REPORT INTO THE INCIDENT
ON BOARD THE
‘MV ROSE OF ARAN’
AT
INIS OIRR PIER
ON
6th JUNE 2016

REPORT NO. MCIB/260
(No.8 OF 2017)
The Marine Casualty Investigation Board (MCIB) examines and investigates all types of marine casualties to, or on board, Irish registered vessels worldwide and other vessels in Irish territorial waters and inland waterways.

The MCIB objective in investigating a marine casualty is to determine its circumstances and its causes with a view to making recommendations for the avoidance of similar marine casualties in the future, thereby improving the safety of life at sea.

The MCIB is a non-prosecutorial body. We do not enforce laws or carry out prosecutions. It is not the purpose of an investigation carried out by the MCIB to apportion blame or fault.

The legislative framework for the operation of the MCIB, the reporting and investigating of marine casualties and the powers of MCIB investigators is set out in The Merchant Shipping (Investigation of Marine Casualties) Act, 2000.

In carrying out its functions the MCIB complies with the provisions of the International Maritime Organisation’s Casualty Investigation Code and EU Directive 2009/18/EC governing the investigation of accidents in the maritime transport sector.
REPORT INTO THE INCIDENT  
ON BOARD THE  
‘MV ROSE OF ARAN’  
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The Marine Casualty Investigation Board was established on the 25th March, 2003 under the Merchant Shipping (Investigation of Marine Casualties) Act, 2000.

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Glossary of Abbreviations and Acronyms

GRT - Gross Registered Tonnage
IMO - International Maritime Organisation
MSO - Marine Survey Office
DTTAS - Department of Transport Tourism & Sport
MRSC - Marine Rescue Sub Centre
HW - High Water
LW - Low Water
LOA - Length Overall
m - metre
ISM - International Safety Management
SMS - Safety Management System
UTC - Universal Co-ordinated Time
DSM - Domestic Safety Management, EU Regulation 336 of 2006

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1. SUMMARY

On Monday the 6th June 2016 the Passenger ship ‘MV Rose of Aran’ was berthed at the Pier at Inis Oírr Island to transfer passengers. Whilst alongside and when passengers were disembarking from the vessel over the gangway the vessel drifted off the berth and the end of the gangway fell off the pier. The gangway tipped downwards towards the water. There were two passengers on the gangway at the time and both fell into the water between the vessel and the pier. Bystanders assisted both passengers on to the pier. The two passengers received medical treatment on the island and were transferred back to the mainland later in the day.

Note all times are local time = UTC + 1
2. FACTUAL INFORMATION

2.1. The vessel (see Appendix 7.1 Photograph No. 1)

   Name: ‘ROSE OF ARAN’.
   Flag: Ireland.
   IMO No: 7527916.
   LOA: 19.97 metres (m).
   Beam: 6.43 m.
   Gross Tonnage: 113 tonnes (t).
   Deadweight: 12 t.
   Year Built: 1976.
   Type of Vessel: Passenger Ship.
   Number of Passengers: 96.
   Number of Crew: 4.
   Registered Owner: Liscannor Ferry Company Ltd.

2.2. Voyage Particulars

   6th June 2016: 11.00 hrs Vessel departed Doolin Pier Co. Clare.
   6th June 2016: 11.45 hrs Vessel arrived Inis Oirr Pier Co. Galway.

2.3. Marine Incident Information

   Type: Persons in water from vessel.
   Date: 6th June 2016.
   Time: 11.50 hrs (approximately).
   Position: Inis Oirr Pier, Co Galway
             (Lat. 53°04.11N Long 009°31.36W).
   Ship Operation: Vessel alongside quay.
   Location: Ireland, West Coast.
FACTUAL INFORMATION Cont.

Human factors: Not following safe practices/procedures.

Physical factors: Configuration of mooring arrangements.

Consequences: End of gangway disconnects from quay, two persons tipped into water.


Cloudy & Clear.

Sea state slight - Low swell (see Appendix 7.2 Met Éireann Weather Report).

Tide at Galway: 6th June HW 06.38 hrs 5.2 m.
(Source Admiralty TT) LW 12.35 hrs 0.5 m.
HW 18.58 hrs 5.4 m.

2.4. Shore Authority Involvement

Shore authority involvement was provided by MRSC Valentia who tasked a lifeboat and helicopter. In the event neither were required and were stood down (see Appendix 7.3 Situation Report from MRSC Valentia).
3. NARRATIVE

3.1. Events before the incident

3.1.1. There are two ferry companies, each operating four vessels, providing services from Doolin Pier, Co. Clare to the Aran Islands and sightseeing cruises along the Cliffs of Moher.

3.1.2. The ‘MV Rose of Aran’ provides ferry services between Doolin Pier, County Clare and the Aran Islands. The vessel had a current passenger ship licence for 96 passengers and four crew members issued by the Marine Survey Office (MSO) to operate the service.

3.1.3. On 6th June 2016, the ‘MV Rose of Aran’ departed Doolin Pier for Inis Oírr at approximately 11.00 hrs with a full complement of passengers and four crew members (see Appendix 7.4 Schedule of sailings). It arrived at Inis Oírr Pier at approximately 11.45 hrs. Two other ferries of similar passenger carrying capacity were also approaching the pier at this time. The tide was almost one hour before low water springs.

3.1.4. The vessel berthed on the outer wall of the pier on Inis Oírr (see Appendix 7.5 Plan of Inis Oírr Harbour). Due to the height of the pier above the deck of the ferry, the vessel was berthed with two head lines and a stern line. The normal back spring from the shoulder could not be positioned because it obstructed the deployment of the gangway at low tides.

3.1.5. The lines were put ashore and secured to the bollards on the quay. The forward lines were secured by a crew member who had climbed up a ladder on to the quay, the stern line was secured by a bystander on the quay and not checked by the crew. The engines were put astern to keep tension on the forward lines and maintain position on the berth.

3.1.6. The gangway was put ashore on to the pier, it was secured on board with ropes on the vessel but just rested on the quay wall (see Appendix 7.1 Photograph No. 2 for arrangements at low tide). Passengers proceeded to disembark at about 11.55 hrs.

3.1.7. A second ferry came alongside the pier astern of the ‘MV Rose of Aran’ and berthed in a similar manner, with the engines going astern to maintain position on the quay. The bow line of the second ferry was placed on the same bollard as the stern line for the ‘MV Rose of Aran’. The staghorn type bollards are used at Inis Oírr, such bollards are suited to locations where there is a large range of tide. Staghorn bollards allow two ropes to be placed on the bollard without interfering with each other (see Appendix 7.1 Photograph No. 3). There is a knuckle to prevent the rope sliding off when the vessel is higher than the jetty.
3.1.8. It was a bank holiday Monday and the pier was crowded with over 500 people waiting to get on to the incoming ferries. The crowd was close to the edge of the pier and obscured the view of the bollards from the wheel house of the ‘MV Rose of Aran’.

3.2. The Incident

3.2.1. About 25 passengers had disembarked from the ‘MV Rose of Aran’ when the stern of the vessel moved away from the pier and a gap opened up between the pier and the vessel. The Master observed that the stern line had become detached from the bollard and was floating in the water. A crewmember was dispatched to bring it aboard while the Master attempted to bring the vessel alongside with the engines. He was unable to do this, because the wash from the engines from the vessel astern pushed the stern of the ‘MV Rose of Aran’ further off the pier.

3.2.2. The crewmember at the gangway stopped passengers disembarking, and called to the passengers on the gangway to get ashore quickly. Two people close to the quay jumped ashore, but a man in the middle of the gangway stopped and froze. There was also a woman on the gangway behind him. The end of the gangway on the pier slipped off the pier and fell downwards towards the water, turning sideways. The woman fell into the water and started to swim towards a ladder on the quay wall. The man slipped down the gangway and held on to the ropes at the end. One crewmember and some passengers held on to the gangway to prevent it falling into the water on top of the two people (see Appendix 7.1 Photograph No.4).

3.2.3. A 999 call from an unknown number was made to the Coast Guard timed at 12.04 hrs informing them of two persons in the water at Inis Oírr Pier (see Appendix 7.3 Situation Report).

3.2.4. The woman swam to a vertical ladder on the quay and tried to climb up, but the bottom of the ladder was encrusted with marine growth and she could not get a firm step on the ladder. A man on the quay climbed down the ladder and assisted her to the top.

3.2.5. The man hanging on to the gangway could not swim. The Master managed to release the shore lines and manoeuvred the vessel into the harbour. A passenger on the vessel threw a life-ring and the man let go of the gangway. Another man on the quay entered the water and assisted him to the rocky shore as the access to the steps was not possible due to the low tide (see Appendix 7.5 Plan of Inis Oírr Harbour).

3.2.6. When the two casualties were brought ashore they were initially attended to by bystanders on the pier.
3.3. Events after the incident

3.3.1. The ‘MV Rose of Aran’ was manoeuvred back alongside the berth and disembarked the remaining passengers. The Master dispatched a crewmember to attend to the two casualties and then let go and waited offshore. Contact was made with the Coast Guard to inform them that the casualties were safely ashore.

3.3.2. The two casualties were brought to the doctor’s surgery, and were examined. Both were in shock and the female passenger had hurt her back. They were transferred back to the mainland by the ferry company later that same day.

3.3.3. The ferry company initiated an investigation and produced an incident report under their DSM code. This investigation found that the stern line of the vessel had come off the bollard which allowed the vessel to drift off the quay. It cited the crowd of people on the quay as a contributory factor which prevented the crew from observing how the stern line was attached to the bollard.
4. ANALYSIS

4.1 Berthing at Inis Oírr Pier

4.1.1. The ferries are usually alongside the pier for a short period of time, about 15 to 20 minutes to disembark and embark passengers. They use three mooring lines to secure to the quay during this time. These lines can be deployed by two different methods as shown below.

4.1.2. Method A: A spring line is secured from the forward shoulder and the engines are put ahead to keep the vessel alongside. A bow line and a stern line are secured. The vessel can be pinned alongside with engines and spring line alone as the rudder is active.

4.1.3. Method B: A bow line is secured from the shoulder and the engines put astern to pull the vessel alongside. A second bow line and stern line are secured. The stern line is essential as there is little control from the rudder with the engines going astern.

4.1.4. On the ‘MV Rose of Aran’ the gangway is forward of the wheelhouse and at low tide it prevents the deployment of the spring line in Method A. As the tide was low water springs, Method B was used on the 6th June. The ferry moored immediately astern had its engines running astern, its wash pushed the ‘MV Rose of Aran’ out from the pier.

4.1.5. The practice is to ask a member of the public to make fast the stern line. It would appear that this is not being checked by the crew member on the quay attending to the bow lines. This runs the risk that the person tying up the stern line is not competent to do so.
4.1.6. With the gangway forward of the wheel house the Master of the ‘MV Rose of Aran’ was looking forward and did not notice the stern line had become loose and was in the water until a gap opened up between the vessel and pier. With no stern line and with the wash of the ferry astern it was impossible to manoeuvre the vessel alongside again in time to stop the gangway coming off the quay. As in paragraph 3.2.2 above the gangway fell towards the water. It was prevented from falling into the water by passengers and crew holding onto the gangway and heaving it back on board as shown in Appendix 7.1 Photograph No.4. As soon as the passengers entered the water and there were people between vessel and quay, the only option was to let go all lines.

4.1.7. At this point of the incident there was one crewmember on the quay, one crewmember attending to the mooring lines and one crewmember (with assistance of passengers) holding on to the gangway, so the crew were not in a position to render assistance to the people in the water. No instruction was given to throw a life-ring, but one was thrown from the vessel by one of the passengers.

4.1.8. The reason the stern line became loose is not clear. It was secured to the bollard by a bystander and this may not have been done correctly. If it was not placed under the knuckle of the bollard it could easily have come free. It is noted by the investigation that there are no designated mooring persons on the quay during embarking and disembarking and that passengers were asked to secure the line onto the bollard. In addition, the ferry which came in astern of the ‘MV Rose of Aran’ used the same bollard to secure its head line. The ‘MV Rose of Aran’s’ stern line could have been released inadvertently at this point. The waiting passengers on the quay crowd around the edge of the quay as the ferries are berthing, obscuring the view of the bollards and impeding the mooring procedures of the crew. On the 6th June it was estimated that there was in excess of 500 people waiting on the quay, most returning from a weekend stay on the island (see Appendix 7.1 Photograph No. 5).

4.1.9. Inis Oírr Pier is owned by Galway County Council. There is room for at least three ferry vessels to berth on the pier at Inis Oírr, which means potentially 288 disembarking passengers at the same time, with perhaps the same number waiting to embark. Despite the transit of hundreds of passengers per day in the summer months there are:

- No By-Laws for the pier or harbour, excepting for the landing of explosives.
- No persons employed by Galway County Council to administer operations on the pier.
- No Safety Management plans for the harbour.
4.1.10. Observations of activities on the pier show lack of management in a number of areas:

- Passengers crowd around trying to find the correct ferry,
- Local transport services drive vehicles through the crowds of people and
- Cargo is left on the pier causing congestion.

On one visit to the pier the life-ring nearest to the point where this incident took place was obscured by bags of stones (see Appendix 7.1 Photograph No. 5).

4.1.11. The response from Galway County Council is that the increase in passenger numbers is as a result of the completion of a second pier at Doolin in June 2015, however there were at least six ferries operating in 2013 and 2014. An extension to the pier at Inis Oirr is in the planning stage and when it is completed there will be By-Laws and perhaps a harbour master. As an interim measure Galway County Council propose restricting vehicular access to the pier.

4.1.12. Whilst the ultimate responsibility for operations within the harbour at Inis Oirr lies with Galway County Council, the ferry companies have responsibility in organising their passengers and ensuring their vessels are berthed safely.

4.1.13. The ferry companies do not employ anyone on the island to liaise with passengers, although at very busy times they may send someone from Doolin. A linesman is employed to handle lines and manage passengers in Doolin for the ferries but there is no similar person in Inis Oirr.

4.2. The ‘MV Rose of Aran’ and Safety Management

4.2.1. The vessel was surveyed and found to comply with the Merchant Shipping Acts and issued with a certificate to carry 96 passengers and four crew. The certificate was valid until the 23rd August 2016.

4.2.2. The company operates four passenger ships with a designated permanent master on each. In addition there are two relief masters. On the 6th June the ‘MV Rose of Aran’ was skippered by one of the relief masters. This Master held a Second Hand Fishing Certificate with endorsement to be the master of a passenger ship. He had worked on the ferries from his teens and had been a full time master on the ferries for a number of years.

4.2.3. The Owners/Operators of the vessel had a Domestic Ship Management (DSM) safety management system (SMS) in place under the EU Regulation 336/2006. Initially this DSM documentation followed “The Domestic Ship Management Template” issued by the Department of Transport, Tourism and Sport (DTTAS). During the last year the DSM system had been revised to take account of the particular operations of the
vessels in the company and this had been approved by the MSO and was being introduced to the vessels.

4.2.4. Examination of the DSM documentation showed that it was comprehensive but lacked specific risk assessments and standard operating procedures for berthing at the various piers and harbours used by the vessels. The guidance notes for the “The Domestic Ship Management Template” under Safety of Navigation in Areas of Operation and states that risk assessments should be carried out in respect of:

“landing areas and piers, considering approaches, tidal conditions, weather, safe access for passenger and crew, satisfactory means of berthing vessel alongside, and adequate space for vessel to lay alongside safely and to identify those ports considered suitable for use by company vessels.”

4.2.5. The DSM regulation emphasises the responsibilities and authority of the Master of a vessel. Given the background, training and experience of the masters in domestic shipping it is essential they be given training in the operation of the code. In particular they should understand how to conduct detailed risk assessments (see Appendix 7.6 Detailed Risk Assessment).

4.2.6. The company’s SMS outlined various emergency drills, however Man Overboard within confines of a harbour was not one of them. During this incident the crew of the vessel were fully engaged in operating the vessel to prevent trapping the casualties between quay wall and the vessel, and were not in a position to render assistance to casualties holding on to the end of the gangway or in the water. The Skipper or one of the crew should have immediately given instructions for the deployment of life-rings to the people in the water.

4.2.7. SMS is not a document that can be referred to, it is an ongoing daily application of safe working principles, subject to constant review. It requires input from the crew of the vessels and the shore management. The masters of the vessels have an important role in the effective operation of the SMS and require training in safety management on board.

4.2.8. The Merchant Shipping (Means of Access) Regulations of 1988 apply to this vessel. The Regulations require that a safe means of access is properly rigged between the ship and any quay at all times.

4.2.9. There is an accompanying Marine Notice No. 38 of 2000 advising operators of the requirements of the regulations (see Appendix 7.7).
5. CONCLUSIONS

5.1. The SMS implemented in the DSM which included the poor mooring of the vessel was the underlying root cause for the incident.

5.2. The release of the stern line into the water was the direct cause of the incident. The fact that this occurred is due to the following factors:

- Lack of detailed risk assessments for the mooring operations at Inis Oirr at various states of tide resulting in weak procedures for mooring the vessel.

- Lack of management structures, safety organisation and lack of policing of operations at Inis Oirr harbour, which is not conducive to the safe berthing of vessels and transit of passengers to and from the pier.

- It is bad practice to continue to operate engines ahead or astern in order to keep the vessel alongside. The vessel should be moored in a secure manner.

5.3. The crew of the vessel were not trained or prepared for recovery procedures within the confines of the harbour, and the recovery of the casualties would not have occurred without people on the shore entering the water and assisting them to shore.

5.4. Under the EU Regulation 336 it is clear that the legal obligation to carry out risk assessment is the responsibility of the ferry operating company and the onus is on the company to do this. This risk assessment was not carried out.

5.5. The lack of any By-Laws or any harbour master on Inis Oirr Pier results in overcrowding and congestion on the pier which hinders the safe berthing of ferries using the pier.
6. SAFETY RECOMMENDATIONS

6.1. The ferry company should carry out a risk assessment to address the issues raised in this report and corrective measures should be implemented in the DSM. These corrective measures should as a minimum ensure that vessels are safely and securely moored before the gangways are deployed and that procedures are put in place to monitor the safe embarkation and disembarkation of passengers.

6.2. Galway County Council should design and implement a safety management system for all operations on Inis Oírr Pier including the formulation of By-Laws which can be enforced.
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<th>PAGE</th>
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</tbody>
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Appendix 7.1 Photographs.

Photograph No. 1: ‘MV Rose of Aran’.

Photograph No. 2: Gangway from a ferry at Inis Oírr at low tide. Note steps from the pier on right hand side do not reach all the way to the water at this state of tide, also note marine growth at this level.
Appendix 7.1 Photographs.

Photograph No. 3: Staghorn Bollards.

Photograph No. 4: The incident with gangway detached, one person swimming towards ladder and one person hanging on to gangway. Note no life-ring deployed at this stage, bow line and stern line have been taken back on board.
Appendix 7.1 Photographs.

Photograph No. 5: View of Inis Orr Pier. Four ferries alongside and approximately 100 people on pier. Note vehicular traffic on pier and access to life-ring obstructed by cargo on pier.
Appendix 7.2 Met Éireann Weather Report.

MET ÉIREANN
The Irish Meteorological Service

Glasnevin Hill,
Dublin 9, Ireland.

Tel: +353-1-806 4200
Fax: +353-1-806 4247

Re: Estimate of weather conditions near Inis Oírr – specific position 53° 04.11N 009°
31.36W on the 6th of June 2016 between 06:00 hours and 12:00 hours.

General Meteorological Situation: A weakening ridge of high Pressure covered the area
(and indeed all of Ireland) during the period in question. A weak showery trough remained
slow moving about 20 nautical miles to the south of the area.

Weather:
The period in question was dry throughout. It was partly cloudy, but some sunshine did occur also – especially later during
the period towards 12 midday.

Winds:
Winds from the southeast (approximately 130 degrees) were moderate to fresh with mean speeds of 13 to 15 knots, and occasionally gusted to 20 or
21 knots. This is a wind of Beaufort Force 4 to 5.

Winds were slackier during the early morning and again during the evening.

Temperatures:
The air temperature rose gradually from 13 degrees Celsius at 6:00 am to
18 degrees by midday. The sea surface temperature was 15 to 16 degrees
Celsius.

Visibility:
Moderate to good (8 to 12 km). It was a little hazy.

Sea States:
The Sea propagation direction was generally from between 180 and 230
degrees.
The Significant Wave Height was 0.4 to 0.7 Meters; with period of 2 to 3
seconds.
Appendix 7.2 Met Éireann Weather Report.

**Appended Beaufort wind Scale.**

<table>
<thead>
<tr>
<th>Force</th>
<th>Description</th>
<th>Speed*</th>
<th>Specification</th>
<th>Wave-height** (metres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Calm</td>
<td>&lt;5</td>
<td>Sea-like</td>
<td>0.1 - 0.3</td>
</tr>
<tr>
<td>1</td>
<td>Light Air</td>
<td>5 - 9</td>
<td>Slight</td>
<td>0.5 - 1.25</td>
</tr>
<tr>
<td>2</td>
<td>Light Breeze</td>
<td>10 - 19</td>
<td>Moderate</td>
<td>1.25 - 2.5</td>
</tr>
<tr>
<td>3</td>
<td>Fresh Breeze</td>
<td>20 - 29</td>
<td>High</td>
<td>2.5 - 4</td>
</tr>
<tr>
<td>4</td>
<td>Gusty Breeze</td>
<td>30 - 39</td>
<td>Very strong</td>
<td>4 - 6</td>
</tr>
<tr>
<td>5</td>
<td>Strong Breeze</td>
<td>40 - 49</td>
<td>Strong</td>
<td>6 - 9</td>
</tr>
<tr>
<td>6</td>
<td>Violent Storm</td>
<td>50 - 63</td>
<td>Very strong</td>
<td>9 - 14</td>
</tr>
<tr>
<td>7</td>
<td>Hurricane</td>
<td>64 +</td>
<td>Phenomenal</td>
<td>Over 14</td>
</tr>
</tbody>
</table>

*Speed = mean speed at a standard height of 10 metres.

**Wave height is only intended as a guide to what may be expected at the open sea.

**Beaufort Scale of Wind**

<table>
<thead>
<tr>
<th>Sea State (Descriptive)</th>
<th>Significant Wave Height in meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calm</td>
<td>0 – 0.1</td>
</tr>
<tr>
<td>Smooth (Wavelets)</td>
<td>0.1 – 0.5</td>
</tr>
<tr>
<td>Slight</td>
<td>0.5 – 1.25</td>
</tr>
<tr>
<td>Moderate</td>
<td>1.25 – 2.5</td>
</tr>
<tr>
<td>Rough</td>
<td>2.5 – 4</td>
</tr>
<tr>
<td>Very rough</td>
<td>4 – 6</td>
</tr>
<tr>
<td>High</td>
<td>6 – 9</td>
</tr>
<tr>
<td>Very high</td>
<td>9 – 14</td>
</tr>
<tr>
<td>Phenomenal</td>
<td>Over 14</td>
</tr>
</tbody>
</table>

Individual waves in the wave train will have heights in excess of the significant height. The highest wave of all will have a height about twice the significant height.

<table>
<thead>
<tr>
<th>Visibility (Descriptive)</th>
<th>Visibility in nautical miles (kilometres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>More than 5 nm (&gt; 9 km)</td>
</tr>
<tr>
<td>Moderate</td>
<td>2 – 5 nm (4 – 9 km)</td>
</tr>
<tr>
<td>Poor</td>
<td>0.5 – 2 nm (1 – 4 km)</td>
</tr>
<tr>
<td>Fog</td>
<td>Less than 0.5 nm (&lt; 1 km)</td>
</tr>
</tbody>
</table>

*Note: If there are no measurements or observations available for an exact location, these estimated conditions are based on all available meteorological measurements and observations which have been correlated on the routine charts prepared by Met Éireann.
Appendix 7.2 Met Éireann Weather Report.
26th June 2016 MRSC Valentia

1204  999 CALL INIS OIRR CGU REPORT TWO PERSONS IN DIFFICULTIES IN WATER OFF INISHEER PIER - TASKED R115, DOOLIN CGU, ARAN ISL LFB- BCST TO SHIPPING

1210  MV ROSE OF ARAN CONFIRMS TWO PERSONS NOW OUT OF THE WATER AWAITING MEDICAL ATTENTION-ARAN ISL LFB AND DOOLIN CGU STOOD DOWN

1234  R115 LANDED INIS OIRR - BOTH CASUALTIES IN DOCTORS SURGERY

1244  DOCTOR CONFIRMS TWO CASUALTIES OK - R115 RETURNING TO BASE

1246  INIS OIRR CGU REPORT BOTH CASUALTIES WERE COMING OFF THE GANGWAY FROM MV ROSE OF ARAN, THEY FELL FROM THE GANGWAY AS THEY WERE DISEMBARKING -

  FEMALE: 26YEAR OLD/LOWER BACK HURT
  MALE: IN FIFTIES //SHOCK

1304  R115 BACK AT BASE AND CLOSING
### Appendix 7.4 Schedule of Sailings

**Sailing Times**
*Ferry Operates from mid-March to late-October only.*

#### For Inis Mór:
- **Depart Doolin**
  - 10:00 a.m.
  - 1:00 p.m.*
- **Depart Island**
  - 11:15 a.m.*
  - 4:00 p.m.

#### For Inis Oírr:
- **Depart Doolin**
  - 10:00 a.m.
  - 11:00 a.m.
  - 1:00 p.m.
  - 5:15 p.m.*
- **Depart Island**
  - 8:30 a.m.*
  - 11:15 a.m.
  - 1:45 p.m.
  - 4:45 p.m.

#### For Inis Meáin:
- **Depart Doolin**
  - 10:00 a.m.
  - 1:00 p.m.*
- **Depart Island**
  - 11:30 a.m.*
  - 4:15 p.m.
Appendix 7.5 Plan of Inis Oirr Harbour.
Appendix 7.6 Detailed Risk Assessment Procedure.
Appendix 7.7 Marine Notice No. 38 of 2000.

Marine Notice

No. 38 of 2000

NOTICE TO ALL SHIPOWNERS, SHIPMASTERS, HARBOUR AUTHORITIES, SHIP AGENTS AND STEVEDORES

SHIP TO SHORE ACCESS

1. Introduction:

It has again come to the attention of the Department of the Marine and Natural Resources that there has in recent years been a number of incidents involving access to ships in Irish ports and in Irish ships in foreign ports, some of which have resulted in serious injuries including fatalities. Most of these incidents have arisen due to improperly rigged gangways, accommodation ladders or ladders and have occurred in the immediate vicinity of the ship to shore access area.

2. Deficiencies:

Some examples are where no access was in position or where the access provided was inherently unsafe. Department of the Marine and Natural Resources' investigators have found, after investigating particular accidents, that in many situations where deficiencies exist they are readily and easily notified. These deficiencies vary from gangway bridge slings unhooked and left lying on the walkway length thus creating a trip hazard, to missing, slack or unsecured hand ropes and inadequate bulwark ladders sometimes without handrails at the transfer point between gangway and dock. Other deficiencies include poorly maintained equipment missing or unsuitable safety nets or nets not properly rigged; poor lighting and unsuitability of a lifeline with line close by the gangway and gangway/accommodation ladder dangerously positioned on the quay or obstructed by discharging/loading equipment such as cranes or road transport.

3. Requirements:

Before any person is permitted on board a vessel a safe means of access is required to be provided. Gangways or ladders including their associated equipment and fittings should be inspected and deficiencies rectified. During the hours of darkness adequate illumination must be provided.
Appendix 7.7 Marine Notice No. 38 of 2000.

4. Duty & Responsibility:

The employer and master have a specific duty and responsibility to provide safe access in accordance with the Means of Access Regulations (S.I. 108 of 1988). Equally important is for all persons including crew members to use the access that is required to be provided. Where necessary gangway watches should be maintained particularly during sensitive periods.

5. Safety Nets:

Attention is drawn to Regulation 11 of the "Means of Access Regulations". Safety nets used, shall be of good construction and sound material, free from any patent defect and of adequate strength for the purpose for which they are intended. They must be securely rigged as their purpose is to minimize the risk of injury to a person who may fall from the access equipment, on to the quay or between the ship and the quay. (Refer to Annex II)

6. Harbour Authority:

At certain berths there may be occasions where it is not reasonably practicable for a ship to rig a safe means of access. In such circumstances, a safe means of access should be requested by the master and provided by the responsible authority.

To assist in further reducing risk of accidents, Harbour Authorities are requested to continue encouraging and assisting owners, masters and persons boarding or leaving a ship to comply with Chapters 6 & 18 of the 1998 edition “Code of Safe Working Practices for Merchant Seamen”

7. Annexes:

Section 4 of SI No. 108 of 1988 is reproduced in Annex I.
Annex II illustrates an acceptable method for rigging of safety nets.
Annex III shows a light weight steep angle type gangway and bulwark ladder with shotlines.
Annex IV is a drawing of a ladder with handrails for use when angle of inclination above the horizontal is more than 60°.

Marine Notice No. 11 of 1996 in relation to Ship to Shore Access is hereby revoked as it is superseded by this Notice.

Any enquiries concerning Marine Notices should be addressed to Maritime Safety Division - Tel: 01-6193359, Fax: 01-6620774.

Secretary-General
Department of the Marine and
Natural Resources
Dublin 2

13 November, 2000
ANNEX I

Section 4 Statutory Instrument No. 105 of 1988

Merchant Shipping (Means of Access) Regulations, 1988

General Duties of Employers and Masters and Others.

4. (1) The employer shall provide adequate equipment and resources so as to ensure that there can be, at all times, a safe means of access between the ship and any quay, pontoon or similar structure or another ship alongside which the ship is secured and, without prejudice to the generality of this duty and the following Regulations, shall ensure that the Master will have available the equipment and resources necessary to enable him to discharge his general duties pursuant to paragraphs (2) and (3) of this Regulation.

(2) The Master shall ensure that

(a) access equipment (including safety nets) is placed in position promptly after the ship has so secured and remains in position while the ship is so secured;

(b) access equipment (including safety nets) which is in use
   (i) is properly rigged, secured, and is safe to use;
   (ii) is so adjusted from time to time as to maintain safety of access, and
   (iii) is maintained in a serviceable condition;

(c) access equipment (including safety nets) and approaches thereto are adequately illuminated;

(d) a Life-buoy with a self-activating light and also a separate safety line attached to a point or some similar device is provided ready for use at the point of access aboard the ship, and

(e) in the case of a ship to which Regulation 8(1) applies, a bulwark ladder is used as a means of access.

(3) Where access is necessary between ship and shore, and the ship is not secured alongside, the Master shall ensure that such access is provided in a safe manner.

(4) Any person boarding or leaving the ship shall use the access equipment provided for the purpose.
Appendix 7.7 Marine Notice No. 38 of 2000.
Appendix 7.7 Marine Notice No. 38 of 2000.
Section 36 of the Merchant Shipping (Investigation of Marine Casualties) Act, 2000 requires that:

“36 (1) Before publishing a report, the Board shall send a draft of the report or sections of the draft report to any person who, in its opinion, is likely to be adversely affected by the publishing of the report or sections or, if that person be deceased, then such person as appears to the Board best to represent that person’s interest.

(2) A person to whom the Board sends a draft in accordance with subsection (1) may, within a period of 28 days commencing on the date on which the draft is sent to the person, or such further period not exceeding 28 days, as the Board in its absolute discretion thinks fit, submit to the Board in writing his or her observations on the draft.

(3) A person to whom a draft has been sent in accordance with subsection (1) may apply to the Board for an extension, in accordance with subsection (2), of the period in which to submit his or her observations on the draft.

(4) Observations submitted to the Board in accordance with subsection (2) shall be included in an appendix to the published report, unless the person submitting the observations requests in writing that the observations be not published.

(5) Where observations are submitted to the Board in accordance with subsection (2), the Board may, at its discretion -

(a) alter the draft before publication or decide not to do so, or

(b) include in the published report such comments on the observations as it thinks fit.”

The Board reviews and considers all observations received whether published or not published in the final report. When the Board considers an observation requires amendments to the report that is stated beside the relevant observation. When the Board is satisfied that the report has adequately addressed the issue in the observation, then the observation is ‘Noted’ without comment or amendment. The Board may make further amendments or observations in light of the responses from the Natural Justice process.

‘Noted’ does not mean that the Board either agrees or disagrees with the observation.
8. NATURAL JUSTICE - CORRESPONDENCE RECEIVED

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Note: The names and contact details of the individual respondents have been obscured for privacy reasons.
Correspondence 8.1  Coast Guard and MCIB response.

MCIB RESPONSE:
The MCIB notes the contents of this correspondence.

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I have no observations on the draft report

Regards

Irish Coast Guard
Correspondence 8.2 Passenger and MCIB response.

Secretariat
Marine Casualty Investigation Board,
Leeson Lane
Dublin 2

Draft report: MCIB/12/260
Incident: M.V. Rose of Aran
Location of Incident: Inis Oírr Pier
Date of Incident: 06/06/16

A chara,
I would like to confirm that I accept the findings of the report and would not like to add any further comment.

On a personal note I would like to thank the investigator for his preparation before he interviewed me. I found it easy to explain the circumstances leading up to the incident using the chart of the pier and the models of the vessels that he provided. This made it easy to explain the incident and avoided any miscommunication.

Yours Sincerely

MCIB RESPONSE:
The MCIB notes the contents of this correspondence.
MCIB RESPONSE:
The MCIB notes the contents of this correspondence and re-iterates Safety Recommendation 6.2.
Furthermore, there are significant cost issues for any local authority in terms of ongoing management of a pier structure through paid employees for this purpose, for instance the presence of a Harbour Master.

The process of Introducing Bye Laws is a reserved function of the members of the Local Authority and therefore an absolute decision on their introduction cannot be given at this stage, nor can it be confirmed if and when such matters will be considered by the councillors.

There are re-development and extension works currently being advanced through the design phases at Inis Oírr Pier and this may present an opportunity in the future for the introduction and implementation of Bye Laws, should the works receive governmental funding and proceed accordingly.

This above comments/submission would have a direct bearing on a number of paragraphs in your draft report and in particular those at p. 4.1.9, 4.1.11, 5.2 and 6.3.

I trust the above will be of some assistance to you.

Roads Transportation, Marine and General Services.
Galway County Council.

[Stamp: Marine Casualty Investigation Board]

18 Feb 2017
Correspondence 8.4 Comhar Caomhán Teo and MCIB response.

MCIB RESPONSE:
The Board notes the contents of this correspondence.
Correspondence 8.5  Passenger’s Solicitor and MCIB response.

MCIB RESPONSE: The MCIB notes this and has amended the report.

MCIB RESPONSE: The facts at paragraph 3.2.2 are from combined witness evidence. No change will be made to the report.

MCIB RESPONSE: No evidence was provided at the time of the investigation in this respect and no change will be made to the report.

MCIB RESPONSE: The MCIB notes this and refers to paragraph 3.2.1 of the report.

MCIB RESPONSE: The Board notes the contents of this observation. All relevant causes are dealt with within the report. No change has been made.
Correspondence 8.5 Passenger’s Solicitor and MCIB response.

These are our client’s observations in respect of the report.

Yours sincerely

[Redacted]

18 Feb 2017

[Stamp: An tSaoirseachtaíocht na hÉireann]
Re: MV. “ROSE OF ARAN” - Incident at Inis Orr Pier - 06 June 2016.

1. Background to incident:
The 19.97m LOA and Beam 6.43m steel built Irish flagged passenger ferry of GRT 113 tonnes, powered by two 250 BHP General Motor engines, operates a daily service in season - mid-March to late October - servicing the following Aran Islands - Inis Mor, Inis Orr and Inis Meain from their terminal base in Doolin, Co. Galway.

The vessel holds a Passenger Certificate for 96 passengers and 4 crew issued by the Marine Survey Office [MSO].

The “Rose of Aran” departed Doolin Pier at approximately 11:00hrs. - 06 June 2016 [Bank Holiday] with a full complement of passengers and four crew bound for Inis Orr, arriving at approximately 11:45hr. She was the first vessel away being followed by two other vessels of similar capacity.

Tidal Data applying at Inis Orr [data as Inis Mor - Spring Tides] was as follows:

| High Water | 06:39hr. | 5.20m |
| Low Water  | 12:33hr. | 0.80m |
| Tidal Range| 4.40m    |      |

Weather conditions were good with south easterly winds moderate to fresh, mean speed 13 / 15 knots occasional gusting to 20 / 21 knots [Beaufort Force 4 – 5] Winds were slackler during the early morning and again during the evening.

Sea State - Propagation direction was generally between 180 – 230°. Significant Wave Height was 0.4 to 0.7m with period of 2 – 3 seconds

2. Berthing at Inis Orr Pier:
The vessel berthed up starboard to on the outer wall of the Pier where due to the height of Pier above the deck of the vessel the mooring lines consisted of a headline, breast line and stern line.

The normal forward back spring was omitted on this occasion as it obstructed the Gangway in the prevailing Low Water conditions.

The lines were led from two staghorn bollards set back some 1m from the edge of the Pier where the edge of the Pier was finished in a radius and then with steep declivity to the vessel’s bits.

The staghorn bollards fitted on the Pier are of a design particularly suited to berths with a large tidal range and allows two lines to be deployed on individual “horns” without them interfering with each other. The design incorporates a “knuckle” below the “horns” which prevents the eye of the mooring line from being displaced when the vessel lies above the

MCIB RESPONSE: The MCIB notes this, Doolin is in County Clare.

MCIB RESPONSE: The MCIB notes this observation.

MCIB RESPONSE: The MCIB notes this observation.

MCIB RESPONSE: The MCIB notes this observation.

MCIB RESPONSE: Tides quoted in this report are sourced from Galway ATT.

MCIB RESPONSE: It should be noted that there were two head lines and a stern line and no breast line. See diagram at 4.1.3.

MCIB RESPONSE: The MCIB notes this observation.

MCIB RESPONSE: Noted, refer to Photograph No. 3 which shows how lines are secured to bollards. There is a correct method for securing the lines. No one could state how the stern line was secured as it was not checked. See paragraph 4.1.8.
level of the Pier.

The headline and breast lines were placed on the staghorn bollard by a member of crew who used a ladder to access the Pier apron. The sternline was placed on the after staghorn bollard by a bystander on the Pier. As was the practice at Inis Oírr, the main engines were put slowly astern to maintain tension on the headline and assist in keeping the vessel alongside in the constant swell conditions experienced in the harbour.

The Gangway was deployed onto the Pier, its heel secured by lashings on deck, the shore end resting against the Pier.

It being a Bank Holiday Monday the Pier was crowded with up to 500 passengers waiting around to board their ferries. This situation allowed the bollards to be obscured from observation by the Master and crew.

Meantime additional ferries arrived and berthed up astern of subject vessel. The vessel immediately astern placed her headline on the same staghorn bollard as subject vessel.

3. Nature of Incident:

Disembarkation commenced at about 11:55hrs. when with some 25 passengers discharged the Master noted that the stern of the vessel was swinging away from the Pier and that the sternline had become displaced from the bollard and was floating in the water.

The crew member stationed aft on the Main Deck was directed to recover the sternline while the Master endeavoured to bring the vessel back alongside using the main engines. In this he was baulked by the effect of the ‘wash ahead’ from the ferry astern which was pushing subject vessel off the Pier.

The crewman stationed at the gangway stopped the disembarkation and called on the four passengers on the gangway to disembark quickly. However, a gentleman and a lady remained on the gangway and the former appeared to ‘freeze’. The vessel continued to swing away from the Pier only secured by her breast line. The shore end of the gangway, once it cleared the Pier, tipped towards the water and rotated forward 90° only being restrained by crew members assisted by passengers.

Both passengers, once ashore, were attended to by bystanders initially and were subsequently examined by a doctor in a nearby surgery. Both were transported back to Doolin by the ferry company later that day.

4. Outcome of Incident:

Subject vessel was subsequently manoeuvred back alongside the Pier and the remaining passengers disembarked.

Owners initiated an immediate investigation and produced an Incident Report under their
Correspondence 8.6 Owner of vessel and MCIB response.

5. Review of incident:

We understand that it was a “bystander”, possibly one of the waiting passengers, that was requested to secure the sternline on the staghorn bollard. The design of the staghorn bollard incorporates a ‘knuckle’ - similar to a pair of ‘ears’- about midheight each side. This feature is to prevent the mooring line slipping off the bollard inadvertently once the vessel rises above the level of the apron.

In this instance, the latter circumstance did not apply in that the vessel would have only required some 25 minutes alongside to complete her cycle of disembarking / embarking her passengers and Low Water was still some 00:38 off.

The vessel had put a crewmember ashore on arrival to make the headline and breast line fast on the bollard but could not take the opportunity to attend to the stern line or to check whether it had been placed securely on the bollard.

We understand that the second ferry to arrive at the Pier made her headline fast to the same staghorn bollard which may have disturbed the stern line of subject vessel. This possibility does not appear to have been investigated by MCIB subsequently.

There is also the possibility that the arrangement of the stern line on the bollard was disturbed by passenger activity as they milled around on the Pier.

In any event once the stern commenced to drift off from the Pier and observed as such by the Master, his options to remedial measures were limited by the pace of unfolding events. With a gap opening between the vessel and the Pier, four disembarking passengers already on the gangway, this presented him with yet a further dangerous situation as the gangway commenced to tip downward to the water.

The immediate concern was to secure the gangway and prevent it falling into the water and injuring the two passengers affected.

The gangway was prevented from falling in the water by sheer manpower - passengers assisting crew to initially hold onto the gangway and subsequently heave it back on board.

Given this situation with passengers in the water between the vessel and the Pier, the Master had little option but to let all lines go and move the vessel away from the Pier.

Berthing at Inis Oír, particularly in Low Water Springs [LWS] tidal conditions coinciding with Bank Holidays, presents a number of additional potential hazards for ferries berthing at the Pier.

- If the berthing coincides with Low Water / near Low Water conditions then the fact that for some this places the vessel’s Bridge Deck below the apron of the Pier and means that the Master has a limited view of the Pier apron, the staghorn bollard and

MCIB RESPONSE: All evidence and available facts have been reviewed and considered by the MCIB. See paragraph 4.1.8.

MCIB RESPONSE: Please see 4.1.6 for analysis in relation to this.

MCIB RESPONSE: The MCIB notes this observation and has amended paragraph 4.1.6.

MCIB RESPONSE: Refer to Paragraph 4.1.4 and 4.2.4.
Correspondence 8.6 Owner of vessel and MCIB response.

the mooring line ends.

- The presence of a large number of passengers waiting on the Pier to board departing ferries, milling about in an uncontrolled fashion while attempting to locate "their" ferry with local transport vehicles driving through the crowd, adds to the chaos.
- Cargo left on the Pier adds to the congestion - its presence often obscuring the presence of the Pier’s LSA gear.
- While the local authority are the owners and operators of the Pier at Inis Orr they have not installed a management administration to deal with its day to day activities and the load generated during the tourist season. This latter is left to be addressed by the individual ferry operators as best they can but it does create a major hazard at peak times in season.

6. Safety Management Aspects:

Crewing Arrangements:
The company operates four passenger ferries on the Aran Islands service, each vessel with a permanent designated Master, and also employ two relief Masters. The latter are suitably experienced and hold Certificates of Competency and endorsed to sail as Master of Passenger Ships.
The Master on the day of the incident was so Certified.

Certification & Documentation:

- Domestic Ship Management Code - [DSM] status:
The vessel had a DSM system [EU Regulation 336/2006] sanctioned and approved by the Dept. of Transport, Tourism and Sport in place and this had been revised over the previous year to reflect the specific operations of the four vessel and this was being introduced with MSO approval.
The implementation of the DSM documentation is a work in progress and requires additional inputs in respect of:
  - Standard berthing procedures of the various ports of call - harbours and piers - used by the vessels in service and risk assessments in respect of same. This latter should encompass the Passenger Gangway arrangements.
- Ship Safety Management System - [SMS]:
Notwithstanding that the current Ship Safety Management arrangement had approval it did not address the MOB - type circumstances encountered in this incident occurring in the
Correspondence 8.6 Owner of vessel and MCIB response.

MCIB RESPONSE: The purpose of the MCIB report is not to attribute blame or fault, Section 35 of the Merchant Shipping Act, 2000 states:

(2) having regard to Section 25, if the investigator succeeds in establishing the cause or causes or probable cause or causes of the marine casualty, the report shall indicate it or them.

(3) Having regard to section 25, the report shall outline any recommendations the Board considers to be warranted and feasible for the avoidance of similar marine casualties.

(4) Although it shall not be the purpose of the report to attribute blame or fault, section 25 shall not prevent the reporting of relevant findings of an investigator in accordance with subsection (1), the indicating of the cause or causes or probable cause or causes of the casualty in accordance with subsection (2) or the making of recommendations in accordance with subsection (3), of this section.

MCIB RESPONSE: The MCIB notes this observation and has amended 5.5.
The practice of running the main engines astern slowly while alongside is a longstanding one where the Masters found that it ‘steadied’ the vessel and reduced the tendency for it to roll in the presence of constant swell in the harbour.

The vessel’s SMS did not include in its repertoire of Emergency Drills - an MOB situation occurring in the confines of a harbour, the procedure set down in the Safety Manual applied, solely to such incident occurring at sea and underway.

The new procedure once agreed with MSO will be entered into the Safety Manual.

8. Safety Recommendations arising:

It will be recalled that the After Mooring Station crewmember claimed that he was unable to access the Master and advise him that the stern line had come adrift due to the companionway from the After Deck to the Upper Deck being occupied by passengers.

Likewise the Master should be able to observe and communicate with crewmembers while they work on deck.

The former has been addressed by the issue of hand-held radios to each member of crew so that communication between Master and crew should be possible under all circumstances.

The second aspect of the Master being unable to observe individual crew members in their Work Stations from the Bridge due to vessel design features will be addressed by the installation of a CCTV monitor embodying a split-screen function on the Bridge. This has the capacity to simultaneously view the Fore Deck, After Deck and Engine Room.

In the absence of By-Laws and a formal administrative structure to control and police the Pier it has been left to the individual Ferry Owners to address matters as they see fit.

We have put the following arrangements in place for the upcoming season while awaiting the local authority decisions in this regard:

- Have appointed a local competent person on our behalf who will attend all berthing and unberthing activities.

This person will address the aspect of passenger assembly during:

(a) Disembarkation and the necessity to maintain clear walkways during that process and
(b) Embarkation arrangements ashore of a practical “crowd-control” nature and where the vessel is clearly indicated by a conspicuous portable sign close by the end of the gangway and the need to have passengers mustered in an orderly fashion prior to boarding, if accidents are to be avoided.

The appointed person will
- Take and release mooring lines relieving the crew of such duties.
- Secure / release shore end of the gangway.
- General supervision of related shore side activities.

We have formally advised the local authority of such while awaiting their implementation of a formal structured plan and relevant bye-laws.