



Automation in Short Sea Shipping from a safety perspective

The RBAT study

Shaping the future of European Short Sea
Shipping: Autonomous & Automated
technologies, 28 April 2021

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2.1 Safety and Security



“There is a growing interest in various applications of automation, among which may be mentioned:

(a) Propelling machinery;

(b) auxiliary machinery;

(c) cargo handling

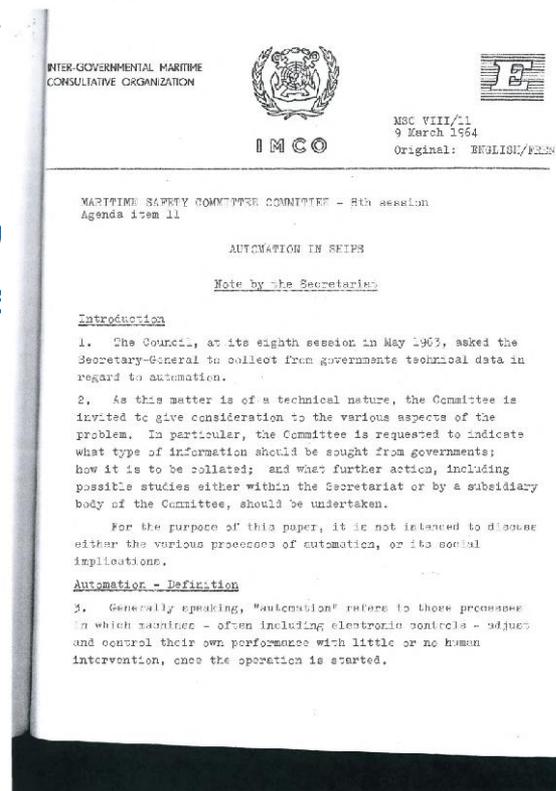
(d) navigation and

(e) communication

(f) other miscellaneous applications.”

MSC VIII/11

9 March 1964



Why autonomous or automated?

Aspirations of

- Improved safety;
- Improved sustainability;
- Financial benefits

Is it safe enough? How do we prove it?

- EMSA's activities on MASS
- The Short Sea Shipping case

EMSA's main activities on MASS

SAFEMASS study

Working on appropriate digital services

Involved in the RSE on behalf of the EC

Working on appropriate competencies for RCCs

Working on cybersecurity issues

Assisting the EC on the operational guidelines on MASS trials

RBAT study

Risk based assessment tool (RBAT):
Risk assess whether introduction of increased or new ways of using automaton is as safe or safer than conventional shipping.

RBAT is conducted by DNV and is separated in 3 parts:

1. Develop the framework for the tool (end 2020 - mid 2021)
2. Develop the first version of the tool with limited functionality (mid 2021 - mid 2022)
3. Develop the complete version of the tool (mid 2022 - mid 2023)

Two approval phases foreseen, RBAT to fit into preliminary approval phase;

Non binary outcome, ambition to identify risks and issues

Facilitate “assessing the assessment”

What is automated (and why)?

Multi-level function map



- Operational modes and context
- Ship type

How is it automated?

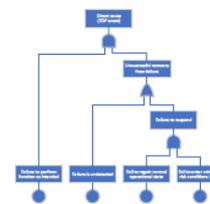
Use of automation



- Human involvement
- Automation mode
- Operator location
- Etc.

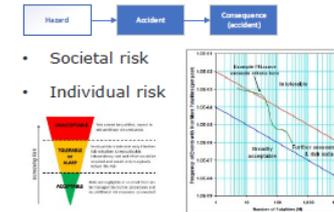
How can it fail?

Risk model



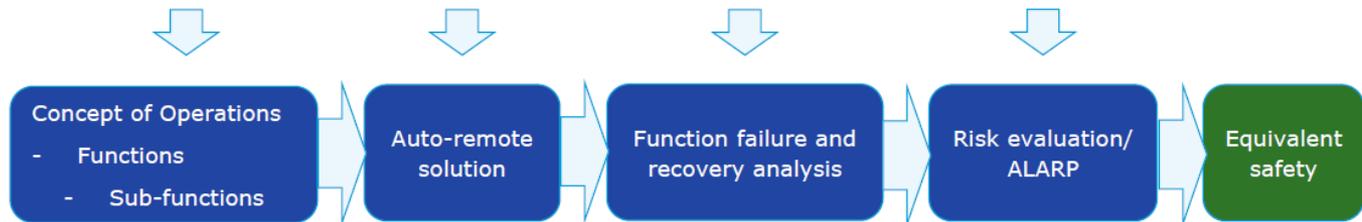
Is it safe (enough)?

HAZID/ Risk acceptance criteria



Framework

Tool



The main priority areas of the EC for SSS:

- Administrative simplification.
- Support industry in picking up new technologies for complying with new and stricter environmental legislation.
- Integration of short sea shipping in full logistics chains.

Can MASS be the answer?



EMSA to continue working on supporting EU MS and the EC on MASS;



RBAT expected to standardise the early stages of the approval process of MASS concepts;



SSS is going to be the first field of application of advanced automation



Automation is the means, not the goal



Thank you!

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