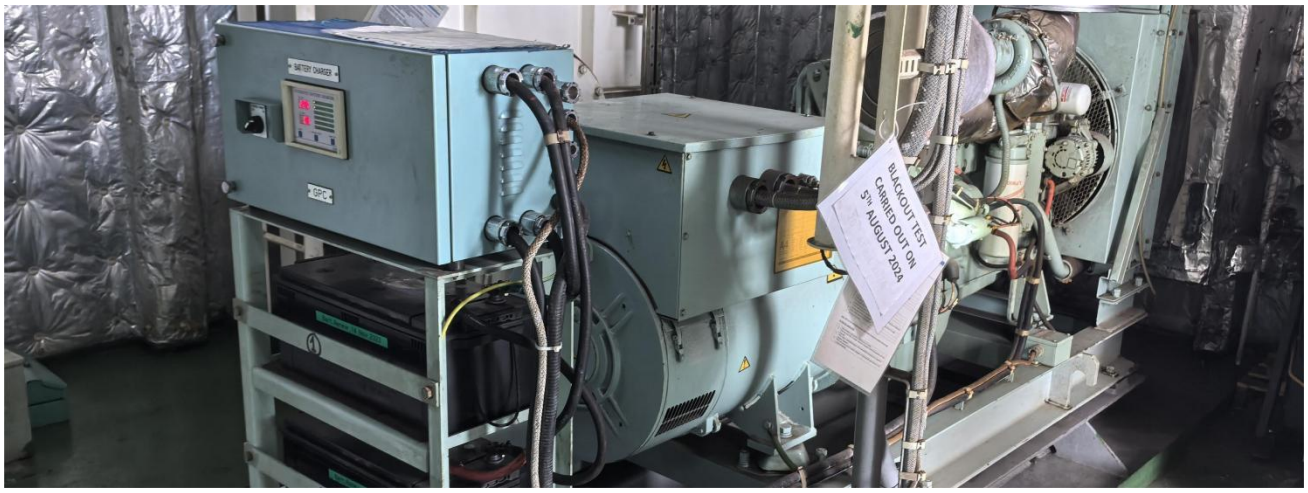
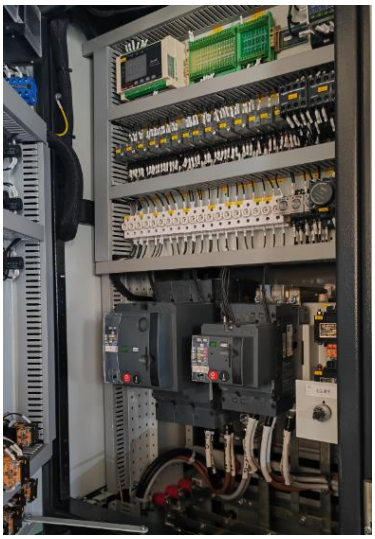
PSC DETENTION RISK ON AUTOMATICALLY START AND POWER SUPPLY FAILURE OF EMERGENCY GENERATOR



It is noted that a succession of ships have been detained recently in Tokyo MOU, Paris MOU Port State Control and some relevant Flag State Control due to the function failure of the emergency generator (E.G.). In addition, the Tokyo MOU issued the Safety Bulletin-Emergency Power Supply Testing on July, for the ships' E.G. has the Sequential Test function (simulated blackout) that was able to demonstrate a satisfactory test utilizing a Sequential Test, but when tested by disconnecting the circuit breaker between the Main Switch Board (MSB) and Emergency Switch Board (ESB) (controlled blackout), the E.G. was unable to automatically start or automatically connect to the ESB.

Case 1



July 12, 2024, Spain
PSC detention due to E.G. automatically connect to the ESB failure

Case 2

September 19, 2024, Belgium
FSC detention due to E.G. automatically started failure

CAUSES ANALYSIS

Upon further investigation, it was found that the failure of fuses or relays in the relevant control circuit of the

ESB on detained ships caused the EG to fail to automatically start and connect to the ESB. The main cause of such failures is the inadequate maintenance, inspection and testing of system equipment and electronic components.

In addition, according to the analysis of the Safety Bulletin-Emergency Power Supply Testing issued by Tokyo MOU, some of the failure incidents may also have been caused by design problems in the relevant control circuit of the ESB, and resulting in the E.G. cannot automatically start and supply power when ship is in blackout situation. The reason for such failures is the improper design principle of the system.

RECOMMENDATIONS FROM CHINA CLASSIFICATION SOCIETY

The management company, shipowner and crew should pay attention to the maintenance and testing of the emergency generator. However, as a result of the foregoing, the simulated blackout test may not fully meet the requirements of SOLAS Chapter II-1, Reg 43.7 regarding periodic functional testing of the emergency generator. More importantly, testing the E.G. in the simulation way for a long time will give the crew an illusion that they can successfully respond to the emergency situation when the ship has a blackout incident. This will potentially endanger lives, ships and the environment. Therefore, the China Classification Society recommends that:

1) For ships with simulated blackout function on the ESB, the shipping company should conduct controlled blackout test by disconnecting the circuit breaker between MSB and ESB to ensure the E.G. remains in normal condition when the ship under a blackout situation.

2) If the test mentioned in item 1) fails, the cause must be ascertained immediately. If the failure is caused by the improper design and the original design drawings need to be modified, please contact us in time for relevant drawings approval and on board survey. For example, the circuit breaker between the MSB and the ESB is not automatically disconnected when the main power supply fails, but only disconnect by a signal sent by Sequential Test.

3) It is recommended that the emergency generator testing procedure in ship company's Safety Management Procedures (SMS) should be updated and improved. The content should include periodic "controlled blackout test" (i.e., no simulated blackout/sequential test used) to ensure that the E.G. function required by SOLAS Chapter II-1, Reg 42.3.1/43.3.1 for the E.G. to automatically start and supply the required load in the event of a failure of the main power supply, and can be tested in a safe and practical way.

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