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WORK PROGRAMME OF THE COMMITTEE AND SUBSIDIARY BODIES

Review of the Integrated Bilge Treatment System (IBTS) Guidelines

Submitted by Liberia, the Marshall Islands and INTERTANKO

SUMMARY

Executive summary:	This document proposes a new output to review and amend the Integrated Bilge Treatment System (IBTS) Guidelines and associated documentation. Specific proposals for consideration are also provided together with possible changes to the relevant IBTS Guidelines and documentation
Strategic direction:	7.1
High-level action:	7.1.2
Output:	No related provisions
Action to be taken:	Paragraph 29
Related documents:	MEPC 69/INF.24; MEPC.1/Circ.642, MEPC.1/Circ.676, MEPC.1/Circ.760 and MEPC.1/Circ.736/Rev.2

Introduction

1 This document proposes a new output to review and as necessary amend the Integrated Bilge Treatment System (IBTS) Guidelines and associated documentation. The submission follows an information document submitted to MEPC 69 (MEPC 69/INF.24), which highlighted views and experiences of the INTERTANKO membership and requested interested Member States and observer organizations to work towards a formal proposal for a new output at MEPC 70.

IMO objectives

2 The primary Strategic Direction for the new output would relate to 7.1 in identifying and addressing possible adverse impacts with High-level Action 7.1.2 to keep under review measures to reduce adverse impact on the marine environment caused by ships. Furthermore, the new output item would correspond with Strategic Direction 14 seeking to ensure better

regulation through a systematic approach and also that its instruments are free from administrative requirements that are disproportionate, obsolete or unnecessary. The output would also meet High-level Action 13.0.3 in encouraging the use in shipping of the best available environmental technology not entailing excessive costs, in line with the goal of sustainable development.

Compelling need

3 Most new tankers are delivered with integrated bilge treatment systems (IBTS) which are installed in accordance with the specifications provided in the annex to the *2008 Revised Guidelines for systems for handling oily wastes in machinery spaces of ships incorporating guidance notes for an integrated bilge water treatment system (IBTS)* (MEPC.1/Circ.642, as amended by MEPC.1/Circ.676 and MEPC.1/Circ.760).

4 As a widely used concept in the tanker industry, the co-sponsors believe that IBTS should continue to be developed and streamlined as experience is gained and advances in waste management technology and its installation on new tankers are made. The accompanying IBTS Guidelines and its associated record-keeping should be further developed to minimize waste generation, account for current improvements in management options as well as improve clarity and guidance given to seafarers in regards to record-keeping.

Analysis of the issue

Review and consolidation of the IBTS documentation

5 An initial set of examples and proposals are outlined below, which demonstrate and document the compelling need for a review of the IBTS Guidelines. However, a practical approach to the subject would commence with a review of and an assessment of the need to amalgamate the three separate IBTS related documents, namely MEPC.1/Circ.642, as amended by MEPC.1/Circ.676 and MEPC.1/Circ.760.

Bilge primary tanks for IBTS ships

6 Bilge primary tanks (BPT) are designed to filter oil before it goes into oily bilge water holding tanks (OBT). MEPC.1/Circ.642 defines the BPT as a pre-treatment unit for separation of oily bilge water. Confusion frequently arises due to the designation of the BPT and its inclusion in the IOPP Certificate or not. Some Administrations and their recognized organizations (RO) view the BPT as a tank and have this recorded on the IOPP Certificate while others follow the definition given within MEPC.1/Circ.642 and view the BPT as a pre-treatment unit only. In the latter case the BPT is referenced in the Oil Record Book (ORB) but not included in the IOPP Certificate.

7 To provide clarity and certainty on this issue, the BPT could be considered as a pre-treatment unit under the IBTS and not as a bilge holding tank. It would therefore not be considered necessary to record the BPT as a tank on the ship's IOPP Certificate so long as the ship has an approved IBTS statement from or on behalf of the Administration.

8 To add greater clarity, a solution may be to amend the name of the BPT and remove the word "tank" and replace it with the more accurate term, "filtering unit". This would go some way in preventing differing interpretations by Administrations, port State control inspectors and ship builders. In practical terms, the filtering unit once filled is always kept full and this would need to be recorded at the time of first filling, e.g. on new buildings or after dry-dock. This could be recorded as a means of treatment in the IOPP Certificate with an accompanying statement that a filtering unit of a specified volume is provided as per the approved IBTS statement. This will assist in the declaration of this fixed volume for inspection and compliance purposes.

Bilge primary tanks for non-IBTS ships

9 A degree of confusion similar to that described in paragraphs 6 to 8 also exists with non-IBTS tankers. It has been observed that inconsistency between recognized organizations exists when it comes to assessing whether these ships have the BPT listed in section 3.3 of the IOPP Certificate or not. Regulation 2.34 of MARPOL Annex I states that "oily bilge water holding tank means a tank collecting oily bilge water prior to its discharge, transfer or disposal". MEPC.1/Circ.642 adds that "an oily bilge water holding tank should be arranged to either discharge ashore or through the 15 ppm bilge separator overboard".

10 In practice, the BPT is not connected (on the suction side) to the bilge pump and it cannot discharge through the standard discharge connection. In addition, the BPT is not connected directly to the oily water separator.

11 The issue is further complicated on non-IBTS tankers that are fitted with heating coils in the BPT to facilitate the disposal of bilge water by evaporation. In such cases the BPT will meet the definition of an oily bilge water holding tank as noted above and will therefore warrant its inclusion in the IOPP Certificate. Maintaining an accurate record of BPT operations in the ORB is not possible due to the design of the BPT, which makes it difficult to accurately estimate quantities transferred/evaporated.

Drains to the sludge tank

12 Standard practice is to transfer the skimmed top layer from the BPT to the oil residue (sludge) tank but at present, there is a difference of opinion as to whether this should be recorded in the ORB or not. One proposal is that this transfer should not be recorded as per MEPC.1/Circ.736/Rev.2 in Part I of the ORB because there is no pump used during the transfer and furthermore, it is difficult to determine the oil quantity that is finally skimmed to the sludge tank.

Clean drains system (CDS) definition

13 The current definition for the Clean Drains System in MEPC.1/Circ.642 can be applied to closed drains from the auxiliary engine and main engine condensate only. However, IBTS does not exclude other non-oily drains, which are open drains such as the scuppers around the engine control room (ECR) cooler unit, the fresh water (FW) tank, the cool FW expansion tank overflow, the jacket water heater and distillation plan and the distillation plant ejector pump.

14 It would be beneficial to provide clarity on whether clean drains that are supposed to be closed but have scuppers (open) flowing into them are still within the definition of clean drains and therefore, the IBTS system or not. Clarity regarding this point will assist in determining whether clean drains can reasonably be stored in the aft peak tank (APT) and whether air conditioning condensate water can be discharged directly overboard through the greywater line system as it is done on non-IBTS ships.

Distinction between oily bilge-water and oil residues (sludge) systems

15 It is becoming common practice to, as far as possible, avoid "water containing oil" entering the oily-bilge water system and instead transfer this effluent directly to the oil residues (sludge) system. In fact, there is a tendency for ship builders to rely on the oil residue (sludge) system and divert water drains with a minimal risk of containing oil to this system.

16 One option to facilitate the management of oily bilge water would be to clearly define, within the concept of the IBTS in MEPC.1/Circ.642, "water with a risk of containing oil" and the means by which to stream this effluent. In this respect, the co-sponsors propose that a revision of MEPC.1/Circ.642 should include a recommendation that "water with the risk of containing oil" is led back through the BPT (if installed) and not directly to the oil residues (sludge) system. This in fact, is the primary purpose of both the oily water separator (OWS) and the IBTS.

Management of evaporation condensation from the oil residues (sludge) system

17 The evaporation of water contained in the sludge tank is an acceptable method for its disposal. The efficiency of this evaporation largely depends on the vent line going out from the tank. There is some condensation expected in the vent line, which in some new designs has a water/oil mist collector from where the condensation leads back to the oil residue (sludge) service tank. This is considered an appropriate means of managing the condensate rather than transferring it to the bilge system.

18 To facilitate the practice recommended in paragraph 17, the co-sponsors encourage the installation of effective condensation pipes to facilitate the evaporation process. By this means, the removal of the condensate water would also be facilitated. The practical approach has been outlined above, however, to ensure uniformity and clarity in the underlying principle for the piping arrangement to the oil residue (sludge) service tank, a clear description and reference should be included in MEPC.1/Circ.642 together with an amendment to the flow diagram of the IBTS, such as the proposal below:

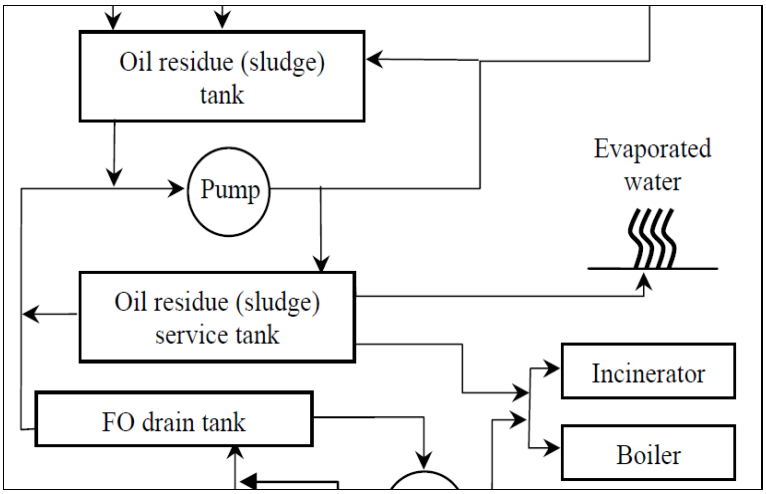

Figure 1: Current flow diagram of the IBTS, page 12, MEPC.1/Circ.642

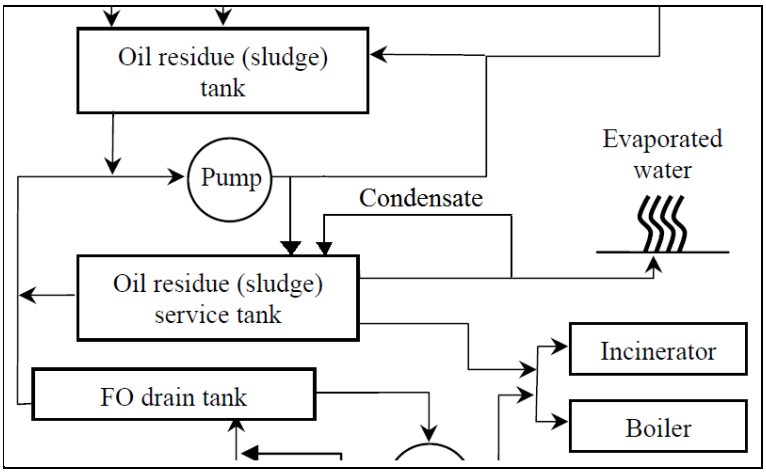

Figure 2: **Proposed inclusion of condensate line back to oil residue (sludge) service tank**

19 To minimize the quantity of oil mixing with water in the evaporation process, it has been observed that "simmering" (temperature control (normally between 80 to 85 centigrade)) can reduce the likelihood of over mixing the oil and water and allows more water rather than oil to be evaporated.

Recording of oily bilge water holding tank incineration, evaporation and transfers to the slop tank

20 Some types of incinerators currently being installed on new buildings have the ability to incinerate bilge water and as such are being installed in order to carry out bilge water incineration independently from the sludge incineration system. The use of the incinerator in this manner is useful in further minimizing oily waste on board and has been welcomed by INTERTANKO's members. However, it has been suggested that the use of the incinerator to manage oily bilge in this manner should be recorded appropriately, such as is commonly undertaken for sludge incineration.

21 It would be beneficial to make appropriate amendments to reflect the incineration of oily bilge water and its transfer to the slop tank in the IOPP Certificate and the ORB. The following proposes how this may be achieved:

IOPP Certificate

21.1 A new section 3.4 in Forms A and B, Supplement to the IOPP Certificate, is added as follows:

"3.4 Means for the disposal of oily bilge water retained in oily bilge water holding tank:

3.4.1 Incinerator for oily bilge water ☐

3.4.2 The ship is provided with arrangements to transfer bilge water to the slop tank ☐

3.4.3 Evaporation of bilge water ☐"

Oil Record Book – disposal of bilge water

21.2 Two new sub-items 15.4 and 15.5 are added to code D of the Oil Record Book Part I. Section 15 is replaced by the following:

"**(D) Non-automatic starting of discharge overboard, transfer or disposal otherwise of bilge water which has accumulated in machinery spaces**

15 Method of transfer, discharge, or disposal:

.1 through 15 ppm equipment (state position at start and end);

.2 to reception facilities (identify port);

.3 to slop tank or holding tank or other tank(s) (indicate tank(s); state quantity retained in tank(s), in m^3);

.4 to oily bilge water incinerator; and

.5 evaporation of bilge water."

Analysis of the implications

22 The co-sponsors do not believe that there would be any adverse cost or administrative implications to the maritime industry of a review of the IBTS Guidelines. The legislative and administrative burden for reviewing these documents and bringing them together as a single document is provided in annex 1 to this document (completed "Checklist for identifying administrative requirements and burdens").

Benefits

23 The primary benefits of amalgamating the three circulars into a single document would be the agreement of one set of definitions and a standardized nomenclature. Furthermore, by bringing these documents together, any discrepancies or inconsistencies can be removed and updates based on experience and new technologies can be incorporated.

Industry standards

24 The focus on the three IMO circulars stems from the absence of a single industry standard or best practice for interpreting the variations in interpretation and the developments in technology since the release of the IBTS concept.

Output

25 Single up-to-date IBTS Guidelines issued as an MEPC circular and replacing the three documents currently in use, MEPC.1/Circ.642, as amended by MEPC.1/Circ.676 and MEPC.1/Circ.760.

Human element

26 A completed checklist for considering human element issues is included as annex 2 to this document.

Priority/urgency

27 The proposed new output is considered urgent to bring up to date the IBTS Guidelines and allow the industry to implement new technology and management options on existing and new ships.

28 The co-sponsors would propose that a new high-priority item be added to the post-biennial agenda of the Committe and the work programme of the PPR Sub-Committee, beginning 2018 with a target completion date of 2020.

Action requested of the Committee

29 The Committee is invited to consider this proposal for a new output based on the information presented in this document.

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ANNEX 1

CHECKLIST FOR IDENTIFYING ADMINISTRATIVE REQUIREMENTS AND BURDENS

This checklist should be used when preparing the analysis of implications, required for submissions of proposals for inclusion of unplanned outputs. For the purpose of this analysis, the terms "administrative requirements" and "burdens" are as defined in resolution A.1043(27) on *Periodic review of administrative requirements in mandatory IMO instruments*, i.e. administrative requirements are an obligation arising from future IMO mandatory instruments to provide or retain information or data, and administrative burdens are those administrative requirements that are or have become unnecessary, disproportionate or even obsolete.

Instructions:

(A) If the answer to any of the questions below is **YES**, the Member State proposing an unplanned output should provide supporting details on whether the burdens are likely to involve start-up and/or ongoing cost. The Member State should also give a brief description of the requirement and, if possible, provide recommendations for further work (e.g. would it be possible to combine the activity with an existing requirement?).

(B) If the proposal for the unplanned output does not contain such an activity, answer **NR** (Not required).

1. Notification and reporting? Reporting certain events before or after the event has taken place, e.g. notification of voyage, statistical reporting for IMO Members, etc.	NR
2. Record keeping? Keeping statutory documents up to date, e.g. records of accidents, records of cargo, records of inspections, records of education, etc.	Yes
Amendments to definitions and terms in the MEPC Circulars may require changes to be reflected in the Oil Record Book and the IOPP Certificate which would be an ongoing cost.	
3. Publication and documentation? Producing documents for third parties, e.g. warning signs, registration displays, publication of results of testing, etc.	Yes
Amendments to definitions and terms in the MEPC Circulars may require changes to be reflected in the Oil Record Book and the IOPP Certificate which would be an ongoing cost.	
4. Permits or applications? Applying for and maintaining permission to operate, e.g. certificates, classification society costs, etc.	NR
5. Other identified burdens?	NR

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ANNEX 2

CHECKLIST FOR CONSIDERING HUMAN ELEMENT ISSUES BY IMO BODIES

Instructions:
If the answer to any of the questions below is:

(A) **YES**, the preparing body should provide supporting details and/or recommendation for further work.
(B) **NO**, the preparing body should make proper justification as to why human element issues were not considered.
(C) **NA** (Not Applicable) – the preparing body should make proper justification as to why human element issues were not considered applicable.

Subject being assessed:
MEPC.1/Circ.642, as amended by MEPC.1/Circ.676 and MEPC.1/Circ.760

Responsible body:
MEPC and the PPR Sub-Committee

1. Was the human element considered during development or amendment process related to this subject?	NA
2. Has input from seafarers or their proxies been solicited?	Yes
3. Are the solutions proposed for the subject in agreement with existing instruments?	NA
4. Have human element solutions been made as an alternative and/or in conjunction with technical solutions?	NA
5. Has human element guidance on the application and/or implementation of the proposed solution been provided for the following:	
• Administrations?	Yes
• Ship owners/managers?	Yes
• Seafarers?	Yes
• Surveyors?	No
6. At some point, before final adoption, has the solution been reviewed or considered by a relevant IMO body with relevant human element expertise?	No
7. Does the solution address safeguards to avoid single person errors?	Yes
8. Does the solution address safeguards to avoid organizational errors?	Yes
9. If the proposal is to be directed at seafarers, is the information in a form that can be presented to and is easily understood by the seafarer?	Yes
10. Have human element experts been consulted in development of the solution?	No

11. HUMAN ELEMENT: Has the proposal been assessed against each of the factors below?	
CREWING. The number of qualified personnel required and available to safely operate, maintain, support, and provide training for system.	NA
PERSONNEL. The necessary knowledge, skills, abilities, and experience levels that are needed to properly perform job tasks.	NA
TRAINING. The process and tools by which personnel acquire or improve the necessary knowledge, skills, and abilities to achieve desired job/task performance.	NA
OCCUPATIONAL HEALTH AND SAFETY. The management systems, programmes, procedures, policies, training, documentation, equipment, etc. to properly manage risks.	NA
WORKING ENVIRONMENT. Conditions that are necessary to sustain the safety, health, and comfort of those on working on board, such as noise, vibration, lighting, climate, and other factors that affect crew endurance, fatigue, alertness and morale.	NA
HUMAN SURVIVABILITY. System features that reduce the risk of illness, injury, or death in a catastrophic event such as fire, explosion, spill, collision, flooding, or intentional attack. The assessment should consider desired human performance in emergency situations for detection, response, evacuation, survival and rescue and the interface with emergency procedures, systems, facilities and equipment.	NA
Comments: Many of the aspects related to the IBTS concept and Guidelines relate to the need for reviewing and consolidating the record-keeping requirements as well as the definitions and terms used. The proposals have stemmed from experience gained from engineers on board in using the current Guidelines. Improving and simplifying the terms and guidance provided will assist in minimizing both individual and organizational errors in record-keeping.	