

Allision

Less Serious Casualty: Allision with a quay wall

What happened?

A tanker with a gross tonnage of 4000 was about to leave port. After reaching the main fairway, steering was switched from manual to autopilot. This resulted in a short-term steering gear control failure, which caused the rudder to deflect automatically to a large rudder angle within a short space of time. Shortly afterwards, the rudder returned to the midships position. Nevertheless, the vessel began turning sharply. Mitigation measures initiated by the ship's command were unable to stop the turning motion. However, these measures reduced the speed and thus the force of impact with a quay wall. Major damage was caused to the bow of the vessel.

Why?

During the construction phase of the ship, data transmission from autopilot to steering gear control was not configured according to requirements. This was noticed neither during final inspection nor during any subsequent inspections. The result was an excessive switching frequency at two relays of the steering gear control system, leading to premature wear and finally short-term failure of one of these relays.

Insufficient knowledge on the part of the bridge crew regarding the required conditions when switching between different control modes meant that they could not regain steering control.

What can we learn?

- The analogue and digital data flow between the components of the steering gear control system should be checked for correct functionality during the final inspection of the vessel.
- It should be ensured that all members of the bridge crew are familiar with switching between the different control modes, so that deviations from standard situations can be responded to appropriately.

Who may benefit?

Classification societies, ship owners, ship operators, seafarers