



Interview with Chief Engineer

Shipping Company (operator): NDSM
Name: KIM Byeong-gwon



Q How do you typically begin work?

A During the Tool Box Meeting prior to work, we have a case-by-case discussion on issues from the previous day as well as risks and potential problems that could arise on that day. Work begins after the discussion.

Q How do you manage marine incidents?

A In accordance with the company's regulations, we select at least three marine incidents per month and send them to the company. Feedback from the company is shared with the crew during the safety quality meeting.

Q What do you think was the cause of the 'marine incident involving an eruption of high-temperature/high-pressure F.O during cleaning of the F.O strainer of the boiler that nearly produced casualties'?

A When handling high-temperature F.O, lack of attention to vents can cause an F.O eruption when opening the cover as a result of residual pressure. I think that the bolt was loosened hastily without removing the residual pressure first.

Q What measures could be taken to improve or prevent such incidents?

A Compliance with safety procedures. The temperature and the pressure must sufficiently be lowered by starting the vent and stopping heating after closing the F.O pump and the entry and exit valve. When opening the cover, the bolt should be unfastened slowly to avoid a potential eruption of F.O.

Q Do marine incident reports help to prevent accidents?

A Yes. Case studies help us to understand the wide range of situations that can occur during work and allows us to prepare against potential risks.

Q Do you have any other comments on marine incident reporting?

A I believe maritime incident reporting is an effective system that prevents potential incidents in advance, thereby avoiding casualties and machinery accidents.



Basic Terms for Safe Shipping

- 1. Priority give-way vessel** : Barges, short boats, and ships of less than 20 gross tonnage, which must avoid the path of other ships in or near the water zone of a trade port.
※ Modified expression (miscellaneous vessel → priority give-way vessel)
The term 'miscellaneous vessel' in the Public Order in Open Ports Act was changed to 'priority give-way vessel' in the Act on the Arrival, Departure, Etc. of Ships
- 2. Stand-on vessel** : The vessel that is on the starboard side of the other vessel when two vessels are in sight of one another.
- 3. Give-way vessel** : The vessel that is on the port side of the other vessel when two vessels are in sight of one another.



Maritime Safety Quiz

- ① Because accidents at sea can lead to casualties and damages to shipping, development of measures to eliminate OOOOOO is urgent.
- ② OOOOOOOO is an organization that uses advanced scientific equipment to observe, inform, suggest, advise and guide ships within its control zone for marine traffic control, maintenance of order and safe navigation and provides information necessary for management of ports.
- ③ Vessels must undergo a thorough OOO inspection prior to port entry to prevent oo accidents. Also, approaching OO should be refrained until the outgoing vessel has completely left the port.
- ④ Before unfastening equipment in the engine room for cleaning, OOOO caused by oil mist from high-temperature and high-pressure should be removed.
- ⑤ If the OOO is not completely detached from the bollard on land at departure, excessive oo can occur, instigating an accident as a result of OOO. Therefore, field inspection must be conducted scrupulously.
- ⑥ Prevent accidents during work through OOOOO before work and undertake operations after a case-by-case discussion on potential issues.
- ⑦ When there are two vessels in sight of one another, the vessel facing the port side (red light) of the other vessel is called OOO.
- ⑧ The vessel that must avoid the path of other vessels in or near the water zone of trade ports is called OOOOO and refers to barges, short boats, and ships of less than 20 gross tonnage.



5 Winners of the Puzzle on Marine Safety from the 1st Newsletter

Lee, Jong-su (Busan), Park, Gyeong-min (Busan),
Choi, Jeong-hwa (Tongyeong), Kim, Seon-gyo (Suwon),
Yang, Yun-jong (Seosan)

- **Submission:** Korean Maritime Safety Tribunal (www.kmst.go.kr)
- **Deadline:** May 30, 2019
- **Winner announcement:** 3rd Newsletter (around May 2019), notified individually
- **Prize:** 50,000 won gift certificate (10 persons)

2nd Issue

Marine Incident
Reporting YES!!
Punishment NO!!
Identity security YES!!



First Step to Preventing Marine Casualty

Marine Incident Newsletter

● Marine Incident ●

A marine incident means an event, or sequence of events, other than a Marine Casualty, which has occurred directly in connection with the operations of a ship that endangered, or if not corrected, would endanger the safety of the ship, its occupants or any other person or the environment.

However, a Marine Incident does not include a deliberate act or omission, with the intention to cause harm to the safety of a ship, an individual or the environment.

- IMO Casualty Investigation Code 2.10 -



Ministry of Oceans and Fisheries
Korea Maritime Safety Tribunal



Joining the 2nd Marine Incident Newsletter

〈Tae Soon Chung〉

Chairman of Korea Shipowners' Association

As marine accidents of various scale of the past indicate, marine accidents can take a significant toll including human casualties and ecosystem destruction caused by pollution. According to the statistics, the main cause of marine incidents are non-compliance and negligence to safety regulations and precautions. Based on Heinrich's Law, we know that continuous occurrence of such marine incidents can lead to major accidents. At a time of severe challenges facing the shipping industry as a result of persistent slump, accidents at sea can also generate serious damages to shipping. Therefore, developing measures to eliminate potential risks is an urgent matter at hand. Furthermore, as Korea is surrounded by water on three fronts, shipping power and safety management must be strengthened from national economy and security perspectives. In order to prevent marine accidents and avoid their recurrence, the shipping industry must actively participate in the reporting system of marine incidents and cooperate to achieve the objectives of this publication. I hope that the Marine Incident Newsletter will lay the groundwork for growth to build a safer shipping industry in Korea.



What is marine incident reporting system?

In order to prevent marine accidents, the owner or operator of a ship shall inform the Chief Investigator of the Korean Tribunal of a near-miss that occurs in connection with the operation of the ship.

(Article 31-2(1) of the Act on the Investigation of and Inquiry into Marine Accidents)

★ As CI Code became effective in 2010, IMO recommended management of marine incidents to its member countries. Accordingly, the reporting system was stated in the domestic law in 2011.

★ Confidentiality of the identity of the reporter

The Chief Investigator of the Korean Tribunal shall not disclose the identity of a person who informs of a near-miss, contrary to the person's intention. (Article 31-2(3) of the Act on the Investigation of and Inquiry into Marine Accidents)

Contact to report : website www.kmst.go.kr
e-mail kmst_special@korea.kr



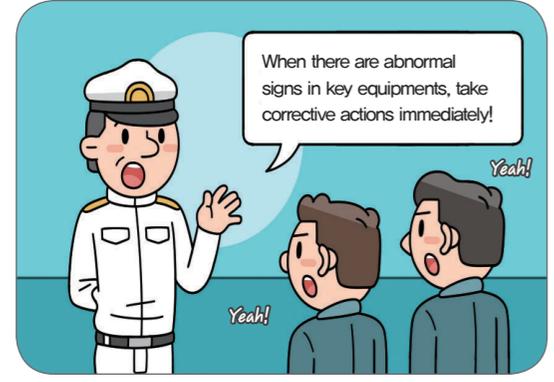
Real Case

Accident caused due to negligence of marine incidents

Collision and stranding due to operation without appropriate repairs while knowing abnormal status of the main engine



The Vessel Traffic Service Center confirmed that a general cargo, A, was dragging anchor due to strong wind and suggested to heave anchor and move to the outer port but A ignored it. When A continued to drag anchor, it tried using the main engine but it did not start. Eventually, it collided with an oil tanker, B, that was anchored close-by and stranded it at a nearby coast.



How did it happen?(Potential factors)

- Ignorance of frequent abnormal signs in the main engine
- Non-functioning of the main engine at a time of urgent need

Must comply!(Preventive lesson)

- Take corrective measures immediately after identifying the cause of the abnormality in key equipments



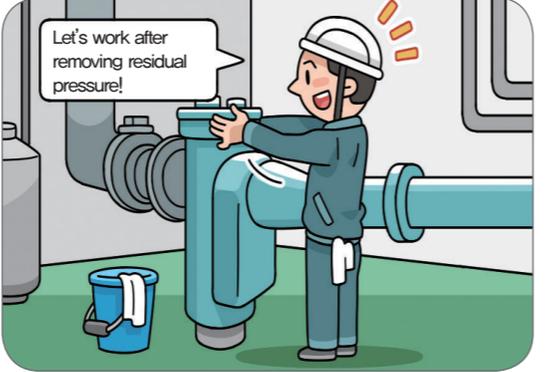
Case 1 Check for residual pressure before operation!

Nearly caused an injury due to explosion of F.O from high-temperature/high-pressure while cleaning the F.O strainer of the boiler



The 3rd engineer almost got scalded by remaining oil mist from high temperature and high pressure remaining while opening the cover to clean the F.O strainer of the boiler. Afterwards, the strainer air vent was opened to remove the remaining pressure before work. This is a marine incident that could have caused an injury if the high-temperature/high-pressure oil mist was sprayed on the body.

* Strainer: Filter installed to remove the solid compound in oil



How did it happen?(Potential factors)

- Residual pressure was not removed using the strainer air vent.
- The bolt was unfastened too hastily without considering the release of F.O when opening the cover.

Must comply!(Preventive lesson)

- Hold a tool box meeting before work, conduct preliminary risk assessment, comply with work procedure
- Remove the internal residual pressure using the strainer air vent
- Do not conduct work hastily



Case 2 Check to see the berth is empty in advance!

Nearly collided with an outgoing vessel while waiting to dock near the berth



While approaching the pier on self-pilot to dock, the ship checked that the outgoing ship docked at its destined berth has not yet left. It reported the plan to dock to the VTS but there was no response. So the ship approached the berth closely and decided to wait there with the main engine off. While the outgoing ship almost collided with the incoming ship due to a gust of wind, the collision was avoided owing to a quick use of the main engine by the incoming ship.



How did it happen?(Potential factors)

- The ship entered the port even though the outgoing ship had not left yet, idly thinking that it would be fine and hoping to dock quickly, and waited closely to the outgoing ship.

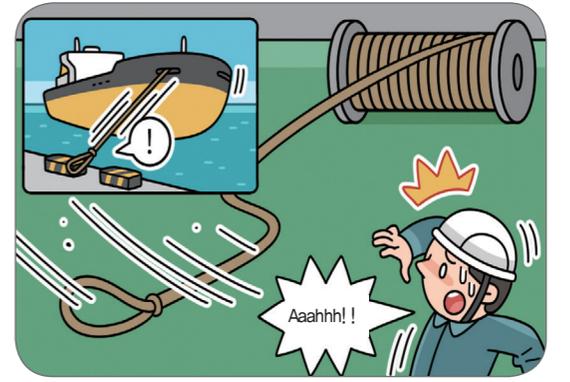
Must comply!(Preventive lesson)

- Check the possibility of docking with the VTS and wait at an anchorage safely and avoid approaching the berth until the outgoing ship leaves the dock completely



Case 3 Keep a watch on the mooring rope until the end!

Mooring rope of powerful tension nearly caused a casualty



After the captain ordered "All line, Let go," the 2nd officer at the stern checked that all mooring ropes had fall from the bollard and ordered to retrieve the spring line. Although the end of the spring line had gotten caught at the control bump of the pier, the 2nd officer did not notice it and helped to organize other mooring ropes. Eventually, the spring line with powerful tension bounced from the end of the pier almost hitting a crew at work. At the time, there were no injury as the freeboard of the ship was high and the crew had moved to a safe area. However, it was a frightful marine incident that could have even caused a casualty.



How did it happen?(Potential factors)

- Failure to check complete removal of the mooring rope from the pier structure and absence of tension
- Lack of focus due to simultaneous work conducted by the crew on duty

Must comply!(Preventive lesson)

- Staff in charge of mooring must check the status of the mooring rope until the end to detect any signs of danger, thereby securing the safety of the crew.
- Before mooring, deepen the understanding of the crew on safety precautions involving risk of snapback and potential generation of unintended tension that could arise from barriers, and other factors through TBM.

* Snapback: Area where mooring ropes could whip back and injure people