

INTERNATIONAL MARITIME ORGANIZATION



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SUB-COMMITTEE ON SAFETY OF  
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51st session  
Agenda item 18

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**ANY OTHER BUSINESS**

**Bridge navigational watch alarm system**

**Submitted by Denmark**

**SUMMARY**

<b>Executive summary:</b>	The document informs the Sub-Committee of an accident in which a cargo ship collided with a bridge and that Denmark intends to propose to MSC 81 that ships should be equipped with, and have in operation a bridge navigational watch alarm system (BNWAS)
<b>Action to be taken:</b>	Paragraph 8
<b>Related documents:</b>	Resolution MSC.128(75)

**Introduction**

1 In 1998, the Danish Maritime Authority analysed incidents of groundings and collisions related to navigational watch-keeping on board ships in the period 1993 to 1998. The analysis was discussed with the shipping organisations and resulted in national regulations regarding development of a bridge navigational watch alarm system that does not cause inconvenience to the operator. The system may include sensors that detect activity on the bridge, so that the operator does not have to press a reset button all the time. The system is now required in Danish ships with a length of 15 m and above with wheelhouse except for passenger ships on domestic routes.

2 The purpose of a bridge navigational watch alarm system is to monitor bridge activity and detect operator disability, which could lead to maritime accidents. The system monitors the awareness of the Officer of the Watch (OOW) and automatically alerts the master or another qualified OOW if for any reason the OOW becomes incapable of performing the OOW's duties. This purpose is achieved by a series of indications and alarms to alert first the OOW and, if he is not responding, then to alert the master or another qualified OOW.

3 Additionally, the bridge navigational watch alarm system may provide the OOW with a means of calling for immediate assistance if required. The system should be operational whenever the ship's heading or track control system is engaged, unless inhibited by the master.

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4 On 3 March 2005, a cargo ship of 3120 gross tonnage flying the flag of another contracting Member State failed to follow its planned track. Apparently there was a lack of control on the ship's navigation bridge. The result was a collision with the combined road and railway bridge across the Great Belt in Denmark. The forward mast, two large deck cranes, the top of the accommodation including all of the navigation bridge and the funnel of the ship were destroyed. The bridge across the Great Belt sustained considerable damage and was closed to traffic for six hours until the damage to the structure had been checked. The chief officer, who was on duty on the ship's navigation bridge, was killed when the ship's navigation bridge was demolished by the impact. The ship's master and cook were seriously injured. It was later found that the chief officer (OOV) had a blood alcohol level of 1,55‰ (0,155%). The ship was equipped with a bridge navigational watch alarm system of a simple type, but this was switched off. Denmark will submit an accident report to IMO in due course.

5 In the opinion of Denmark, a bridge navigational watch alarm system, which had been functioning, would have signalled to the master or another responsible officer that the navigation officer on duty was not alert. That would probably have prevented the ship from colliding with the bridge across the Great Belt.

6 The International Maritime Organization has adopted resolution MSC.128(75) on performance standards for bridge navigational watch alarm system (BNWAS). The Organisation has, however, not adopted carriage requirements or guidelines for such systems.

#### **Conclusion**

7 Based on our experience with the national implementation of regulations that require a bridge navigational watch alarm system in ships with a length of more than 15 m and observing a foreign ship colliding with the bridge across the Great Belt, Denmark will propose that carriage requirements for bridge navigational watch alarm systems are put on the agenda of the NAV Sub-Committee. Denmark plans to submit a proposal to this effect to MSC 81.

#### **Action requested of the Sub-Committee**

8 The Sub-Committee is invited to note the information provided and take action as appropriate.