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COVER NOTE

From:	Secretary-General of the European Commission, signed by Mr Jordi AYET PUIGARNAU, Director
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To:	Mr Jeppe TRANHOLM-MIKKELSEN, Secretary-General of the Council of the European Union
No. Cion doc.:	SWD(2017) 380 final
Subject:	COMMISSION STAFF WORKING DOCUMENT For the Council Shipping Working party IMO – Union Information paper to be submitted to the 5th session of the Sub- Committee on Pollution Prevention and Response (PPR 5) of the IMO in London from 5 - 9 February 2018 concerning information about an alternative method to further reduce the impact on the environment of tank washings containing high-viscosity and persistent floating products

Delegations will find attached document SWD(2017) 380 final.

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Brussels, 15.11.2017
SWD(2017) 380 final

COMMISSION STAFF WORKING DOCUMENT

For the Council Shipping Working party

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COMMISSION STAFF WORKING DOCUMENT
For the Council Shipping Working party

IMO – Union Information paper to be submitted to the 5th session of the Sub-Committee on Pollution Prevention and Response (PPR 5) of the IMO in London from 5 – 9 February 2018 concerning information about an alternative method to further reduce the impact on the environment of tank washings containing high-viscosity and persistent floating products

PURPOSE

The document in Annex contains a draft Union Information paper to the 5th session of the Sub-Committee on Pollution Prevention and Response (PPR 5) of the IMO concerning consideration of an alternative method to further reduce the impact on the environment of tank washings containing high-viscosity and persistent floating products, of relevance to MARPOL Annex II provisions. It is hereby submitted to the appropriate technical body of the Council with a view to achieving agreement on transmission of the document to the IMO prior to the required deadline of 1 December 2017¹.

Directive 2005/35/EU of the European Parliament and of the Council on ship-source pollution and on the introduction of penalties for infringements² incorporates international standards for ship-source pollution into EU law and seeks to ensure that persons responsible for illegal discharges are subject to adequate penalties. Polluting substances in the Directive are defined as substances covered by MARPOL Annexes I and II. Furthermore, Directive 2000/59/EU on port reception facilities for ship-generated waste and cargo residues³ requires Member States to ensure the availability of port reception facilities adequate to meet the needs of ships normally

¹ 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.

² OJ L 255, 30.9.2005, p.11

³ OJ L 332 28.12.2000, p. 81

using their ports, with the ultimate goal to reduce discharges of ship-generated waste and cargo residues into the sea, thereby enhancing the protection of the marine environment.

SUB-COMMITTEE ON POLLUTION
PREVENTION AND RESPONSE
5th session
Agenda item 4

PPR5/INF
XX November 2017
Original: ENGLISH

**REVIEW OF MARPOL ANNEX II REQUIREMENTS THAT HAVE AN IMPACT
ON CARGO RESIDUES AND TANK WASHINGS OF HIGH-VISCOSITY AND PERSISTENT
FLOATING PRODUCTS**

**Consideration of an alternative method
to further reduce the impact on the environment of tank washings
containing high-viscosity and persistent floating products**

Submitted by the European Commission on behalf of the European Union

SUMMARY

Executive summary: This document provides the background of an innovative cargo tank design resulting in a minimal residual quantity after unloading of these cargo tanks from high-viscosity persistent floating (HVPF) products.

Strategic direction: 7.2

High-level action: 7.2.2

Output: 7.2.2.3

Action to be taken: Paragraph 12

Related documents: MEPC68/17/2, PPR 4/WP.3, Annex 5

1 This document is submitted in accordance with the *Guidelines on the organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.5) and contains information about an innovative tanks design in the debate under this agenda item as an alternative method to further reduce the impact on the environment of tank washings containing high-viscosity and persistent floating products so as to reach the main goal.

2 MEPC 68 agreed to include a new post-biennial output on the "Review of MARPOL Annex II requirements that have an impact on cargo residues and tank washings of high-viscosity persistent floating (HVPF) products and associated definitions and preparation of amendments" in the biennial agenda of the PPR Sub-Committee and the provisional agenda of PPR, with a target completion date of 2018.

3 Through the consequential discussions, during several meetings of both PPR and ESPH, the focus was on the reduction of the residual quantity in the tanks and associated piping after unloading, however, before the ship leaves the port. To reach that goal the inclusion of a mandatory prewash became an item with priority. Main concern regarding residual quantities in the tanks appeared to be the clingage after unloading of the cargo tanks from HVPF products. During the discussions it was also indicated that the lack of port reception facilities is an item of concern when there is an increasing demand consequential to the mandatory prewash.

4 The discussion, as reflected in paragraph 3 above, was mainly based on the transport of HVPF products in conventional ship type 2 chemical tankers. This document provides the background on the innovation resulting in an alternative tank design based on the key words: independent – insulated – smooth – excellent stripping results.

Details of the innovative tank design and its benefits

5 The tanks installed are independent cylindrical tanks. The individual cargo tanks are separated via a void space. Further, these cargo tanks are separated from the ballast tanks via a cofferdam. Because of this special design, both the tanks and associated piping offer the outstanding opportunity to be fully insulated. Further, because of the cylindrical shape, the tank walls are smooth which provide excellent stripping results. Consequential to the cylindrical shape, there are no additional corners in which cargo residues can accumulate. To visualize the independent tank concept, some pictures are reflected in annex 1 to this document.

6 This innovative alternative tank design results in the following specific benefits:

1. The cargo temperature is permanently fulfilling the standards for a non-solidifying substances according to the definitions of MARPOL Annex II: The result is that the cargo is continuously non-solidifying.

2. It is important to note that solidifying products that are considered to be persistent floaters (SPPF), such as vegetable oils and animal fats have excellent insulating properties. Once a fat is solidified onto a tank wall it can only be fully liquefied if the tank wall itself is heated which is not possible for tanks on board of a conventional chemical tanker. However, for these independent and individual insulated tanks, the tank walls keep the required temperature during the entire voyage, including the period of unloading.

Since each cargo tank is separated via a void space it is impossible that two different cargoes, of which the one shall be transported under ambient temperature and the other under heated conditions, like a SPPF product, can be stowed adjacent to each other, which is possible on board of a conventional chemical tanker with additional clingage as a consequence.

Conclusion: due to the insulation of the tank (top, side and bottom) of this innovative independent tank design, not only the cargo, but also the complete tank wall itself has a temperature whereby the cargo is always non-solidifying. Therefore, the cargo cannot solidify or adhere to this smooth cylindrical wall.: The result is that clingage is not possible and therefore not existing.

3. The quantity of cargo residues after unloading is comparable with the results of the water test because the viscosity of the cargo is similar to water during the voyage, including the unloading period: The result is that the mandatory residue standard is not exceeded.

4. The cargo residues after unloading of these cylindrical smooth wall tanks are far less than the cargo residues in a conventional tanker after a prewash. The water test result for *all* tanks, associated piping and pumps for instance of the Star Curacao is 13,7 litres (total 11 tanks, associated piping and 2 cargo pumps): The result is that, after unloading, the cargo residue per tank and associated piping is only a few litres.

7 During the revision of MARPOL Annex II and the amendments of the IBC code (entry into force 01-01-2007), The Netherlands and the United Kingdom informed delegates and NGO's in IMO about several ships which are fitted with these specially designed independent cargo tanks. This resulted into resolution MEPC.120(52) superseded by MEPC.148(54). So basic information on this concept has been discussed before, however, this was in another context.

8 Important for the debate at hand is that the results of the water test of for instance the Star Curacao, which fully complies with all ship type 2 requirements and is build according to this alternative tank design, is 13,7 litres for all tanks, associated piping and pumps, so for the complete ship. This is far less than the allowed residual quantity per tank and associated piping for a conventional chemical tanker. To compare the water test results with current operational results after unloading of HVPF products some additional calculations were made on board of the Star Curacao which resulted in approximately 15 litres for all tanks, associated piping and pumps, so for the complete ship. It might be concluded that also this residual quantity is far less than the residual quantity in a conventional chemical tanker even after a mandatory prewash.

9 Based on the information above, it might be concluded that for tankers provided with this innovative alternative tank design there is no need to require a mandatory prewash to obtain the ultimate goal of reduction of legal discharges of HVPF/SPPF products as the residual quantity is already minimal since the stripping results are not affected by clingage.

Benefits for the marine environment and the Administration

10 The implementation of this innovative alternative tank design is source based. The reduction of the residues, via normal unloading and stripping operations, avoids an additional and unnecessary waste stream to a shore reception facility. To obtain the essential residual quantity no mandatory prewash is necessary, as it is redundant and therefore:

1. No prewash water to be discharged to a reception facility;
2. No increasing need for adequate port reception facilities;
3. No increase of terminal occupation so less time and costs;
4. Saving of energy which also leads to the reduction of CO₂;
5. Stimulates marine environmental awareness;
6. This innovation leads to minimal residual quantities;
7. Less administrative burdens for the shipping industry and the Administration

Action requested of the Sub-Committee

12 The Sub-Committee is invited to take note of this innovative alternative tank design in the continuing debate under this agenda item as a way forward.

ANNEX

THE INNOVATIVE ALTERNATIVE TANK DESIGN

DESIGN/CONSTRUCTION



STRIPPING RESULTS

