Safety recommendation no. 166

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Safety deficit	On 20 April 2016 at approx. 13:09, the motorvessel Albis (MS Albis) belonging to the Zürichsee-Schifffahrtsgesellschaft (ZSG) collided with the jetty while mooring in Küsnacht (ZH). Several people were injured in the collision. Extensive damage was caused to the ship and the jetty. The collision beween MV Albis and the jetty in Küsnacht on 20 April 2016 can be attributed to the fact that it was not possible to take over driving control on the port bridge-wing control stand. As the records for some important parameters for the accident investigation are lacking, it cannot be said conclusively whether purely technical or purely human factors were the cause. The following contributed to the accident: • Unfavourable decisions and prioritisation regarding - the time at which the switch was made from the main bridge to the bridge-wing control stand; this left little room to deal with unforeseen events; - rapid acceleration shortly before the mooring manoeuvre from the main control stand, considering the distance and the approach angle to the mooring jetty as well as the given topology. • A lack of training on dealing with possible system failures. • Inadequate or missing guidelines, controls and monitoring in the company with regard to - procedures, plans and training courses which raise awareness of system failures and the emergency procedures in response to them, and which also provide regular opportunities for shipmasters to address issues relevant to the safe navigation of passenger ships; - applying lessons learned from safety-relevant notifications. The following associated risks were identified: • The technical limits of the steering system are not sufficiently considered in the current operating processes. • No 'Failure/Malfunction of motor steering' scenario exists. • There is no gathering of data that is required to analyse causes and to improve the system long-term. • The ZSG does not have a concept for developing and monitoring a safety management system. In particular, the company does not ensure that its shipmasters read, understand and apply appropriate instructions on all lessons learned regarding the safe navigation of its vessels. • Safety-relevant and reportable incidents are not reported to the FOT as the ZSG does not have up-to-date instructions. As a result, the FOT cannot carry out some oversight functions that are vital to safety in the system. In the mooring manoeuvre, the shipmaster did not have sufficient

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	instructions, experience or risk awareness with regard to possible system failures. The choice of speed, the angle of approach and the late assumption of command on the bridge-wing control stand suggest that the shipmaster had full confidence in the technology and in his own driving and operating skills. The investigation also showed that there are problems of timetable compliance and safety; in the event of a system failure or an unexpected reaction, no time was available to initiate an appropriate procedure to prevent a collision.
Safety recommendation	The Federal Office of Transport FOT should require the ship companies to train and test crew members in safety-relevant system failures and irregularities and suitable emergency procedures. Shipmasters should also have the opportunity to rehearse the procedures periodically so that they can be applied intuitively in the case of an incident.
Addressees	Bundesamt für Verkehr
Stage of the implementation	Partially implemented. The Federal Office of Transport (FOT) confirms that it has added the new role 'Failure of drive control' to the list of safety roles in the draft revision of the IP-ShipBO (2021). The STSB safety recommendation will thus be implemented when the revised IP-ShipBO comes into force (planned for spring 2023).
Investigation report concerning the safety recommendation	Vorbericht Schlussbericht

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