. The vessel was swung in the turning basin but control could not be changed from the forward to aft stations, despite making two attempts.                         | Human Factors (On Board).<br><br>The vessel was manoeuvred using the forward controls to a safe area in the Tidal Harbour whilst the problem was investigated. The problem was quickly identified within the electronic command system and was a result of earlier maintenance work. |
| 4    | 28-14       | As an OSV with a pilot embarked, was departing from a supply base, the vessel bridge team had difficulty manoeuvring the ship effectively. A collision was narrowly avoided when the pilot intervened and took the controls. | Human Factors (On Board).<br><br>It was established that the master was a temporary relief master; inexperienced on this vessel and he was replaced at the vessel's next port call.  |

Figure 1, Incident Types 2014

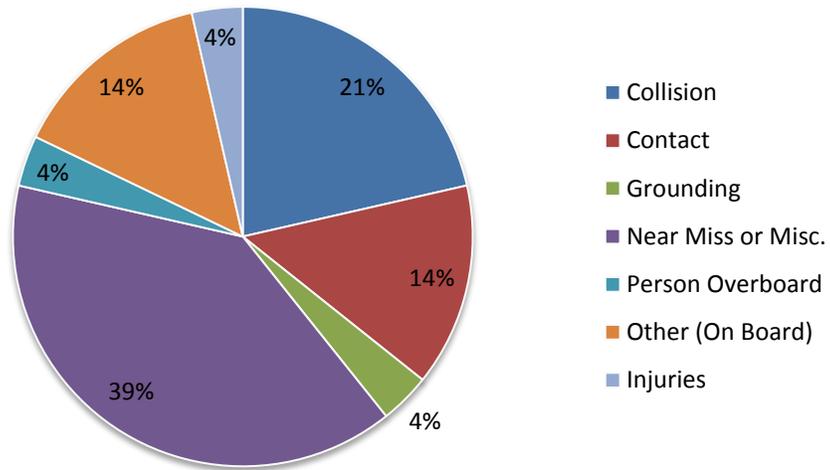


Figure 2, Incident Causes 2014

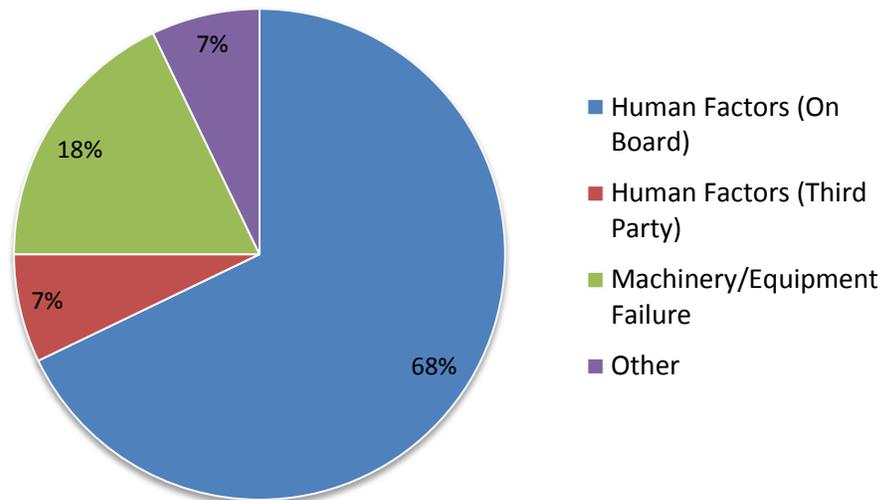


Figure 3, Incident Types since 2013

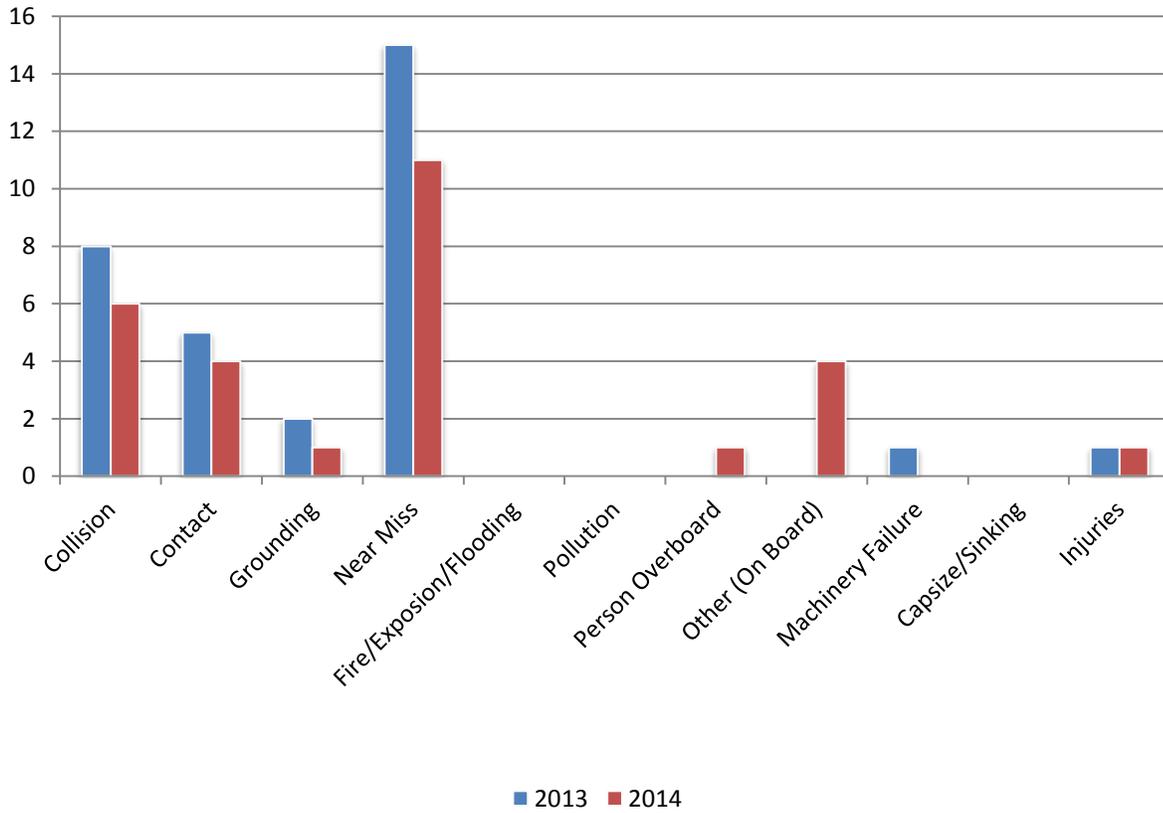


Figure 4, Incidents per 1000 Vessel Movements since 2013

