

## MONTHLY SAFETY SCENARIO

NOVEMBER 2023

# Main engine failure caused serious contact accident

It was night and the vessel was in ballast condition and heading to port. The pilot boarded and two tugs were connected: one on the bow and one on the stern. Prior to the pilot boarding, the engine had been tested and the pre-arrival checks had been completed.

At the pilot brief the pilot was given the pilot card and he informed the Master that the plan was to berth on the starboard side. To be able to do this the vessel was required to carry out a 180° turn to port. The Master had lined up the vessel and started to turn when the main engine failed to respond. He ordered slow astern but there was no response. Several repeated orders, from slow astern to full astern, were commanded from the bridge telegraph but with no response.

The main engine was a medium speed four-stroke engine driving a fixed pitch propeller through a gearbox controlled

via a Woodward governor and reversing effected by the main gearbox. Control was carried out via the electronic bridge control.

On this vessel, during manoeuvring the Chief Engineer was customarily on the bridge. He was operating the engine telegraph and attempted to transfer control to the engine control room. At the same time the pilot requested the two assisting tugs to attempt to turn the vessel away from danger. Just in front of the vessel were a tug and a moored barge, which the vessel hit at a speed of five knots.

The tug was seriously damaged and sank rapidly. The ship suffered significant damage to the bulbous bow and the forepeak was filled with water.

After an internal investigation it was found that one of the solenoid valves had





failed. These are responsible for regulating and stopping the air signal to the governor that controls the main engine speed. Due to this failure the engine could not be stopped, or the gearbox set astern.

## 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?

- 1.** What were the immediate causes of this accident?
- 2.** Is there a risk that this kind of accident could happen on our vessel?
- 3.** How often do we inspect our solenoid valves?
- 4.** Is this job included in our PMS?
- 5.** Is the job interval sufficient?
- 6.** How could this accident have been prevented?
- 7.** What sections of our SMS would have been breached if any?

- 8.** Is our SMS sufficient to prevent this kind of accident?
- 9.** If procedures were breached why do you think this was the case?
- 10.** Do we have a risk assessment on board that addresses these risks?
- 11.** How can we learn from this?