



LEGISLATIVE ASSESSMENT FOR SAFETY HAZARDS OF
FIRE AND INNOVATIONS IN RO-RO SHIP ENVIRONMENT

LASH FIRE
Information
sheet

More efficient extinguishing system activation

This 2-pager presents a Reflection, evaluation and change (REC) process that can be used to improve procedures and design for activation of drenchers and CO2 systems.

The process is designed to be carried out by the ship crew, preferably in collaboration with the onshore organisation – e.g. with participation from the designated person ashore. This to ensure continuity of the process, from discovering improvement potentials, to implementing suggested changes in design or procedures.

A premise for the REC process is that there exists substantial tacit knowledge within the ship crew. Such tacit knowledge is fundamental for undertaking necessary adaptations to cope with both routine work and to improvise when faced with surprises.

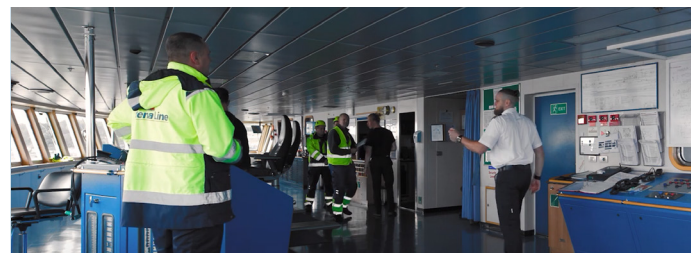
However, well-functioning adaptation to varying conditions tend to conceal suboptimal procedures and design.

The purpose of the REC process is to make tacit knowledge explicit and visible through active reflection during practise, to evaluate needs for change, and to implement necessary changes.

Relevant users

The intended recipients of this guideline are

- those onboard the ship actively taking part in, coordinating or leading fire management.
- the designated person ashore, or other similar roles that can connect the crew with onshore organisational environments that can support with implementing changes.



Based on your experience, and during the drill, try to notice:

1. Do you experience any difficulties or dilemmas?

2. What could make this specific task difficult in a real emergency (dilemma/challenge), e.g.

- Making sense of the alarm (sensemaking)
- Identifying correct drencher zone (sensemaking)
- Looking up dangerous goods manifest (sensemaking)
- Choice of extinguishing strategy (decision making)
- Drencher activation steps (communication, know-how)
- Activation instructions 'poster' (design)
- Effect of water on dangerous goods (sensemaking)
- Other ...

3. Are there things you would have to do differently in a real fire emergency?



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Application

The REC process should be carried out in connection with selected ordinary fire drills. It can be seen as an extended fire drill that is devoted not to rehearsing existing procedures and systems, but to identify improvement potentials for the same procedures and systems. There is no requirement with respect to the frequency of implementation, but since work practices and material environments on a ship is subject to continuous adaptation, it is recommended to implement the REC process no less than four times per year.

The REC process is estimated to expand a regular fire drill with approximately 1 ½ hours, in addition to time necessary for planning the extended drill (scenario).

How to conduct the Reflection, evaluation and change process

The REC process consists of four parts; prebrief, a REC adapted fire drill, de-brief and a change process.

1. Pre-brief

A meeting is held before the fire drill, gathering those who are to participate in the drill. The intention with this meeting is to prime everybody with a 'critical' mindset and to reflect collectively on their existing practices and experiences, searching for improvement potentials.

In the pre-brief, the crew reflects on and discusses a series of questions, all starting with "Based on your experience, and during the drill, try to notice...". The focus of the questions will change with the focus of the planned fire drill scenario. The framing of the pre-brief thus involves both looking back and looking forward. An example of questions that could be asked in a pre-brief when focus is on decision making and activation are provided in Textbox 1. For other foci, e.g. communication; design of instructions materials; roles and responsibilities (coordination), questions should be tailor made.

2. REC adapted drill

After the pre-brief, the drill is run as planned. During the drill, the crew should bear in mind the questions and discussions from the pre-brief. If useful, the questions could be printed and brought during the drill. Notes can also be taken during the drill, although this is often not convenient for all participants.

3. De-brief

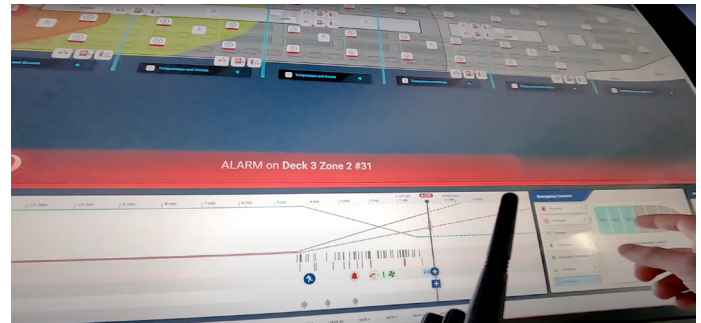
The debrief should start with discussing open question on learning points from the drill (Textbox 2).

After the open questions session, proceed with more detailed questions (see Textbox 3 for examples). The questions in this section should be related to the drill scenario and the activities undertaken during the drill. Hence, although many of the leading questions in Textbox 3 would be relevant in most drills, the questions must be adapted to the context.

A designated facilitator of the debrief session should be responsible for having the discussions, noting suggested changes in procedures and design, and bring the results forward to the last stage.

4. Change

To close the loop of the REC process, a change initiative must be implemented. The authority required to implement a design or procedural change will vary from case to case and from company to company. Some changes will be possible for the crew to implement without conference with the onshore organisation, while others will necessitate involvement from the designated person ashore or other onshore resources.



1. What worked well?

- How can we maintain and strengthen what went well?

2. What did not work so well?

- Is there anything we should have done differently?
- If yes, which changes would that require for procedures and design?

Textbox 2. Open questions



1. Localisation of fire

- Was it easy to make sense of the alarm?
- Was the runner sent in the right direction?

2. Dangerous goods, information and handling

- How was the process of looking up necessary information on dangerous goods?
- Does the presence of dangerous goods cause any hesitation?

3. Drencher activation

- Are markings and numbering of drencher zones and pumps clear and unambiguous?
- Was the communication about drencher zone and pumps clear and unambiguous?

Textbox 3. These are only examples.

