



The
Swedish
Club

MONTHLY
SAFETY
SCENARIO

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Case Study - Accidental Fuel Oil Spill in Port

A container vessel arrived at Port A, where it berthed at the terminal to discharge and load containers. To correct a list, the crew initiated de-ballasting operations from Ballast Tank No. 7 (starboard side). Undiscovered to the crew, a fracture had developed in the boundary bulkhead between Ballast Tank No. 7 and the adjacent Heavy Fuel Oil (HFO) Tank No. 2 (starboard), allowing heavy fuel oil to gradually seep into the ballast tank.

At approximately 09:30 local time, the crew commenced pumping out about 240 cubic meters of ballast water. Nearly an hour later, around 10:20 local time, deck personnel observed an oil sheen forming on the water surface between the vessel's starboard side and the quay. The crew immediately halted the ballast discharge and promptly activated the Shipboard Oil Pollution Emergency Plan (SOPEP).

Upon notification via VHF radio, port authorities immediately suspended container operations. A local spill-response

contractor was quickly mobilized, deploying containment booms and absorbent materials to control and mitigate the oil spill. Containment measures allowed container operations to safely resume by 20:00 local time. Subsequently, the vessel shifted to another berth at approximately 23:00 local time to facilitate detailed inspections and repairs.

Inspections carried out between February 11 and 23 revealed the crack in the boundary plating at the frame level within HFO Tank No. 2, intensified by corrosion and pitting within Ballast Tank No. 7. Both tanks were emptied, cleaned, thoroughly inspected, and isolated to prevent further leakage. Hull cleaning was also performed at the vessel's waterline to remove residual oil. The vessel departed Port A on February 23 under temporary class conditions mandating permanent repairs by a stipulated deadline.

The incident arose from several key issues: primarily, structural degradation due to corrosion and unnoticed cross-contamination between adjacent tanks.





Questions

When discussing this case please consider that the actions taken at the time made sense for all involved. Do not only judge but also ask why you think these actions were taken and could this happen on your vessel?

- Does our SMS address these risks?
- What sections of our SMS would have been breached if any?
- How often are internal tank inspections performed onboard?
- What signs might indicate potential contamination between adjacent tanks?
- Are crew members sufficiently trained in recognizing early signs of tank leaks?
- What measures can be implemented to improve monitoring of ballast water conditions?
- Are current corrosion protection practices adequate, and how can they be enhanced?
- How frequently are SOPEP drills conducted, and how effective are they?
- What is the procedure for communicating with port authorities during environmental incidents?
- What lessons can be learned from this incident to reinforce safety culture onboard?
- What additional equipment or technology could improve early leak detection onboard?
- How can crew vigilance be improved to detect structural deficiencies earlier?
- What additional training or practical drills could help the crew be better prepared for real-life scenarios?
- What support do we need from management (additional training, updated procedures, more resources) to strengthen our procedures?
- What immediate, actionable steps can we take from today's discussion?