



Council of the  
European Union

Brussels, 26 January 2016  
(OR. en)

5531/16

OMI 3  
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#### COVER NOTE

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From:	Secretary-General of the European Commission, signed by Mr Jordi AYET PUIGARNAU, Director
date of receipt:	25 January 2016
To:	Mr Jeppe TRANHOLM-MIKKELSEN, Secretary-General of the Council of the European Union
No. Cion doc.:	SWD(2016) 11 final
Subject:	COMMISSION STAFF WORKING DOCUMENT For the Council Shipping Working party IMO – Union submission to be submitted to the 96th session of the Maritime Safety Committee (MSC 96) of the IMO in London from 11 – 20 May 2016 concerning firefighting measures on ro-ro and ro-pax vessels

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Delegations will find attached document SWD(2016) 11 final.

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Encl.: SWD(2016) 11 final



Brussels, 25.1.2016  
SWD(2016) 11 final

**COMMISSION STAFF WORKING DOCUMENT**

**For the Council Shipping Working party**

**IMO – Union submission to be submitted to the 96th session of the Committee on Maritime Safety (MSC96) of the IMO in London from 11 – 20 May 2016 concerning firefighting measures on ro-ro and ro-pax vessels**

**COMMISSION STAFF WORKING DOCUMENT**  
**For the Council Shipping Working party**

**IMO – Union submission to be submitted to the 96<sup>th</sup> session of the Committee on Maritime Safety (MSC96) of the IMO in London from 11 – 20 May 2016 concerning firefighting measures on ro-ro and ro-pax vessels**

**PURPOSE**

The document in Annex contains draft a draft Union submission to the 96<sup>th</sup> session of the Committee on Maritime Safety (MSC96) of the IMO. It is hereby submitted to the appropriate technical body of the Council with a view to achieving agreement on transmission of the documents to the IMO prior to the required deadline of 8 March 2016<sup>1</sup>.

Article 6(2)(a)(i) of Directive 2009/45/EC on Safety Rules and Standards for Passenger Ships makes the application of SOLAS in its up-to-date version applicable to new Class A ships. The draft submission concerns amendments to SOLAS II-2 regulation 20 (Protection of vehicle, special category and ro-ro spaces) that will have a direct impact on Class A ships and therefore the said draft Union submission falls under EU exclusive competence.

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<sup>1</sup> The submission of proposals or information papers to the IMO, on issues falling under external exclusive EU competence, are acts of external representation. Such submissions are to be made by an EU actor who can represent the Union externally under the Treaty, which for non-CFSP (Common Foreign and Security Policy) issues is the Commission or the EU Delegation in accordance with Article 17(1) TEU and Article 221 TFEU. IMO internal rules make such an arrangement absolutely possible as regards existing agenda and work programme items. This way of proceeding is in line with the General Arrangements for EU statements in multilateral organisations endorsed by COREPER on 24 October 2011.

## ANNEX

MARITIME SAFETY COMMITTEE  
96th session  
Agenda item XX

MSC 96/[16] [23]/XX  
X March 2016  
Original: ENGLISH

### **Formal safety assessment, including general cargo ship safety**

#### **Considerations on the revision of SOLAS II-2 regulation 20**

#### **Submitted by the European Commission on behalf of the European Union**

##### **SUMMARY**

<i>Executive summary:</i>	This document provides details, required by MSC-MEPC.2/Circ.12/Rev.1 (Revised Guidelines for Formal Safety Assessment (FSA); 2013) in addition to a study (ref. MSC.96/INF.XX) on fire safety in connection with the transport of vehicles with electric generators or electrically powered vehicles on ro-ro and ro-pax ships, in order to consider the results of accident investigations for the development of SOLAS II.2/20. In particular the expected carriage of electric propelled vehicles should be considered in ro-ro-Regulation 20.
<i>Strategic direction:</i>	5.2
<i>High-level action:</i>	5.2.1
<i>Planned output:</i>	--
<i>Action to be taken:</i>	Paragraph 13 - 16
<i>Related documents:</i>	FSI 20/5/3, FP56/13, SSE 2/INF/19, MSC96.INF.XX

### **Introduction**

1 This document is submitted in accordance with paragraphs 4.1 to 4.5 of MSC-MEPC.1/Circ.4/Rev.4 (Guidelines on the organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies), with a view to consider the establishment of a planned output to be included under the existing agenda of the Sub-Committees SSE, CCC or HTW.

2 This document is based on the results of a study of transport processes of electric vehicles and vehicles with refrigeration units on ro-ro and ro-pax vessels. The analysis is described in document SSE2/INF 19. Further details, required for a formal safety assessment, is considered in the Annex of MSC.96/INF.XX.

## Discussion

3 In November 2011, the United Kingdom's Marine Accident Investigation Branch (MAIB) published its report into the fire on the Bahamas registered ro-ro passenger vessel Commodore Clipper which occurred in June 2010. The investigation found that the fire started in the main vehicle deck (a special category space in accordance with SOLAS regulation II-2/3.46) due to an electrical fault in one of the cables providing ship's power to a refrigerated road-freight trailer.

4 Safety issues identified by the fire on Commodore Clipper (June 2010), together with those contained in the marine accident reports by the German and Danish Administrations on the fires which occurred on, respectively, the ro-ro passenger vessels Lisco Gloria (October 2010) and Pearl of Scandinavia (November 2010) should be considered for the improvement of the SOLAS regulations and other guidelines, such as on the Human Element Guidelines on Fatigue (annex to MSC.1/Circ.1041). In doing so, consideration should be given to identifying improvements that can be made to the fire protection standards applied to ro-ro passenger vessels constructed before 1 July 2010 (which could remain in service for the next 15 or 20 years or more) to enhance their survivability and safe return to port in the event of a vehicle deck fire.

5 The lesson learned from the fire on the Lisco Gloria is that the crew's education, training and awareness of the consequences of fire on board are essential for effective fire-fighting or evacuation of a ship. The immediate decision of the master to evacuate undoubtedly saved the lives of the passengers and crew.

6 Furthermore, ro-ro decks with vehicles stowed provide sufficient inflammable material for a fire and thus fuel once started; quick and comprehensive fire response is paramount to avoid rapid spread of the fire, both horizontally and vertically, and to control the situation, always taking into account the vulnerable stability of the vessel if a huge amount of fire-fighting water has to be applied that might become trapped in a ro-ro deck if the scuppers are blocked by fire debris.

7 The transport of electric vehicles leads to an increased fire hazard. In particular, if the vehicles are connected to power distribution system of the ship for charging, a higher risk of ignition can be expected. Overall, this leads to a higher risk of fire and thus measures are needed to increase ship's safety.

8 The accessibility of ro-ro decks is very limited, even worse for a fully equipped fire-fighting team with breathing apparatus and fire hoses under pressure.

9 With regard to emergency management, evacuation should be organized via multilingual recorded messages on the public address system and via the general abandon ship alarm in an emergency, in order to allow a quick abandoning.

10 The fire insulation is effective, if supplemented by the crew's cooling measures. This can facilitate safe evacuation of the passengers.

11 Fuel cell vehicles present a special risk if hydrogen is used as fuel. Since hydrogen is lighter than air, it will primarily collect under the ceiling of the vehicle deck and might cause a severe explosion with catastrophic consequences for the ship and the persons on board. Escaping hydrogen cannot be detected by the sensors currently in use on ships. The applicable provisions for the prevention of explosions are targeted at gases that are heavier than air and require appropriate explosion protection on vehicle decks only for installations near the floor.

12 The compelling need or the need for considering the matter in IMO instruments is based on the fire accidents experienced with ro-ro vessels with total loss and partly, many victims as listed in the INF documents. For the recent accident with RoRo NORMAN ATLANTIC the result of the accident investigation is pending. The consequences of the fire however, are well known.

### **Proposal**

13 The results of the discussion above of the accidents on ro-ro vessels are not yet considered in IMO Instruments. There is neither in SOLAS II-2 Regulation 20 nor in a resolution or a IMO circular a measure of recommendation. The matters listed in number 4 -11 should be discussed in the appropriate sub committees dealing with fire protection, such as SSE, CCC or HTW, in order to address performance criteria for IMO instruments.

14 The study in SSE 2/INF.19 contains an analysis of the fire safety situation on board existing ro-ro vessels, when carrying electric propelled vehicles with batteries or with fuel cells. This situation should be discussed in the appropriate sub committees.

15 The FSA, based on the study in SSE 2/INF.19 supplemented by MSC 96/INF.XX, contains measures to be discussed and further considered in the appropriate subcommittees such as SSE, HTW or CCC.

### **Action requested of the Committee**

16 The Committee is invited to note the study on fire safety, in connection with the transport of vehicles with electric generators or electrically powered vehicles on ro-ro ships and ro-pax ships in SSE 2/INF.19 together with MSC 95/INF.XX and the proposals in 13,14 and 15 above and take action as appropriate.