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## Testing of Emergency Sources of Electrical Power

Notice to Owners, Masters, Skippers and Crews of Merchant Ships and Fishing Vessels

*This Note supersedes Merchant Shipping Notice 1626*

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- 1 Investigation into marine casualties has indicated that a number of incidents have occurred in which the emergency source of electrical power has not operated correctly following the loss of main power. The purpose of this Marine Guidance Note is to remind those responsible for the operation of ships that the Regulations require periodic testing of the complete emergency electrical system including any automatic starting arrangements.
- 2 There has been a requirement for testing facilities to be provided for the complete emergency electrical systems of passenger ships, cargo ships and fishing vessels since the relevant construction rules and regulations first came into force in 1952, 1965 and 1975 respectively. An equivalent requirement is included within SOLAS.
- 3 The tests should represent an electrical “black out” as far as is reasonably practicable without jeopardising the safety of the vessel. In all cases, the emergency generator should be loaded so as to ensure that it satisfactorily delivers power. It is recommended that, if practicable, the tests should be incorporated into the vessel’s weekly safety checks.
- 4 Where automatic starting arrangements are fitted, the loss of the main source of power may be simulated by opening the interconnector feeder breaker at the main switchboard. Alternatively, if an interconnector is not installed, the supply to the emergency generator “auto-start” controller may be switched off from the main source of electrical power.
- 5 Where automatic starting arrangements are not fitted the emergency generator must be manually started. If an interconnector is fitted then this may need to be switched off to permit the emergency generator to take load.
- 6 It is to be ensured that the emergency generator prime mover can be satisfactorily started by all the means fitted for this purpose including manual starting where this is provided in compliance with the Regulations and also including any cold starting arrangements.
- 7 An assessment should be made of the effect of the test on gyro compasses, computers and other sensitive equipment. Provision of uninterruptable power supplies may be considered necessary in view of the potential consequences of an unplanned black out.
- 8 An emergency generator should be run on load for sufficient time to ensure that normal running temperatures and pressures are achieved. It is recommended that the test run should be of not less than 30 minutes duration and that the load should be as near to the capacity of the generator as is practicable.
- 9 Emergency consumers should be put on load to verify their connection to the emergency switchboard, their continued satisfactory performance and in the case of diesel generator sets to minimise operation of the diesel engine on light load.

10 Inspections of United Kingdom vessels carried out by the Marine Safety Agency and port state control inspections carried out on United Kingdom vessels in foreign ports may include a test of the emergency sources of power and the

crew's familiarity with their duties related to the system. It may be of benefit to record details of regular testing in the log book for inspection by attending surveyors or port states.

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