

MAIB Report on the investigation of the grounding of *Muros* Haisborough Sand, North Sea, 3 December 2016

In the early hours of 3 December 2016, the bulk carrier *Muros* ran aground on Haisborough Sand, eight miles off the east coast of England (Norfolk) and the Master's attempts to manoeuvre the vessel clear were unsuccessful due to a falling tide. There were no injuries and no pollution, but damage to *Muros*'s rudder necessitated the vessel, refloated six days later, being towed to Rotterdam for repair.

When *Muros* grounded, the vessel was following a passage plan shown on its electronic chart and display information system (ECDIS). The plan had recently been revised on the ECDIS by the OOW who then used the system to monitor the vessel's position.

Safety Issues

The (UK) Marine Accident Investigation Branch (MAIB) in its investigation found that the revised passage plan was unsafe as the visual check of the revised route was not conducted on the ECDIS at an appropriate scale.

It was found that the vessel's Master directed the OOW to revise the route but he did not see or approve it.

Furthermore, ECDIS safeguards had been ignored, overlooked or disabled.

Additionally, the OOW's performance was probably adversely affected by a low state of alertness.

Finally it was found that ECDIS use on board *Muros* was not as envisaged by regulators or equipment manufacturers.

In conclusion

The MAIB has recently investigated several grounding incidents in which the way vessels' ECDIS was configured and utilised was contributory.

There is increasing evidence to suggest that first generation ECDIS systems were designed primarily to comply with the performance standards required by the IMO, as these systems became a mandatory requirement on ships, with insufficient attention being given to the needs of the end user.

As a consequence, ECDIS systems are often not intuitive to use and lack the functionality needed to accommodate accurate passage planning in confined

waters. This situation has led to seafarers using ECDIS in ways which are at variance with the instructions and guidance provided by the manufacturers and/or expected by regulators.

Therefore the MAIB is conducting a safety study, in collaboration with the Danish Maritime Accident Investigation Board, to more fully understand why operators are not using ECDIS as envisaged by regulators and system manufacturers.

Here the overarching objective is to provide comprehensive data that can be used to improve the functionality of future ECDIS systems by encouraging the greater use of operator experience and human centred design principles.

Readers may wish to see the full MAIB report into the grounding of *Muros* available here:

https://assets.publishing.service.gov.uk/media/59e601e7ed915d6aadcdaf18/MAIBInvReport22_2017.pdf

Photo:

mv Muros

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