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## **Totem BNWAS**

Bridge Navigation Watch Alarm Systems (BNWAS) are required to be installed on all vessels above 150 GT, within a schedule of 3 years starting from July 2011. BNWAS is designed to ascertain that the navigation bridge will be manned by a competent navigator at all times, and avoid the possible in-capacitance of the navigator from any reason including sleep or accident. Talking about crew welfare, the assurance that there is a responsible wakeful officer on top is clearly required.

BNWAS should be operated whenever the vessel is at sea, and will alarm if the officer will fail to reset the system within a pre-defined time (up to 12 minutes). Alarms will first be activated on the bridge (first stage : reminder), and if not reset then the 2<sup>nd</sup> stage will be raised :in the backup officer cabin. Failure of the backup officer to go to the bridge and reset the system will raise the 3<sup>rd</sup> and 4<sup>th</sup> stage alarms, in all panels and then the emergency alarm. Clearly, crew welfare will be adversely affected by officers that will neglect the periodical reset and disturb the crew by un-necessary alarms.

Totem BNWAS was developed by Totem Plus with simplicity in mind. The system can be installed and commissioned by the crew in few hours, using the serial communication bus between all alarm units (one-cable fits all). Setup of timers and backup officer selection is easily done directly from the LCD of the main unit display. Two officers can be designated as backup officer at any time. It helps to keep captain always informed re the situation on the bridge or train junior officers on their duty. Alarms can be selected from several different audio signals to distinguish it from other alarms on the bridge and in cabins.

The system reset can be done in three different ways: by pressing reset buttons on the bridge, by reset orders from other navigation systems capable of that function (example : ECDIS systems that can reset the BNWAS on any user command, such as the Totem ECDIS), or by movement detection by motion sensors. Movement detection in Totem Bnwas is using latest dual technology to avoid false resets: Microwave and Infrared. Such external resets (including motion detections resets) increase crew welfare in the sense that normal operation on bridge will not demand tedious manual resets by the OOW, and will not add extra pressure on a possibly overloaded navigator.

An added value, unique for Totem BNWAS : the BNWAS can be turned into a burglar alarm in port, and will alarm on any un-authorized motion on the bridge such as thieves and burglars.

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