



DEVELOPMENT OF A GOAL-BASED INSTRUMENT FOR MARITIME AUTONOMOUS SURFACE SHIPS (MASS)

Report on a survey on current issues concerning
Remote Operation Centres

CMI – Tokyo 2025

What was the purpose of the survey?

- IMO is currently working on the MASS Code
- (current) Revised timetable:
 - Non-mandatory code adopted by May 2026
 - Mandatory Code adopted by January 2030 – into effect in 2032

Location of ROC is a contentious topic

- Article 91 and 94 of UNCLOS

Article 91 Nationality of ships

1. Every State shall fix the conditions for the grant of its nationality to ships, for the registration of ships in its territory, and for the right to fly its flag. Ships have the nationality of the State whose flag they are entitled to fly. There must exist a genuine link between the State and the ship.
2. Every State shall issue to ships to which it has granted the right to fly its flag documents to that effect.

Article 94 Duties of the flag State

1. Every State shall effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag.
2. In particular every State shall:
 - (a) maintain a register of ships containing the names and particulars of ships flying its flag, except those which are excluded from generally accepted international regulations on account of their small size; and
 - (b) assume jurisdiction under its internal law over each ship flying its flag and its master, officers and crew in respect of administrative, technical and social matters concerning the ship.
3. Every State shall take such measures for ships flying its flag as are necessary to ensure safety at sea with regard, *inter alia*, to:
 - (a) the construction, equipment and seaworthiness of ships;
 - (b) the manning of ships, labour conditions and the training of crews, taking into account the applicable international instruments;
 - (c) the use of signals, the maintenance of communications and the prevention of collisions.
4. Such measures shall include those necessary to ensure:

Solution – Adoption of the ISM Model?

Control by way of audits and certification

DNV-GL
Date of issue:
2019-12-30

TYPE APPROVAL ASSESSMENT REPORT

Particulars of Assessment

Type of Assessment: ☐ Initial ☒ Periodical ☐ Renewal

Company applying for Type Approval: Hoppecke Batterien GmbH & Co.KG

Company Address: Brilon

Product Type: Batterie

Type Approval Certificate (TAC) No: TAE00001VU, TAE00001VS, TAE000025R, TAE00001VT

Revision No: 2022-06-06+2022-07-20+2022-08-24

Expiry Date:

Assessment Item	Yes	No	N/A	Remarks
Initial Assessment				
General Items ¹				

Legislating in a vacuum



Current USV Operations

Remote Operations Centres



Main takeaways....

- Location of ROC outside the territory of a Flag State is feasible
- ISM Model is viable for Flag State to exercise practical control over a ROC.
- Need for co-operation between Flag State and state where ROC located which could be regulated under the MASS Code.
 - Working/Labour Conditions
 - Connectivity and Cybersecurity
 - Jurisdictional Oversight

