



STATE MARINE ACCIDENT INVESTIGATION COMMISSION

INTERIM REPORT 39/15

very serious marine accident

M/V GREEN EGBERSUND

oil spill at Gdynia harbour due to damaged shell plating
of the vessel during docking on 27 August 2015

August 2016



The investigation of a very serious casualty of “Green Egersund” is conducted under the State Marine Accident Investigation Commission Act of 31 August 2012 (Journal of Laws of 2012, item 1068 and of 2015, item 1320) as well as norms, standards and recommended procedures agreed within the International Maritime Organisation (IMO) and binding the Republic of Poland.

The objective of the investigation of a marine accident or incident under the above-mentioned Act is to ascertain its causes and circumstances to prevent future accidents and incidents and improve the state of marine safety.

The State Marine Accident Investigation Commission does not determine liability nor apportion blame to persons involved in the marine accident or incident.

The following report shall be inadmissible in any judicial or other proceedings whose purpose is to attribute blame or liability for the accident referred to in the report (Art. 40.2 of the State Marine Accident Investigation Commission Act).

Information concluded into this report have been revealed on facts and circumstances determined during the investigation and gathered by the Commission during the period since the day of the accident until the day of publishing it and may be changed in case the new facts or evidence regarding the accident will reveal.

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1. Facts

On 27 August 2015 at 16:48, m/v “Green Egersund” unberthed from the Południowe Wharf in Gdynia harbour and headed towards “SMW 1” floating dock belonging to shipyard “Stocznia Marynarki Wojennej S.A.” On its passage to the floating dock, the vessel did not use its own engine, but used three tugs: “Fairplay VII” at the head, “Mars” at the stern, and “Fairplay IV” assisting at the board.

After the vessel was turned in the manoeuvring basin so that the stern faced the dock, the docking operation began. The tugs kept the vessel in line with the dock axis until the ship passed the fore line of the side walls. When the stern entered a few meters into the dock, the vessel deviated from the axis, the stern drifted towards the southern side wall and at 17:14 the starboard side of the stern hit the edge of the foundation of a pedestal fairlead located at the head of the southern side wall.

The impact damaged the vessel’s shell plating at the point where heavy fuel service tank no 15 was located and caused a spill. The dock master reported the spill to the shipyard dispatcher, who respectively notified the Rescue Team of Stocznia Marynarki Wojennej, Gdynia Harbour Master’s Office, Harbour Fire Service (Portowa Straż Pożarna Zarządu Morskiego Portu Gdynia S.A.), as well as Bonex and Delfin companies in charge of cleaning harbour waters upon the Shipyard’s request in the case of an oil spill.

The docking of the ship with leaking fuel was not stopped. After hawsers were dropped from the dock and fastened to the bitts, the vessel was hauled to position with trolleys and mooring winches. Around 17:25 the dock master positioned the vessel so that the hull could be placed on keel blocks. Around 17:40 the fuel leakage from the damaged tank ended.

Around 19:00 a containment boom was placed between the edge of the Gościnne Wharf and the Północne Wharf of Basin IX. 40 minutes later, a Harbour Fire Service (PSP ZMKPG S.A.) unit placed the containment boom and sorbent sleeves at the entry to the internal harbour in order to prevent the oil spill to spread into the external harbour.

The clean-up of the spill in harbour basins, including intervals, ended by 6 September 2015. The works in the Shipyard ended on 11 September 2015. After the dock and the hull were cleaned, the boom separating shipyard basins from the remaining part of the harbour was uninstalled.



2. General Information

2.1. Ship Particulars

Name of the ship:	Green Egersund
Flag:	the Bahamas
Shipowner:	Caiano Shipping II AS Norway
Classification society:	DNV - GL
Vessel type:	reefer ship
Call signal:	C6Y08
IMO number:	8804567
Gross tonnage:	5084
Year of built:	1990
Power:	4045 kW (Wartsila AB 5500 HP)
Width:	18 m
Total length:	109 m
Hull material:	steel
Minimum crew:	11 persons
S-VDR recorder:	Rutter 100 G 25



Photograph 1. M/v "Green Egersund"



2.2. Floating Dock Particulars

Name of the dock:	Dok SMW 1
Flag:	Polish
Shipowner:	Stocznia Marynarki Wojennej Gdynia
Classification society:	PRS S.A.
Vessel type:	floating dock
Capacity:	8,000 t
Year of built:	1989
Width:	35.50 m
Total length:	151 m
Dock material:	steel



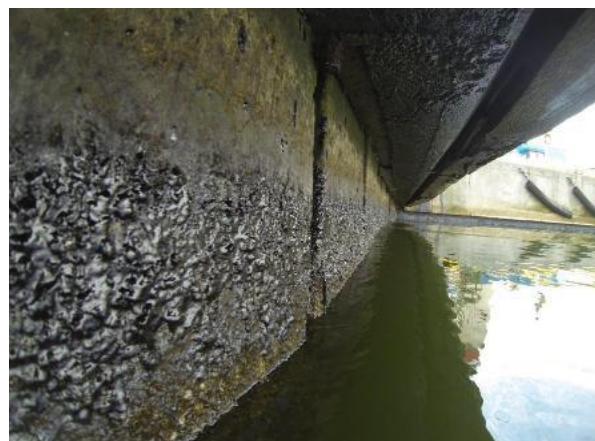
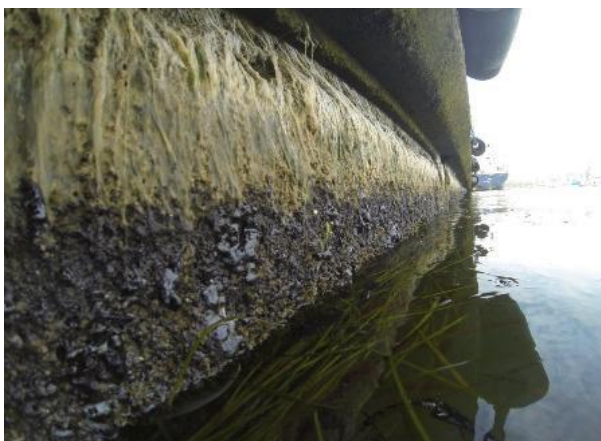
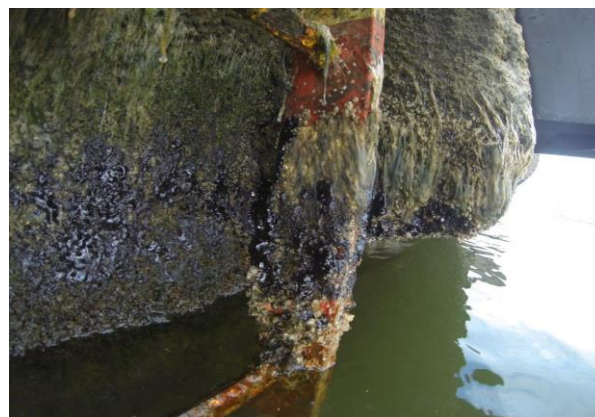
Photograph 2. SMW 1 floating dock

2.3. Ship's Voyage Information

Port of destination:	Gdynia
Type of voyage:	international
Crew:	1 Belarusian, 1 Estonian, 2 Latvians, 10 Russians, 2 Ukrainians,

2.4. Accident Information

Type:	very serious marine accident
Date and time of event:	27.08.2015 at 17:14:09 LT
Geographic position at the time of the accident:	$\varphi = 57^{\circ} 32' 16'' \text{ N}$; $\lambda = 18^{\circ} 32' 21'' \text{ E}$
Geographical area of the accident:	Gdynia harbour
Nature of the water region:	internal waters
Weather at the time of the accident:	wind SW 3° B, very good visibility, air temperature 21,6° C, water temperature 18° C
Operational status of the ship in the course of the accident:	undergoing special class survey, without main engine, ballasted, towed to the dock from the stern by tugs
Location of the accident on board:	starboard side near the stern, shell plating of the heavy fuel service tank
Environmental impact of the accident:	harbour and wharf waters at Gdynia harbour contaminated with 0.5 – 2.5 cm thick layer of an oil-based substance



Photograph 3. Gdynia internal harbour wharfs contaminated with fuel



2.5. Shore Services and Rescue Action Information

The oil spill clean-up operation was carried out by Rescue Team of Stocznia Marynarki Wojennej, as well as Bonex Sp. z o.o. and Delfin R.M. Firma Usługowa, which removed the fuel spill from water surface in the shipyard basin and in the harbour basins.

Due to the size and spreading of the oil spill to the adjacent harbour basins, units of the Harbour Fire Service (PSP ZMPG S.A.) were also involved in the securing of the basins.

After the inspection of the contaminated harbour basins, carried out by a representative of the Marine Environment Protection Inspectorate of the Maritime Office in Gdynia, which revealed massive amounts of an oil-based substance on the water surface, on 28 August 2015 “Kapitan Poinc”, a multi-purpose rescue ship of the Maritime Search and Rescue Service equipped with specialised devices to remove oil spills from the water surface, joined the decontamination operation.

3. Circumstances of the Accident

On 27 August 2015 at 16:20, a pilot in charge of the docking of “Green Egersund” in SMW 1 floating dock in Stocznia Marynarki Wojennej S.A. Gdynia harbour boarded the vessel berthed to the Południowe Wharf in Gdynia harbour.

The captain, chief officer and ship repair manager from the Shipyard were on the bridge. Having learnt the manoeuvring potential of the vessel, the pilot discussed with the captain the planned unberthing of the ship from the wharf, the manner and place of fastening of tow-ropes and preparation of heaving lines in order to handle hawsers from the dock, as well as the proposed manoeuvres¹. At the same time, the pilot requested an additional third tug due to weather conditions and recommendations of the harbour master. He then informed the ship repair manager about the current maximum draught and obtained information about the depth to which the dock was submerged.

The second officer and two seamen were at the manoeuvring post at the stern, while the third officer, bosun and a seaman were at the bow.

At 16:23, “Mars”, “Fairplay VII” and “Fairplay IV” tugs approached the ship. The pilot discussed the manoeuvres with tug masters, using 17 UKF frequency. At 16:48, having reported

¹ The vessel’s generators were not operating and it was decided that the hawsers from the bitts on the wharf would be directly delivered to the tugs at the head and at the stern.



The dock master notified the pilot of the damaged hull plating and of the leakage of an oil-based substance into the shipyard basin using 17 VHF channel. The dock master informed the shipyard dispatcher about the accident and fuel leakage.

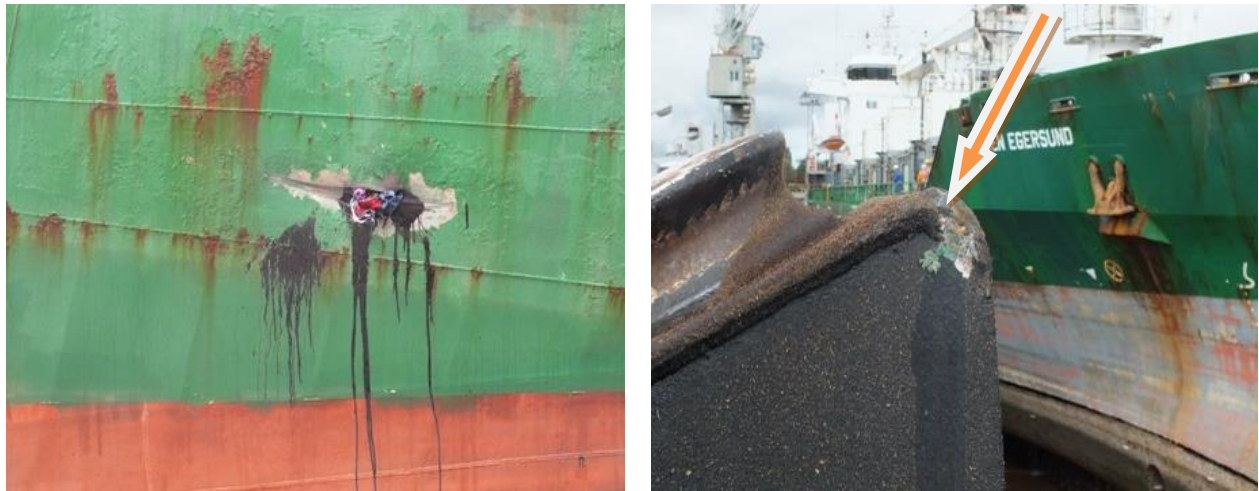
Chief engineer reported to the captain that the leakage of an oil-based substance from the damaged hull plating originated from the heavy fuel service tank 15. Due to the fact that the fuel could not be pumped to another tank, chief engineer dumped part of fuel to sumps and to the waste oil tank. The pilot notified the Harbour Master's Office in Gdynia of the oil spill from the damaged fuel tank using VHF ch. 12.

Around 17:15 steel ropes thrown from the dock were fastened on the vessel and the ship was hauled to position with trolleys and pullers. Tugs were released at 17:30. At 17:31, the pilot informed the dispatch officer at the Harbour Master's Office in Gdynia that fuel was still leaking from the damaged plating of the heavy fuel service tank. The leakage stopped around 17:40.

The SMW Rescue Team arrived in the dock and together with the dock crew initiated neutralisation operations on board of the southern side wall that had been flooded with fuel.

4. Preliminary Analysis and Comments about Factors Causing the Accident with Regard to Examination Results and Expert Opinions

Vessels in Stocznia Marynarki Wojennej are entering the floating dock from the stern due to the location of the dock in the shipyard basin, the size of the repaired vessel and the scope of repair works. With the stern facing the pier in the dock, both the stern of the repaired vessel and such components as shafting, propeller and superstructure are easily accessible. Such components and devices can thus also be safely transported to repair stations on the mainland. Such positioning guarantees balance between the dock and the vessel due to the fact that the appropriate lengthwise stability is maintained. Due to the above-mentioned factors, ships have been entering the floating docks from the stern for many years.



Photograph 4. Damaged hull plating of “Green Egersund” and foundation of a pedestal fairlead including the edge hit by the vessel.

4.1. Human Factors (fault and neglect)

The Commission recognised that the accident resulted from a mistake made during the manoeuvring, which led to a loss of control of the hull side motion after part of the vessel had entered the floating dock.

5. Expected Date of Publication of the Final Report

Due to a large number of entities involved in operations aimed at spill containment and elimination of its effects in the shipyard basin and in Gdynia harbour basins, the Commission decided to complete the report with additional information, including information related to the operations initiated by the stakeholders to date.

Preparation and publication of the final report is expected to happen within three months.

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8. Glossary and Abbreviations

LT – local time

SW – wind direction (south-west)

S-VDR – Simplified Voyage Data Recorder

kn – knots (speed)

9. Information Sources

Notification of the accident

Documents of the vessel and floating dock

Materials from hearing of witnesses

Photographs taken at the place of the accident

Materials and documents received from the shipowners

Data from the vessel’s S-VDR

10. Composition of the Accident Investigative Team

The team conducting the examination was composed of:

Team leader: Marek Szymankiewicz – SMAIC Secretary

Team member: Tadeusz Gontarek – SMAIC member