



**HELLENIC REPUBLIC  
HELLENIC BUREAU FOR MARINE CASUALTIES INVESTIGATION  
INTERIM SAFETY INVESTIGATION REPORT**

**Fire on Ro-Pax  
EUROFFERY OLYMPIA**



**June 2023**

## Contents

Foreword .....	3
1. Summary .....	5
2. Factual Information .....	6
2.1. Particulars of involved vessel .....	6
2.2 Voyage Particulars .....	7
2.3 Marine casualty information .....	7
2.4 Emergency response .....	9
3. Narrative.....	10
3.1 The Emergency.....	10
3.2 Fixed firefighting systems on cargo spaces .....	12
3.3 Sustained damages.....	12
4. Final Investigation report .....	14
Appendix.....	15

## Foreword

The Hellenic Bureau of Marine Casualties Investigation (HBMCI) was established by Law 4033/ 2011 (Government Gazette 264 A/ 22 December 2011) for the purposes of implementing the European Directive 2009/18 /EC that governs the safety investigation regime.

HBMCI conducts safety investigations into marine casualties or marine incidents with the sole objective to identify and ascertain the circumstances and contributing factors that caused them through analysis and to draw useful conclusions and lessons learned that may lead, if necessary, to safety recommendations addressed to parties involved or stakeholders interested in the marine casualty, in order to take remedial actions, aiming to prevent reoccurrence or avoid future marine accidents.

The conduct of Safety Investigations into marine casualties or incidents is independent from criminal, discipline, administrative or civil proceedings whose purpose is to apportion blame or determine liability.

### **Important points of Interest**

- This interim report has been prepared by virtue of art. 16.2 Law 4033/2011, as applies (art. 14.2 Directive 2009/18/EC) as the full investigation report was not published within 12 months from the marine accident date.
- The Interim Report has been published for the sole purposes of the safety investigation process with no litigation in mind and should be inadmissible to any judicial or other proceedings (administrative, disciplinary, criminal or civil) whose purpose is to attribute or apportion blame or liability.
- The Interim Report is prepared without taking into consideration any administrative, disciplinary, judicial (civil or criminal) proceedings and with no litigation in mind. It does not constitute legal advice in any way and should not be construed as such.
- Fragmentary or partial disposal of the contents of this report, for purposes other than those it has been produced, may lead to misleading conclusions.

Under the above legal framework, the Interim Report only aims to present a concise summary of the events occurred on the 18<sup>th</sup> of February 2022 that led to the very serious marine casualty of the fire on board RoPax “EUROFERRY OLYMPIA”, resulting in the death of 11 people, all truck drivers.

HBMCI conducts the safety investigation of issued marine casualty as the leading Investigating State. The content of this Interim Report is based on currently available information and data collected and analyzed during the safety investigation process.

The completion of the procedure as defined in relevant legislation may reveal or identify new information, data or evidence and consequently cause changes or amendments in the content of this Interim Report.

All times quoted are local times (LT), unless otherwise stated.

**GLOSSARY OF ABBREVIATIONS AND ACRONYMS**

1.	AB	Able seaman
2.	AIS	Automatic identification system
3.	C/O	Chief Officer
4.	gt	gross tonnage
5.	HCG	Hellenic Coast Guard
6.	EMSA IMDatE	The Integrated Marine Data Environment Technical framework that collects and combines data from EMSA's maritime applications and other external sources
7.	IMO	International Maritime Organization
8.	kW	Kilowatt
9.	LT	local time
10.	nm	nautical miles
11.	O(s)OW	Officer(s) on the watch
12.	Olympia Radio	National Coastal Station covering the maritime safety sector (GMDSS) for receiving and transmitting distress, urgency and safety signals and commercial maritime communications world widely.
13.	OS	Ordinary seaman (deck crew)
14.	rpm	revolutions per minute
15.	UTC	Universal co-ordinated time
16.	VDR	Voyage data recorder
17.	VHF	Very high frequency (radio)

## 1. Summary

On 18 February 2022, at approximately 03:56, a fire broke out in the main garage area of Ro-Pax "EUROFERRY OLYMPIA", while en route for her scheduled voyage from Igoumenitsa (Greece) to Printizi (Italy). At the time of the fire the vessel was operated by 51 crew members (Greek and Italian nationality), she was carrying 239 passengers of various nationalities and she was navigating at the sea area approximately 4,5 nm northwest of Erikousa island, within the Greek territorial waters.

The Master informed about the emergency situation the Kerkyra Traffic which immediately notified the JRCC/Piraeus. He also notified an Italian Patrol vessel which was navigating in the proximity and requested assistance. JRCC/Piraeus established contact with the vessel through OLYMPIA RADIO and initiated a Search and Rescue operation. In particular, a "MAY-DAY RELAY" alert was transmitted and under the coordination of JRCC/Piraeus, all nearby vessels were requested to proceed to the area of the casualty in order to render assistance to "EUROFERRY OLYMPIA". At the same time, the Hellenic Coast Guard Authorities of Corfu and Igoumenitsa were ordered to engage their Emergency Plans and deploy all available operational assets in order to provide assistance to the vessel. Furthermore, SAR air assets were deployed to the casualty.

Following Master's order, passengers and crew boarded on the two lifeboats and abandoned the vessel. In total 228 passengers, 51 crewmembers and one stowaway were recovered either from the lifeboats or by SAR Helicopter and transferred to Corfu Island. Eleven people (10 passengers and 01 crewmember) were transferred to the General Hospital of Corfu, while 11 passengers were missing.

After the evacuation, the vessel remained drifting in the casualty area where search operations were commenced for the missing persons. On 22 February, a tug boat started towing the vessel bound for Platigiali/Astakos port (Greece). She arrived on 23 February where search/salvage operations resumed in order to locate the missing passengers and extinguish the fire. Tragically, during the search operation all 11 missing passengers were found dead inside their trucks.

## 2. Factual Information

### 2.1. Particulars of involved vessel

<b>Name of Vessel</b>	<b>EUROFERRY OLYMPIA</b>
Call Sign	IBEG
Company (ISM Code A 1.1.2)	GRIMALDI EUROMED S.p.A
Ownership	GRIMALDI EUROMED S.p.A
Flag State	Italy
Port/No of Registry	Palermo 257
IMO Number	9010175
Type of Vessel	RoPax
Classification Society	RINA
Year built	1995
Ship Yard	StoczniaGdanskaipolen S.A. – Gdansk, Poland
Loa (Length over all)	186.45 m
Boa (Breadth over all)	28.70 m
Gross Tonnage	33.588
Net Tonnage	10.076
Main Engine	4 Diesel Sulzer
Engine Power /Speed	4 X 5760 kW / 21,3 knots
Operation Sea Area	A1 + A2



Figure 1. Photo of Euroferry Olympia

## 2.2 Voyage Particulars

Voyage details	
Port of departure	Igoumenitsa
Port of arrival	Brindizi
Type of voyage	International (Ro-Pax liner between Italy and Greece)
Number of passengers:	239 + 1 stowaway
Cargo on board	<ul style="list-style-type: none"> <li>➤ Deck 1: 29 trucks/trailers</li> <li>➤ Deck 2: 12 semitrailers (01 reefer) - 03 trucks - 24 truck trailers (16 reefers) - 4 jumbo trailers</li> <li>➤ Deck 3: 45 truck trailers (10 reefers) - 7 Jumbo trailers (01 refrigerator) - 01 truck (reefer)</li> <li>➤ Deck 4: 24 truck/trailers (08 reefers)</li> </ul>
Manning	50 Crew members + 1 staff member

## 2.3 Marine casualty information

Casualty	
Type of casualty	Very serious
Date and time	18/02/2022 – 03:56 LT
Position – location	Lat: 39° 58,1' N, Long: 019° 37, 35' E 12 nm Northeast of Corfu Island
External environment	Wind: NW with force 3 - 4 Bfrs, Sea state: calm, Visibility: good – clear, Night
Ship operation	En route
Voyage segment	From Igoumenitsa to Brindisi
Consequences (to individuals, property, environment,)	Loss of Life: 11 Passengers Injuries: 10 passengers + 01 crew member Vessel: Total Loss
Affected areas of the vessel:	Ro/Ro spaces, accommodation spaces, bridge and engine control room

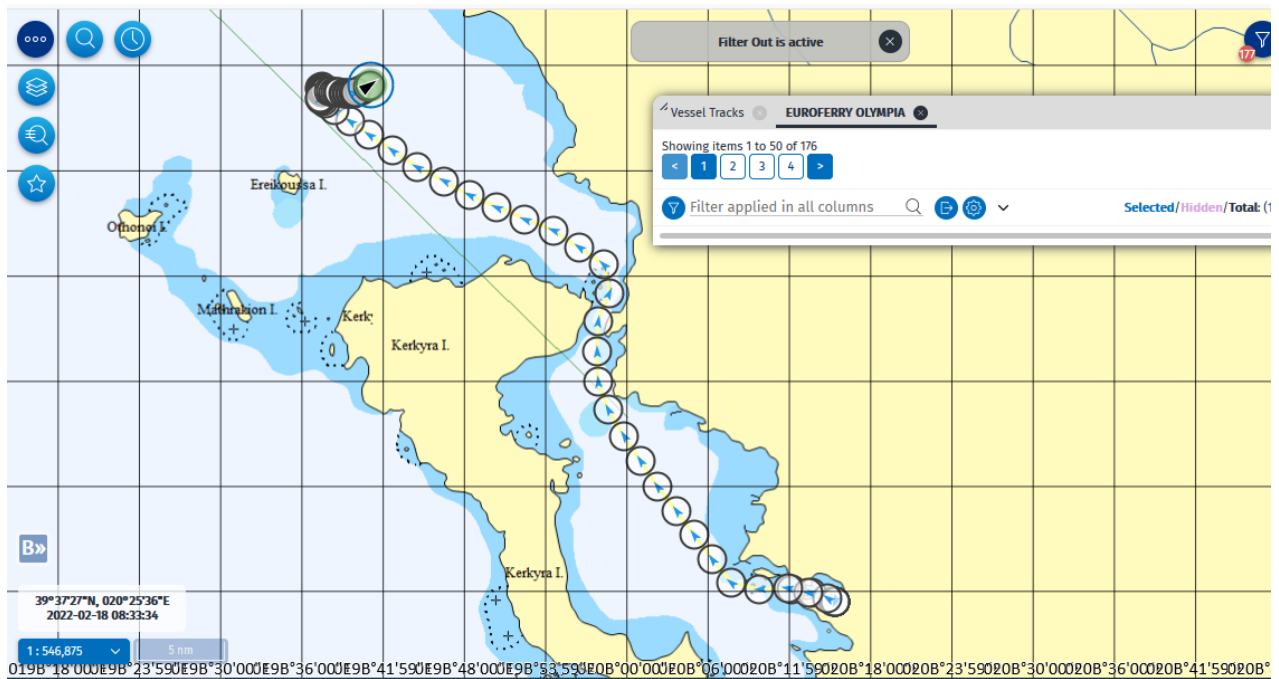


Figure 2. Depiction of route from Igoumenitsa port until the time of the casualty ( source EMSA IMDatE)

Table 1: Abstract of vessel's Minimum Safe Manning Certificate

<b>Trading Area: Long International</b>				
<b>Grado/Funzione</b> Grade/Capacity	<b>Certificato (Regola STCW)</b> Certificate (STCW Regulation)	<b>Personale</b> Personnel		
		<b>Transferimento senza passeggeri</b> Transfer without passengers	<b>Fino a 499 passeggeri</b> Up to 499 passengers	<b>Fino a 600 passeggeri</b> Up to 600 passengers
<b>Comandante</b> <i>Master</i>	II/2 – V/2	1	1	1
<b>Primo Ufficiale di Coperta</b> Chief Mate	II/2 – V/2	1	1	1
<b>Ufficiale di Navigazione</b> Deck Officer	II/1 – V/2	2	2	2
<b>Direttore di Macchina</b> Chief Engineer	III/2 – V/2	1	1	1
<b>Primo Ufficiale di Macchina</b> 2 <sup>nd</sup> Engineer	III/2 – V/2	1	1	1
<b>Ufficiale di Macchina</b> <i>Engine Officer</i>	III/1 – V/2	2	2	2
<b>Operatore GMDSS</b> GMDSS Operator	IV/2 – VI/1 – V/2	(**)	(**)	(**)
<b>Nostromo</b> Able Seafarer Deck	II/5 – VI/1 – V/2	1	1	1
<b>Marittimo Abilitato di Coperta</b> Able seaman	II/5 – VI/1 – V/2	3	3	3
<b>Giovanotto Coperta</b> Deck Boy	VI/1 – V/2	2	2	2
<b>Mozzo</b> Young Deck Boy	VI/1 – V/2	2	2	2
<b>Operaio – Operaio</b> <b>Mechanico – Motorista –</b> <b>Frigorista</b> Fitter – Motorman - Freezer	III/5 – VI/1 – V/2	1	1	1
<b>Elettricista</b> <i>Electrician</i>	VI/1 – V/2	1	1	1
<b>Giovanotto di macchina</b> Engine Boy	VI/1 – V/2	2	2	2
<b>Commissario</b> Purser	VI/1 – V/2	//	1	1
<b>Cuoco Equipaggio</b> Crew Cook	VI/1 – V/2	1	1	1
<b>Cuoco</b> Cook	VI/1 – V/2	//	1	1
<b>Cameriere</b> Steward	VI/1 – V/2	1	1	2
<b>Garzone di Camera – Picc. Di Camera</b> Assistant Steward	VI/1 – V/2	//	3	4
<b>Garzone di Cucina – Picc. di Cucina</b> Assistant Cook	VI/1 – V/2	//	1	1
<b>Medico di bordo</b> Ship's doctor	VI/1 – V/2	//	<sup>(1) (2)</sup> 1	1
<b>Totale Numero di persone</b> <b>Total Number of persons</b>		<b>23</b>	<b>30</b>	<b>32</b>



## 2.4 Emergency response

At approximately 04:17 the Master of Euroferry Olympia reported the emergency to Kerkyra Traffic Control along with the vessel's position and at approximately 04:24 a "Fire on board" distress signal was broadcasted. The distress was received by the coastal station "OLYMPIA RADIO" and following direct communication with Euroferry Olympia was relayed to Piraeus Joint Search & Rescue Coordinating Center.

Piraeus JRCC assumed the operational control and co-ordination for the SAR Operation and deployed all available assets of the area's HCG Authorities, as well as Air units and a Hellenic Navy vessel. Fire Brigade units from Kerkyra Station were also deployed to the casualty and were engaged to the cooling of the hot surfaces while the vessel was drifting. An Italian Patrol vessel that was navigating to the area proceeded to the casualty as well as other nearby vessels.

Following Master's order, passengers and crew were mustered and boarded on the two lifeboats and evacuated Euroferry Olympia. They were recovered by the HCG SAR vessel and the Italian Patrol vessel and were transferred to Kerkyra where medical assistance and accommodation facilities were provided.

Euroferry Olympia remained drifting at the casualty area and members of the Fire Brigade Special Unit initiated a search operation to the vessel's spaces for the missing passengers. During the search operation, one truck driver, who was sleeping in his truck on Deck 1 when the fire broke out, managed to exit by himself from the vehicle spaces and was recovered by the rescue team.

On 22 February 2022, the vessel was towed towards to Platigiali/Astakos port where she arrived on the following day and search operations were resumed.

### S & R Units involved

<b>State's Units</b>	→ 07 HCG Patrol vessels
	→ 01 HCG SAR vessel
	→ 01 HCG Antipollution vessels
	→ 01 Hellenic Navy vessel
	→ 01 Fire Brigade vessel
	→ 03 Fire Brigade firetrucks
	→ 01 Hellenic Navy Helicopter
	→ 01 SAR Helicopter
	→ 01 Italian Guardia de Finanza Patrol vessel
	→ Fire Brigade's Special Unit for Disasters
	→ National Operational Health Center
	→ Hellenic Civil Protection Service
<b>Other Vessels</b>	→ 03 Ro-Pax vessels
	→ 01 Pax vessel
	→ 01 Ro-Ro cargo vessel
	→ 02 Tugboats
	→ 01 Fishing vessel

Following the arrival of Euroferry Olympia at the port of Platigiali/Astakos on 23 February, 2022, the Fire Brigade Unit continued the search operations to all the vessel's spaces in order to locate the missing persons. Subsequently, the areas affected by the fire were inspected for remaining fire pockets visually and with heat measurement devices, by the Fire Brigade and the appointed salvors. The area of the main garage at Deck 2 was accessible only to the side walls, due to the limited visibility caused by the dense smoke,

as well as the narrow spaces between the loaded trucks. Consequently, after assessing the condition and temperatures of Deck 2, arrangements were made for the opening of the vessel's stern ramp which was carried out on 28/02/2022.

During the opening operation, heavy black smoke started emanating from the stern, indicating fire re-ignition at the main garage area. After the stern ramp was fully open, fire extinguishing operation was initiated, but the density of the loaded trucks prevented the fire extinguishing crew from entering to inner spaces of the garage area. As a result, the fire kept burning and destroyed all the remaining trucks and vessel's equipment on the main garage.

When the fire on Deck 2 was extinguished, the search operation for the missing persons recommenced and was completed on 23rd March 2022.

In total 279 passengers and crew were rescued and 11 passengers lost their lives. All casualties were truck drivers and were found inside truck cabins on Decks 1, 2 and 3.

### 3. Narrative

The construction of the events is based mostly on data and information acquired by the electronic evidence of Euroferry Olympia VDR, the interview process as well as external sources for vessels' navigation monitoring (EMSA IMDatE).

#### 3.1 The Emergency

Following the completion of loading operation, Euroferry Olympia departed from Igoumenitsa port at approximately 01:30 Lt. On the bridge were the 3<sup>rd</sup> Officer, who was the OOW, one AB and the Master. At approximately 03:30 Lt the Master left and, on the bridge, remained the navigational watch.

At 03:56, as the vessel was navigating 12 nm northeast of Corfu Island with a speed of approximately 17 Knots, the first fire alarm was activated on the bridge for the area of the main garage on Deck 2, between frames 116 and 153. The OOW ordered the patrol AB and the Bosun to proceed to the area and check for possible fire. The patrol AB proceeded to check Deck 2 from the Port side Lobby and when he saw the existence of smoke emanating from the main garage, he reported to the OOW and started closing the intermediate door between the main garage and the Port Side garage (Fig. 3).

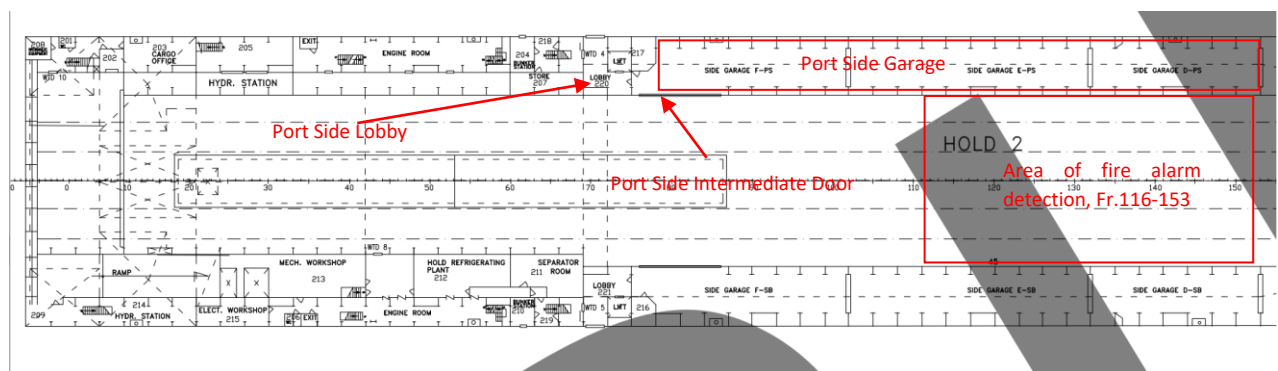


Figure 3. Abstract of General Arrangement of main garage, Deck 2

The OOW reported to the Master the emergency situation and the Master came on the bridge at approximately 04:04. It was reported that at that time the smoke in the main garage was dense and that the crew could not detect any flames or the origin of the fire. In the meantime, more fire alarms for the adjacent areas of the main garage were activated.

After assessing the situation, the Master ordered the assembly of the fire extinguishing

squad - Foxtrot Team and the C/O to proceed with closing all doors and openings of the main garage and to operate exhaust ventilation in order to reduce the dense smoke. Subsequently the existence of smoke to the open garage on Deck 3 was reported.

The Foxtrot Team was assembled to the area of the port side lobby, on Deck 2 and at approximately 04:29 entered to the port side garage and started spraying water to the bulkhead of the main garage for cooling. At approximately 04:31:30 the Foxtrot Team returned to the lobby and pulled out from the area leaving the fire hose spraying inside the port side garage.

At approximately 04:32 fire was spotted at the center of the open garage on Deck 3 and was reported to the Master. Immediately the Master ordered the Chief Engineer to operate Zones 4 and 5 of the Drencher system which covered the center area of garage on Deck 3, between frames 90 and 138 (Fig. 4). At 04:38 Master ordered the Chief Engineer to stop Zone 4 of the Drencher system and operate Zone 6 that was covering the area between frames 66 and 114. Following, the Master ordered the C/E to change the operation Zones of the Drencher system, as per below:

- At 04:39 Master ordered C/E to stop Zone 5 and open Zone 7 covering the area between frames 40 and 90,
- At 04:40 Master ordered C/E to stop Zone 6 and open Zone 8, that was covering the area between frames 20 and 66,
- At 04:42 Master ordered the C/E to stop Zones 7 and 8 and open for a short time Zones 2 and 3, that were covering the fore garage area between frames 138 and 89,
- At 04:46 Master ordered to stop Zones 2 and 3 and open Zones 4 and 5,
- At 04:49 Master ordered the C/E to stop the operation of the Drencher system, to assess the situation,
- At 05:00, following a report from the crew about explosions of the truck tires on Deck 3, Master ordered to start again the operation of the Drencher for Zones 4 and 5,
- At 05:01 Master ordered to operate Zones 1 and 2,
- At 05:08 Master ordered to operate Zones 3 and 4.



Figure 4. Abstract of Fire Fighting Equipment Plan. Blue lines indicate the operating zones of the Drencher System

In the meantime, at approximately 04:20 the Master had ordered the Chief Purser of the Delta Team to muster all the passengers and make the necessary announcements. At approximately 04:37 Delta Team reported to the Master that the Muster Station Alpha was affected by smoke and they were ordered to transfer the passengers to Muster Station Bravo.

As the firefighting operation was not effective in distinguishing the fire, at 05:05 the Master ordered the preparation of the two lifeboats for evacuation and at 05:11 he ordered the Emergency Teams to proceed with the embarkation of the passengers to the lifeboats and to report to him the total number of embarked passengers.

At 05:12, the Master called the coastal station Olympia Radio to request a tugboat with firefighting capability for assistance with the firefighting and reported that they lost control

of the vessel and that they are proceeding with the evacuation.

At 05:16 the Delta team reported to the Master that the total Pax number embarked to the lifeboats was 220 and that 19 passengers were missing. Following that, the Master at 05:18 gave the order to abandon the vessel and the two lifeboats were launched.

The passengers and crew that had evacuated the vessel were recovered from the lifeboats by the Italian Patrol Boat and the HCG SAR vessel, which arrived on scene and were transferred to Corfu Port.

### 3.2 Fixed firefighting systems on cargo spaces

Euroferry Olympia's fixed firefighting equipment for cargo spaces included a Carbon Dioxide System (CO<sub>2</sub>) for the closed vehicle spaces on Deck 1 and Deck 2 (main garage) and the Drencher System for the open vehicle spaces on Deck 3.

As already stated, the Drencher System was activated for the firefighting operation on Deck 3 and it was operated with regard to the existed instructions, which provided guidance for operation of two zones at the same time.

For the CO<sub>2</sub> fixed firefighting system on the main garage on Deck 2, the available data, suggests that it was activated shortly before the evacuation of the vessel and not during the firefighting operation.

### 3.3 Sustained damages

Based on the inspections carried out by the vessel's Class after the casualty, the following damages were recorded:

- **Main Engine Room:** The engine room was not directly affected by flames; nevertheless, the high temperature reached on the ceiling of the engine room, due to the fire in garage/deck No2, the electrical cables, systems and fire insulation have been impaired.
- **Engine Control Room:** The Engine Control Room was not directly affected by the fire and smoke; soot widespread on equipment and electrical switch boards was observed.
- **Diesel Generator Room:** Diesel Generator room was not directly affected by the fire and smoke; soot was widespread on equipment and electrical switch boards was observed.
- **Shaft and Steering Room:** Shaft and Steering room was not directly affected by the fire and smoke; soot was widespread on equipment and electrical switch boards was observed.
- **Deck No1:** The ceiling and the associated structures of the Deck No1 (fr.5-210) have been found damaged and buckled, with a maximum depth approximately 300/500 mm. The fixed ramp and the associated bulkheads (fr.40-70) were found damaged and buckled, with a maximum depth approximately 300/500 mm.
- **Deck No2:**
  - The bottom of Deck No2 (fr.5-210), has been found damaged and buckled, with a maximum depth approximately 300/500 mm. The Main Frames and it's reinforcing, stiffeners, have been found damaged and inflected.
  - The movable cover between the Deck No1 and Deck No2 has been found completely deformed and damaged (fr.15-90). The electrical and hydraulic plant and associated systems, the fire protection, detection and extinction system and the passive and active firefighting equipment was found completely burned and lost.

- The sides and central garage on Deck No2 were affected by fire. More specific, transversal bulkheads (from Deck 2 to Deck 3) and its structures have been found damaged and buckled, with a maximum depth approximately 200/300mm.
- Starboard and Port Side Shell (from Deck 2 to Deck 3) has been found damaged and inflected (fr.5-210), with a maximum depth approximately 200/300 mm.
- The electrical and hydraulic plant and associated systems, the fire protection, detection and extinction system as well as the passive and active firefighting equipment was found completely burned and lost.
- Engine Work Shop (fr.24-42) was not affected by fire and smoke, the equipment and the associated engine tools were found completely burned and soot was widespread on equipment and tools.
- Electrical work shop (fr. 21-30) was not affected by fire; nevertheless, soot was observed widespread on equipment and tools.
- Purifier room (fr.60-69, stbd side) was found completely burned by fire with all its machinery and equipment.
- Hydraulic station for the operation of the ramp located at Deck No2 (fr.21-33, port side) has been found completely burned and lost.

➤ **Deck No3:**

- The bottom of Deck No3 (fr.10-100), has been found damaged and buckled, with a maximum depth approximately 500/600 mm. The main frames and it's reinforcing, stiffeners, have been found damaged and inflected. In way of frame 88 the gutter/rain rail has been found cracked with a transversal length of approximately 1500/2000mm and a light of 300mm.
- Forward Maneuvering Station in way of frame 213 has been found deformed, the mooring ropes and mooring equipment has been found completely burned/lost.
- The electrical plant and associated systems, the fire protection, detection and extinction system as well as the passive and active firefighting equipment was found completely burned and lost.

➤ **Emergency Generator Room:** The electrical plant of the emergency diesel generator and its switchboard has been found compromised due the high temperature in the area; the room was affected by smoke.

➤ **Deck No4 :**

- The bottom of Deck No4 (fr.113-216) has been found damaged and buckled with a maximum depth approximately 700 mm.
- The Fast Rescue Boat and its davit have been found completely burned and lost.
- The Rescue Boat and its davit are partially burned.
- The side shell, internal bulkheads and associated structures of the superstructure/accommodation area (restaurant-galley, passenger's cabins, air conditioning room and the galley stores) have been found damaged and inflected with maximum depth of 200/300 mm.
- All the furniture's, the electrical and cabins associated equipment and plant, the fire protection, detection and extinction system and the passive and active firefighting equipment was found completely burned and lost and the ceiling cover was collapsed in all area.
- The launching appliances and davits of the lifeboats are not directly affected by the fire.
- The life raft launching appliances and associated life rafts were completely burned.

➤ **Deck No5 (fr.21-111):**

- The side shell, internal bulkheads and associated structures of the

superstructure/accommodation area (passenger's cabins and passenger area) have been found damaged and inflected with maximum depth of 200/300mm.

- All the furniture's, the electrical and cabins associated equipment and plant, the fire protection, detection and extinction system, and the passive and active firefighting equipment was found completely burned and lost, the ceiling cover was collapsed in all area.

➤ **Deck No6** (fr.21-111):

- The side shell, internal bulkheads and associated structure/accommodation area (passenger's cabins, passenger area, bar, hospital room, nursery) have been found damaged and inflected with maximum depth of 200/300 mm.
- All the furniture, the electrical and cabins associated equipment and plant, the fire protection, detection and extinction system, and the passive and active firefighting equipment burned and lost, the ceiling cover was collapsed in all area.

➤ **Deck No7** (fr.63-111):

- The side shell, internal bulkheads and associated structures of the superstructure/accommodation area (crew and passengers' cabins, air conditioning room) have been found damaged and inflected with maximum depth of 200/300mm.
- All the furniture's, the electrical and cabins associated equipment and plant, the fire protection, detection and extinction system, and the passive and active firefighting equipment was found completely burned and lost, the ceiling cover was collapsed in all area.

- **Deck No8** (fr.75-111): Wheel house was found completely destroyed/lost. Destruction of all bridge communications and navigation equipment, switchboards, clusters and windows.

#### 4. Final Investigation report

Due to the complexity of the casualty, the investigation process is still ongoing and further analysis is needed to identify safety issues and factors that contributed to the events as they unfolded during the emergency.

Amongst others, the ongoing investigation and analysis focuses on the following key items:

- The fire origin and propagation,
- The crew's firefighting activities and performance,
- The operation and efficiency of the fixed firefighting equipment,
- The evacuation process,
- The loading procedures,
- VDR data.

The Final Investigation Report will be published upon completion of the examination and analysis of the collected data, as well as the consultation process of the Draft Safety Investigation Report with the Substantially Interested States.

# Appendix

## Abstract of vessel's General Arrangement Plan

