

EMSA Guidance on the carriage of AFVs in ro-ro spaces

Next steps

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EU MS and stakeholders brought this item to the attention of DG MOVE in 2020

DG MOVE requested EMSA to draft guidance on the issue in December 2020

EMSA gathered a consultation group in March 2021

EMSA developed the Guidance with the support of the consultation group

The Guidance was published on 23rd May 2022

[Ship Safety Standards - Transportation of Alternative Fuelled Vehicles \(AFV\) - EMSA - European Maritime Safety Agency \(europa.eu\)](#)

1.1 Working with experts

· Group composition (≈ 30 participants)



2. Scope



Ro-Ro passenger ships & Ro-Ro cargo/PCTCs



Risk assessment elements



Operational elements



All AFVs



Based on available research

LASH FIRE
ALBERO
BREND 1 & 2
FIRESAFE I & II



3. The document - Structure



Part 1: Ro-Pax

Part 2: Ro-Ro Cargo and
Vehicle Carriers

Annexes

- Operational Guidance
- Fire properties of vehicles

3. The document - Parts 1 & 2 – Highlights

- **Prevention**

- Identification of vehicles
- Conditions for carriage
- Small electric vehicles
- Charging

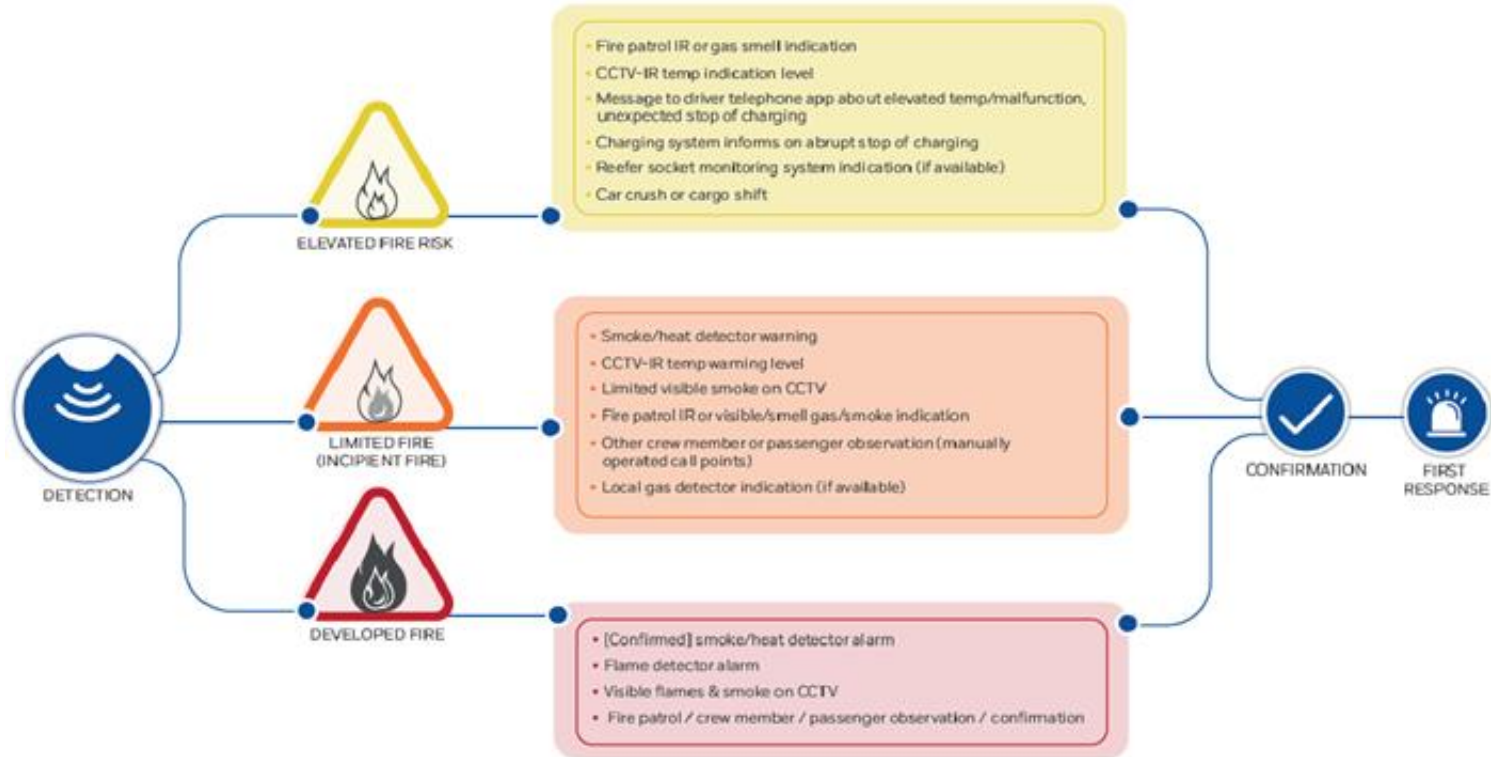
- **Detection**

- **Fire suppression and extinguishment**

- AFVs emergency response procedure
- Fire suits and specifications



3. The document - Annex I – Operational guidance



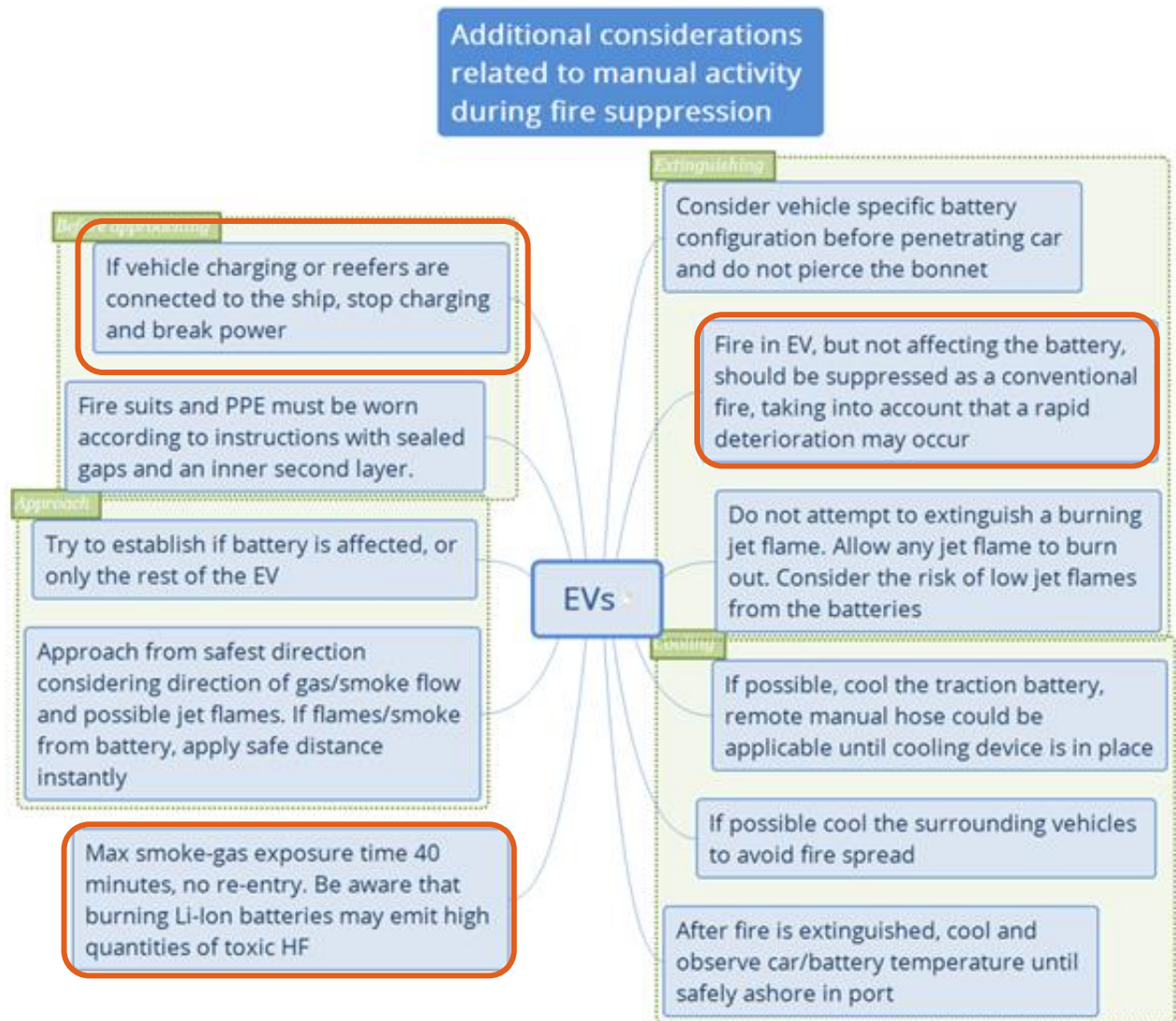
Depending on alarm level (detection):

- **Elevated fire risk or limited fire** **manual first response and fixed system as applicable**
 1. Locate fire
 2. Prepare for signs of thermal runaway/propagation
 3. Extract gases from confirmed fire in BEV
 - **Developed fire** **fixed fire-fighting system**
 1. Stop charging all vehicles in the affected deck and break power
- Fire fighting always coordinated with ventilation strategy

3. The document - Annex I – Operational guidance – BEV Fire Safety

Addressing the risks:

- Low jet flames
- Toxic gases
- Explosion
- Re-ignition
- Increase in fire size and propagation



- Looking at output proposed in MSC 105 “***Evaluation of adequacy of fire protection, detection and extinction arrangements in vehicle, special category and ro-ro spaces in order to reduce the fire risk of ships carrying new energy vehicles***” included in agenda at MSC 107 for completion in 2027
 - ❓ Looking at new results - LASH FIRE recommendations?
E.g. CARGOSAFE ❑ Relevant and common results for changes in SOLAS II-2
- Other relevant work: **CCC CG on Vehicle Special Provisions - Amendments to the IMDG Code**
 - ❓ Proposal problematic for ro-ro cargo ships and ro-ro passenger ships if SP 961 and 962 are replaced
 - ❓ Safety of used and damaged battery powered vehicles inside/outside CTU
 - ❓ Report to be submitted to CCC 9



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