



# Bundesstelle für Seeunfalluntersuchung Federal Bureau of Maritime Casualty Investigation

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The Federal Bureau of Maritime Casualty Investigation (BSU) published the English version of the investigation report No 52/18 on 18 December 2019. The report deals with the allision of the container ship AKACIA with the lock gate in Kiel-Holtenau. The report is available on

[https://www.bsu-bund.de/EN/Publications/Publications\\_node.html](https://www.bsu-bund.de/EN/Publications/Publications_node.html)

for download.

### Allision of the container ship AKACIA with a lock gate of the Kiel Canal in Kiel-Holtenau

On 19 February 2018, the full container ship AKACIA, sailing under Portuguese flag, was en route from Bremerhaven to St. Petersburg. After having transited the Kiel Canal, the ship was scheduled to enter the Neue Südschleuse lock with pilot guidance at about midnight. While carrying out different manoeuvres with the controllable pitch propeller system (CPP) during the approach of the lock, a blockage of the proportional valve of the CPP system's hydraulic system occurred. This valve controls the oil flow to the hydraulic cylinder within the propeller hub. Due to the blockage, the hydraulic flow distribution could neither be influenced by the normal operating mode nor the backup-control, so that the propeller turned to the maximum in the direction ahead. The ship increased her speed close to the lock to more than 10 knots. Neither dropping both anchors nor activating the main engines emergency stop could reduce the speed essentially. Therefore, the AKACIA struck the seaward lock gate with a speed of 8 knots at 2354. She broke through the gate with a part of her forecastle and sustained heavy damages to her bow area. The lock gate sustained considerable damages as well.

Nobody lost their life or was injured due to the collision with the lock gate and no environmental pollution occurred.

The investigation revealed that the propeller struck an unknown object at an unknown time before. This contact caused damages to the propeller blades and parts within the propeller hub. Consequently, small fragments were then transported through the hydraulic system causing the described unexpected blockage when the ship approached the lock.

All investigation reports, safety recommendations and other information published by the BSU are available on

<https://www.bsu-bund.de/EN/Publications>.

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Director