HBMCI
Hellenic Bureau for Marine Casualties Investigation

INTERIM REPORT

Art. 16.2 Law 4033/2011 (art. 14.2 Directive 2009/18/EC)

MARINE ACCIDENT SAFETY INVESTIGATION

Death by electric shock of a Technician during repairs works in the engine room of M/V NODUS

Marine casualty Safety Investigation Law 4033/2011 as amended and applies

(summary extract of art. 1.b, 4.1.a & 4.1.b)

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. The sole objective of the conduct of a safety investigation is to ascertain the circumstances that caused the marine accident or incident through analysis, to draw useful conclusions and lessons learned that may lead, if necessary, to safety recommendations or proposals addressed to parties or stakeholders involved in order to take remedial actions, aiming to prevent or avoid future marine accidents.

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by virtue of art. 16.2 Law 4033/2011, as applies (art. 14.2 Directive 2009/18/EC) as the full investigation report will not be published within 12 months of the marine accident date.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 only aims to present a concise summary of the events occurred on the 5th of June 2020 that led to a very serious marine casualty
- The Interim Report does not constitute legal advise in any way and should not be construed as such.

Very serious marine casualty

JUNE 2021

HBMCI conducts the safety investigation of issued marine casualty. The content of this Interim Report is based on current available information and data collected and analyzed during the safety investigation process into captioned marine casualty.
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 data provided by this Interim Report.
All times quoted are local times unless otherwise stated.

M/V NODUS

M/V NODUS is a 22.000 tons general cargo under Liberia flag which was launched in 2010. By the time of the examined marine casualty she was in ballast condition and crewed with 21 seafarers, including the Master. Her last port of call was Haifa/Israel.

Marine Accident Synopsis

M/V NODUS arrived in Piraeus anchorage on 31 May 2020. Upon her arrival the engine crew reported to the Master that a water leakage was observed at the auxiliary's boiler chamber´s bottom. Specifically the water tubes of the boiler were found corroded and needed be replaced. Following, the Master reported the damage to the managing company and a local repairing company was arranged to carry out the repairs on the following day. On 01 June 2020 at approximately 09:00 the owner of the contracting repairing company and four technicians that were hired by his company boarded NODUS. Their working schedule ranged from approximately 10:30 LT until night hours, that corresponds to approximately 10 -12 hours every day with short breaks. Two of them, the casualty Technician who was a specialized metal worker and his Assistant were assigned to carry out the repairs in the boiler.

On 05 June 2020 all water tubes of the boiler had been replaced and the chamber was filled with water, in order for the engine crew to check its operation and water tightness. During the check a minor leakage was spotted by the engine crew at the space directly below the bottom of the boiler´s chamber, where the furnace is fitted and the Technician and his Assistant were respectively informed. Although the boiler was to be drained, however, 20-30 cm of water was reported to had been remained. The boiler´s confined space was vented by a portable air pump that was supplying air through an air tube. The Technician entered into the boiler in order to check the water leakage. Due to the restricted working area, his Assistant could only see his back and that he was sweating. For this reason it was reported that the Technician had asked him to increase the air supply in the boiler. Shortly after the Technician spotted the water leakage and used an oxygen flame torch to seal it. When he completed the repair, he passed all the equipment to his Assistant and asked for a portable hand lamp to visually check the work carried out. However, probably due to the confined space inside the boiler, the portable hand lamp fell from the Technician's hand and the glass cover around the lamp and the lamp itself broke. Following, as per the reports collected, he passed to his Assistant some broken pieces of the lamp´s glass cover. At that moment and while the Technician was ready to exit the boiler, his Assistant heard him letting out a strange roar and realized that he couldn't breathe, and in parallel noticed smoke coming from his body and saw him collapsing.

The Assistant alerted the other technicians as well as the engine crew who was in the engine control room by that time. Following, two members of the vessel's emergency response team entered the boiler with breathing apparatus and got the technician out. First aid was administered to the casualty but unfortunate he did not respond. The local Coast Guard Authority was informed by the Master and the casualty was transferred ashore to the nearest hospital where he was pronounced dead.

Investigation - initial findings

The technical investigation conducted so far, identified that:

- the repairs carried out on board were not reported in advance to the competent Coast Guard Authority and resultantly the permission required by the respective Greek legislation was not issued;
- the power supply of the portable hand lamp was 220v and no inverter was used, as required when repairs are carried out inside the engine room by the Greek legislation (up to 42V).
- The repair works had not been properly planned and were not adequately supervised or controlled leading to unsafe working conditions;
- no toolbox meeting was carried out between the contractor or the technicians with the Master and/or the Chief Engineer, in order to agree on the safety measures to be implemented, before the commencement of the works and plan the contingency actions to be followed in case of emergency;
- Based on the post mortem report, it is highly possible that the technician´s actions may have been impaired by the effects of illicit substances;

Final Investigation Report

The draft safety Investigation report when finalized will be circulated to involved and interested parties for consultation according to the provisions of EU regulation 1286/2011.

HBMCI
Hellenic Bureau for Marine Casualties Investigation

Marine casualty Safety Investigation Law 4033/2011 as amended and applies
(Conjunction extract of art. 1.b, 4.1.a & 4.1.b)

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. The sole objective of the conduct of a safety investigation is to ascertain the circumstances that caused the marine accident or incident through analysis, to draw useful conclusions and lessons learned that may lead, if necessary, to safety recommendations or proposals addressed to parties or stakeholders involved in order to take remedial actions, aiming to prevent or avoid future marine accidents.

Grigoriou Lambraki Street 150
P.c 185 18
Piraeus

Tel: 213 1371968
213 1371409
210 1371267
Fax: 213 1371269
Email: hbmci@yna.gov.gr
Website: www.hbmci.gov.gr

FACTUAL INFORMATION

SHIPS PARTICULARS

Name	**NODUS**
Flag	LIBERIA
Port and number of Registry	MONROVIA 19688
Ship´s type	GENERAL CARGO
IMO	9497464
Call sign	D5VR3
LOA	179,5 m
Breadth	27.7 m
Year of built	2010
Shipyard	QIDONG DAODA HEAVY INDUSTRY CO. LTD
Construction	Steel
Gross Tonnage	22.064 Tons
Net Tonnage	11.930 Tons
Engine / Power	WARTSILA / 8.730 KW x 127 RPM
Classification Society	KOREAN REGISTER OF SHIPPING
Minimum Safe Manning	13

Voyage Particulars

Last port of call	HAIFA /ISRAEL
Trading Area	International Voyages
Cargo on board	BALLAST
Crew on board	21

Marine Casualty Information

Date & time	05/06/2020 at 21:30 LT
Type of marine casualty	Very serious marine casualty
Weather & environmental conditions	Visibility Good, SE wind 5 bf , night time
Location of casualty	Inside auxiliary boiler
Damages to ship	None
Fatalities / injuries / pollution	One metal worker (shore personnel) Greek nationality /none/none