

LESS SERIOUS MARINE CASUALTY

Less serious marine casualty: Collision in the Kiel Canal in dense fog

What happened?

A coaster was navigating the Kiel Canal in extremely dense fog. A canal ferry crossing was located in the forward direction just behind a railway bridge over the canal. The ferry cast off from the northern bank of the canal at precisely the moment at which the coaster's bow reached the railway bridge. As the ferry was about to approach the southern ferry terminal with several people and vehicles on board, her starboard side was caught by the bow of the coaster. Her starboard bow scraped past the ferry's side superstructure, significantly deforming it in the process. The ferry pilot managed to manoeuvre the ferry back onto the path towards the ferry terminal after the collision-induced course deviation and dock there. Nobody on board was injured. The coaster suffered only very minor damage during the collision and was able to continue her voyage.

Why did it happen?

- The ferry failed to observe her obligation to wait for the coaster to pass before beginning the canal crossing. The ferry pilot did not pay attention to the approaching vessel even after casting off but rather concentrated solely on steering unerringly for the opposite ferry terminal – which could only be located by radar until the middle of the canal – due to the extremely poor visibility.
- The ferry's AIS system had a technical fault. This not only affected the reception function but rather also meant that the ship's own GPS position and/or movement as she left the ferry terminal were not transmitted or displayed realistically. Instead, the AIS signal on the relevant display on board the coaster (as well as in the reception system of the vessel traffic service) gave the false impression that the ferry was still at the northern ferry terminal until immediately before the collision.
- It was not possible to observe the ferry's canal crossing – which could not be visually identified up until the time of the collision due to the dense fog – via radar on the bridge of the coaster. When the ferry cast off, she was in the railway bridge's radar shadow from the coaster's point of view and after the coaster had passed the bridge both vessels had already converged to such an extent that proper radar detection was no longer technically possible. Accordingly, collision prevention measures could not be initiated.

What can we learn from this?

- When sailing on rivers or canals it is important to consider that bridges located ahead can impair the veracity of radar images significantly. In particular, this applies to objects located directly behind a bridge, which may be completely concealed by the shadow of the respective structure.
- Although AIS provides valuable assistance in detecting vessels and their movements in a timely manner, it is important to consider that the technology in question may be defective, misconfigured or exposed to interference. The above factors may mean that the movement pattern displayed on the receiver side of another vessel with which a collision may occur does not correspond to reality.
- Insofar as both a radar echo and an AIS signal are received from another vessel with which a collision may occur but not displayed congruently, it must be carefully investigated whether it really does concern one and the same object.

Who can implement/observe it?

Ship's commands, pilots