



**MEASURES TO HARMONIZE PORT STATE CONTROL (PSC) ACTIVITIES AND  
PROCEDURES WORLDWIDE**

**Report on the concentrated inspection campaign for  
emergency power supply testing**

**Submitted by IACS**

**SUMMARY**

*Executive summary:* This document comments on document III 12/INF.14 (Tokyo MoU) containing a report of recent activities of its PSC regimes in 2025. IACS makes this submission to raise awareness of a study considering Concentrated Inspection Campaign (CIC) examining the emergency power supply of ships and to inform all those who may be interested in cooperating with IACS on the matter of the emergency power supply testing procedures.

*Strategic direction,  
if applicable:* 1

*Output:* 1.11

*Action to be taken:* Paragraph 11

*Related document:* III 12/INF.14

**Introduction**

1 This document is submitted in accordance with the provisions of paragraph 6.12.5 of the *Organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.5/Rev.7), and provides comments on the activities of the Tokyo MoU, with its recent report contained in document III 12/INF.14.

**Background**

2 This document contains a report of a study conducted by IACS, to examine the emergency power supply of ships. Conducted between 1 January 2025 and 31 December 2025, the report summarizes statistical data based on the reports provided by all IACS members for the inspections conducted during the whole year.

3 The campaign was launched in response to concerns raised by the Tokyo MoU over risks in the testing procedures, following observations raised by port State control officers over the reliability of "simulated blackout" tests in demonstrating SOLAS compliance.

Recognizing the update provided in paragraph 5.2 of document III 12/INF.14 in respect of the Tokyo MoU Committee enhancement of inspection campaign methodologies, IACS submits this report to inform all those who may be interested in cooperating with IACS on the matter of the emergency power supply testing procedures.

4 The report concludes that further analysis is required into recurring equipment failure points; that during ISM audits, procedures for controlled blackout tests are strengthened; and further studies to standardize the design standards for emergency generator simulation tests may be considered to ensure compliance with SOLAS.

**Discussion**

5 As presented in the table below (table 1), the total number of ships inspected was 36,723, which resulted in 853 ships with an identified deficiency (2.32%):

**Table 1**

Item 1	Total number of ships inspected	36,723
Item 2	Total number of ships in which malfunction was observed	853
Item 3	Type of deficiency	
a.	Malfunction of control unit/circuit (i.e. PCB or control relay unit, etc.)	160
b.	Malfunctioned ACB	116
c.	Mis-selection of engine starting selection switch mode in emergency generator room	120
d.	Closing quick-closing valve	214
e.	Malfunction of starting arrangement	136
f.	Malfunction of engine	77
g.	No power supply to the services essential for safety in an emergency	100
h.	Port restriction/regulation	592
i.	Others (failure/malfunction)*	72
	Others (testing could not be conducted)**	69

Details of "Others" (item i in table 1 above) are as follows:

* Failure/malfunction: 72	** Testing could not be conducted: 69
No power supply to emergency light	Cargo operation
No over speed stop	Maintenance of navigation equipment powered by emergency power supply
Cooling system failure	Firmly declined by crew members or superintendents due to concerns about the impact on navigational equipment
Filters clogged	Due to the repair work was carried out in engine room, it was not suitable to carry out the blackout test
Air present in the fuel lines	Excessive water within the starting air receiver
Excessive water within the starting air receiver	Absence of the electrician

* Failure/malfunction: 72	** Testing could not be conducted: 69
Low insulation values in generator	The emergency generator type installed onboard was not arranged with the automatic starting arrangement. The transitional source of emergency electrical power supply which consists of an accumulator battery was provided onboard and maintained to supply automatically in the event of failure of main source of electrical power.
No Risk Assessment / Similar measure / Procedure for Emergency D/G controlled blackout test was established or included in Company and Shipboard SMS, Blackout drills were not regularly scheduled in the Company and Shipboard SMS	
Crew unfamiliar	

6 The type of deficiency and percentage (excluding port restriction/regulation and cases where testing could not be conducted) are shown in the figure below:

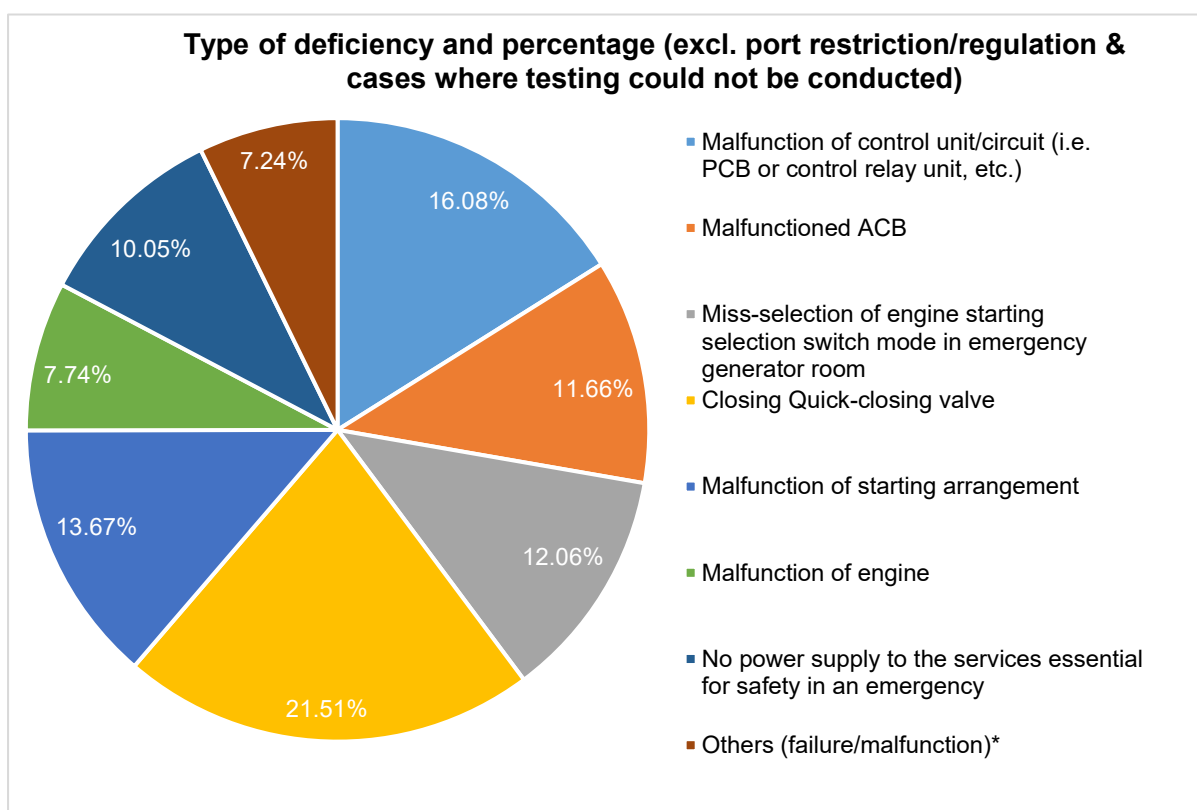


Figure 1

7 There were recurring equipment failure points of which the following are the most critical:

- .1 the closing of quick-closing valves;
- .2 control unit/circuit (PCB/relay); and
- .3 Emergency Diesel Generator (EDG) starting arrangements.

8 The recurring nature of such failures indicated industry-wide issues with equipment maintenance, installation quality or component durability. These failures directly compromise compliance with SOLAS regulations II-1/42 and II-1/43 for automatic Emergency Power Supply (EPS) activation.

9 Based on the comprehensive data analysis, the following main conclusions are drawn:

- .1 Recurring equipment failure: The closing of quick-closing valves, control unit/circuit (PCB/relay) and Emergency Diesel Generator (EDG) starting arrangement are the most critical and recurring failures which indicate industry-wide issues with equipment maintenance, installation quality or component durability. These failures directly compromise compliance with SOLAS regulations II-1/42 and II-1/43 for automatic Emergency Power Supply (EPS) activation.
- .2 SMS compliance: The notable non-equipment deficiency is lack of controlled blackout test procedures in company and shipboard SMS, which is directly contrary to SOLAS regulations II-1/42.7 and II-1/43.7 (periodic full system testing). Simulated blackout tests (via RTS/sequence test) are widely used but do not test the actual circuit paths required for real blackouts, which gives ships' engineers a false sense of readiness of the ship's emergency systems in the case of an emergency.
- .3 Operational and human factor gaps: Crew unfamiliarity with EDG operation, miss-selection of starting switch modes highlight gaps in crew training, competency and safety culture. Human error is a major contributor to malfunctions during real emergencies.

10 Based on these conclusions, IACS has identified the following potential best-practice recommendations and possible next steps:

- .1 during ISM audits, focus should be on ensuring that a procedure exists in the necessary detail for conducting a controlled blackout test for emergency diesel generators and may pay more attention to whether the testing arrangements and procedures for emergency diesel generators adequately demonstrate the functionality of the emergency power supply system as a whole, including by means of controlled blackout testing where appropriate;
- .2 IACS will consider performing a further analysis to clarify the inspection and testing cycles and requirements for high-frequency malfunctional components, such as quick-closing valves, control units, and starting devices; and
- .3 IACS will consider further studies to standardize the design standards for emergency generator simulation tests to ensure that the design complies with the requirements of SOLAS.

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

11 The Sub-Committee is invited to note the information provided.