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NOTE

From:	General Secretariat of the Council
To:	Delegations
No. Cion doc.:	15757/24
Subject:	Draft Union submission to the 12th session of the International Maritime Organization's Pollution Prevention and Response Sub-Committee providing experience in Europe with regards to the effectiveness of MARPOL Annex II amendments for products with a high melting point and/or high viscosity – Presidency compromise proposal

Following the Shipping Working Party meeting on 15 November 2024, delegations will find attached a Presidency compromise proposal.

Changes compared to the Commission proposal are indicated in **bold underline** (added text) and ~~strikethrough~~ (deleted text).

In the absence of objections from delegations by **Wednesday 20 November, 12h00 CET**, the Presidency will transmit the submission to the IMO.

Deadline for transmission to IMO: **22 November 2024**.

SUB-COMMITTEE ON POLLUTION
PREVENTION AND RESPONSE
12th session
Agenda item 4

PPR 12/4/XX
XX November 2024
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AMENDMENTS TO MARPOL ANNEX II IN ORDER TO IMPROVE THE EFFECTIVENESS OF CARGO TANK STRIPPING, TANK WASHING OPERATIONS AND PREWASH PROCEDURES FOR PRODUCTS WITH A HIGH MELTING POINT AND/OR HIGH VISCOSITY

Experience in Europe with regards to the effectiveness of MARPOL Annex II amendments for products with a high melting point and/or high viscosity [1]

Submitted by Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands (Kingdom of the), Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the European Commission~~, acting jointly in the interest of the European Union~~

SUMMARY

Executive summary:	This document provides information on experience with regards to the effectiveness of the MARPOL Annex II amendments for products with a high melting point and/or high viscosity in Europe. The co-sponsors propose to pursue the development of an improved prewash procedure.
Strategic direction, if applicable:	7
Output:	7.38
Action to be taken:	Paragraph 32
Related documents:	MEPC.315(74), PPR 5/3, MEPC79/12, PPR11/INF.21

Background

1 Cargo residues of products with a high melting point and/or high viscosity resulting from tank washing operations have been detected along the European coast and by satellite and aerial surveillance images of European seas.

2 In order to reduce solidified cargo residues of such products washed ashore, MEPC 74 adopted resolution MEPC.315(74), amending regulation 1, regulation 13, and appendices IV and VI to MARPOL Annex II concerning cargo residues and tank washings of persistent floating products of pollution category Y with a high viscosity and/or high melting point in specific geographical areas. These amendments entered into force on 1 January 2021.

[1] **The Shipping Working Party notes that the present submission does not fall in its entirety under EU exclusive competence. However, Member States agree to coordinate on this issue on a voluntary basis and this should not be construed as exercising shared Union competence.**

3 The Sub-Committee noted that there was a general support for these amendments being part of a phased approach based on both geographical regions and/or grouping of substances containing high-viscosity and persistent floating products that could be implemented in MARPOL Annex II and the IBC Code.

4 Furthermore, MEPC 79, following consideration of document MEPC 79/12 (Austria et al.), agreed to include on the agenda of MEPC an output on "Amendments to MARPOL Annex II in order to improve the effectiveness of cargo tank stripping, tank washing operations and prewash procedures for products with a high melting point and/or high viscosity", assigning the PPR Sub-Committee as the associated organ. Subsequently during PPR11, document PPR11/INF.21 (Spain and Kingdom of the Netherlands) provided further information concerning ways to improve the effectiveness of cargo tank stripping, tank washing operations and prewash procedures for products with a high melting point and/or high viscosity, supplementing the information in document MEPC 79/12.

5 The ESPH Technical group agreed in its 30th session (ESPH 30) held between 14 and 18 October 2024 to assign special requirement 16.2.7 to three products of the IBC Code. ESPH 30, hence, invited interested delegations to submit proposals for assignment of this special requirement to cargoes in the IBC Code that are linked to pollution incidents and analysis on shoreline deposits of cargo residues to the PPR Sub-Committee. Furthermore, the Group agreed to recommend to the PPR Sub-Committee to limit the work under output 7.38 to operational procedures for more effective tank stripping, tank washing and prewashes through development of amendments mainly to appendices IV and VI to MARPOL Annex II and associated guidance, as appropriate.

6 In the regional context, the Baltic Marine Protection Commission (Helsinki Commission, HELCOM) is working towards reducing the impacts of hazardous substances in the Baltic Sea area. HELCOM held a consultation workshop on discharges from tank washing on chemical tankers (IC WS DISCHARGES 1-2024) in May 2024 discussing possible measures to reduce inputs of solidifying and/or high viscosity substances and/or persistent floaters. The memo of the workshop is available under the following link (link https://irp.cdn-website.com/53007095/files/uploaded/Memo_of_IC_WS_DISCHARGES_1-2024.pdf) and Recordings of the presentations are available under the following links: www.youtube.com/watch?v=UgC10zOVWBs and www.youtube.com/watch?v=jJ-UogEFgNk.

7 With this document, based on additional information and experience with regards to the effectiveness of the MARPOL Annex II amendments for products with a high melting point and/or high viscosity, the co-sponsors propose to pursue the development of an improved prewash procedure taking Annex 1 to MEPC 79/12 (Austria et al.) as a starting point taking into consideration further information provided in PPR11/INF.21 (Spain and Kingdom of the Netherlands), and furthermore, to assign prewash requirements to additional products.

Experience in Europe

Germany

8 Germany conducted a study between 2020 and 2022 assessing whether the establishment of a national prewash requirement for solidifying cargo can result in a reduction of cargo residues detected on the coast in Germany. The study also aimed to assess whether the amount of cargo residues washed ashore was reduced after 2021 after entering into force of regulation 13.7.9 of MARPOL Annex II and to identify the substances that are washed ashore or sampled in seawater. The report of the study is available under the following link (in German only): https://www.bsh.de/EN/TOPICS/Research_and_development/Completed_projects/_Anlagen/Downloads/PIMOPA_final_report.html

9 Results of the study show no clear trend in the absolute volume of solidified products washed ashore on the German coast in the study period. This is related to the heterogeneous nature of data compiled from different areas, matrices, times periods using various sampling strategies. However, some general observation can be made.

10 Paraffins and vegetable oils which are products of pollution category Y and fall under the prewash requirement are still detected in samples collected along the German coastline, during systematic beach monitoring as well as in water surface samples taken in the North Sea.

11 Additionally, solidified residues of products not yet falling under the regulation and the prewash requirement have been detected along the coast. Most commonly detected products were fatty alcohols and ethylene oligomers. For fatty alcohols, the assignment of prewash requirements might be warranted. Although chemically similar to paraffin products, ethylene oligomers – although chemically similar to paraffins – are not covered by the two existing category Y paraffin entries in the IBC Code, i.e., *n*-Alkanes (C10-C20) and Paraffin wax, highly-refined because they contain longer carbon-chain lengths than C20 and their molecular weight pattern suggests synthesis from ethylene monomers and not by distillation (as is the case for paraffin). This could indicate that products with no agreed carriage requirements are transported in tank ships. This should be subject of further investigations. Furthermore, products that could not be chemically identified, were detected.

Sweden

12 Sweden, in 2023, conducted 1,800 hours of aerial surveillance in the Baltic Sea and detected 77 discharges from vessels over an area of 393 km². Between January and September 2024, already 53 discharges related to tank washing operations have been detected by Sweden. Observations by the Coast Guard's aerial surveillance show that these discharges typically occur while the vessels perform tank washing operations *en route.* Contact was made with most of the involved vessels and inspections were carried out, including an analysis of their cargo record books and MARPOL certificates as well as analysis of samples. In most cases, either no prewash was required, or the prewash was performed in accordance with the Procedures & Arrangements Manual and a certificate was issued. As in many cases, tall oil products, which currently do not require a prewash were detected in discharges observed in tank cleaning operations, the assignment of the special requirement 16.2.7 to these products might be warranted.

13 It cannot be ruled out that the current regulations and prewash requirements for certain substances are insufficient. Despite compliance with regulations, residues of products with a high melting point and/or high viscosity often remain in the tanks of chemical tankers. Sweden raises concerns that the Procedures and Arrangements Manual's routines for stripping and prewash requirements are inadequate for certain products with a high melting point and/or high viscosity.

14 In Sweden, when the temperature drops below 0℃, observations show that these products solidify more rapidly, further complicating effective prewash. For example, tall oil pitch is generally unloaded at a temperature of 72 - 75℃, while regulations specify a minimum of 60°C. However, Sweden notes that vessels often struggle to heat the washing water to 60°C and in reality, the water must be at or above the unloading temperature to achieve an efficient prewash.

15 Tank washing operations at sea can takes many hours, sometimes extending for several days. Vessels often sail back and forth without a set destination only for the purpose of tank washing. It is important to note that even when regulations are followed, large areas of sea and coast are impacted by cargo residues due to prewash at sea. The release of wash water containing these substances affects the marine environment, despite stricter requirements for tank stripping and prewashing after 2021.

Finland

16 In Finland, less discharges of cargo residues with a high melting point and/or high viscosity were observed in the recent years. The reason for fewer detections is a national requirement in force since 2010 to inspect vessels discharging category Y substances. This practice goes beyond MARPOL regulation which requires vessels discharging category X substances only to be inspected.

17 If the unloading of a substance of category Y is not carried out in accordance with the Procedures & Arrangements Manual, a prewash shall be carried out before the ship leaves the port of unloading, unless alternative measures are taken as set out in Regulation 13.7.1. If the stripping is considered unsuccessful or insufficient, more efficient cargo tank stripping is required.

18 Thanks to the Finnish national requirement for inspection, all vessels discharging category Y substances are inspected in Finnish ports and the volumes of the cargo residues discharged at the Finnish ports are known.

19 However, some slicks of cargo residues have been detected by the Finnish Coast Guard mainly in the outer region of the Bay of Bothnia in the Northern part of the Baltic Sea. Usually, it has been a case of *en route* tank washing operations and residues of tall oil products, typically tall oil, crude. This observation supports the proposal to the specific and operational requirement 16.2.7 to tall oil products.

Netherlands

20 The Netherlands, in the recent years, observed less washing up of cargo residues resulting from tank washing on coasts thanks to national requirments stricter than those prescribed by MARPOL. As pointed out in MEPC 79/12, the Netherlands actively carries out onboard inspection of ships unloading products with a high melting point and/or high viscosity as prescribed by national legislation. Inspections showed that cargo tanks after prewash and stripping procedures frequently resulted in quantities of residue exceeding the volume required by regulation 12 of MARPOL Annex II. In order to address this, the Netherlands implements in national legislation stricter prewash procedures than those prescribed by MARPOL. This led to a reduction of such substances as paraffin waxes washing up along the Dutch coast.

21 Document MEPC 79/12 also notes that the manner of involving a surveyor during a category Y prewash should be considered, in a similar manner as required for a category X prewash according to regulation 13.6 of MARPOL Annex II. For the Netherlands, it is currently not possible to witness all prewash procedures of category Y substances. Instead, in the Netherlands a risk-based approach is used in order to determine which prewash procedures are witnessed.

Experience from Belgium

22 On a national level, Belgium does not impose additional discharge or stripping measures for residues of noxious liquid substances than what is currently required as per the provisions of MARPOL Annex II. Nonetheless, the inadequacy of the current MARPOL provisions to effectively prewash certain type of products (e.g. paraffines) is a known issue.

23 Therefore, in many cases and on a voluntary basis, the attendance and guidance of the MARPOL surveyor during the stripping and prewash operations is requested by the ship operator. On a case-by-case basis and in consultation with the local port authorities, the MARPOL surveyor and the captain or his representative map out the most effective approach for these discharge operations.

24 In this regard, the specific circumstances such as for example the possibility to sufficiently deballast prior to operations, the nature of the particular cargo as well as the ships specific capabilities or limitations including for example its capacity to generate sufficiently hot water, or provide for steam injection are taken into consideration.

Spain

25 In Spain, in the recent years, many possible discharges of cargo residues with a high melting point and/or high viscosity were detected by satellite surveillance (CleanSeaNet service of the European Maritime Safety Agency). In those cases where the vessel calls in a Spanish port, it follows an inspection which usually concludes that the vessel was performing tank washing operations in line with MARPOL Annex II.

26 Maritime transport of products with a high melting point and/or high viscosity has increased significantly due to the increased demand of biofuels over the years and therefore increased satellite detections. This trend will continue over the coming years. The assignment of prewash requirements to other substances with high viscosity and/or high melting point should be considered because many inspections in Spain found the prewash not to be mandatory, but the discharges are clearly visible as slicks in the satellite and aerial images.

27 The specific areas introduced in resolution MEPC.315(74), amending regulation 1, regulation 13, and appendices IV and VI to MARPOL Annex II include the Atlantic waters until the border between Portugal and Spain in the south of the Iberian peninsula, however do not cover the Spanish south Atlantic and Mediterranean waters where the release of cargo residues with a high melting point and/or high viscosity also occurs and also has impact on the marine environment.

Discussion

28 The entering into force of the mandatory prewash for products of pollution category Y with a high viscosity and/or high melting point did not result in a significant decrease in detected discharges of these substances in European seas nor in detected cargo residues along European coasts of the sea areas listed in regulation 13.7.9 of MARPOL Annex II. Experience from observations from satellite and aerial surveillance in Europe indicates the release of such cargo residues during *en route* tank washing operations that appear to be compliant with the MARPOL regulation. These findings indicate that the regulation did not yet achieve its intended goal.

29 Member states imposing additional measures such as improved cargo tank stripping and prewash procedures, or enhanced inspection regimes report a reduction of detected discharges of these substances in their waters and detections of residues along their coasts. Introducing additional measures, such as detailed in Annex 1 to MEPC 79/12, with a stronger focus on implementation, enhances the effectiveness of cargo tank stripping and prewash procedures.

30 Furthermore, reported experience shows that prewash requirements are not assigned to all products with a high melting point and/or high viscosity, whose residues are detected at sea or along the coast, or observed during tank washing operations in Europe. Assigning special requirement 16.2.7 in column o of chapter 17 of the IBC Code to all products that correspond to solidified residues of substances fulfilling the criteria of paragraph 7.1.4 of regulation 13 of MARPOL Annex II could contribute to the decrease of discharges of these products during tank washing operations.

Conclusion

31 The co-sponsors propose to pursue the development of an improved prewash procedure taking Annex 1 to MEPC 79/12 (Austria et al.) as a starting point, taking into consideration further information provided in PPR11/INF.21 (Spain and Kingdom of the Netherlands) and furthermore, to assign prewash requirements to additional products by amending relevant provisions of the IBC code as specified in paragraph 30.

Action requested to the Sub-Committee

32 The Sub-Committee is invited to consider the information and national experience provided in this document and take action as proposed in paragraph 31.