



## LETTER TO INDUSTRY-OILY WATER SEPARATOR ISSUES AND FLOW SWITCH -MEPC.107(49)

This notice details recent Port State Control (PSC) detentions relating to the operation of Oily Water Separator/Oil Content Meter (OCM) and current discussions being held at the IMO for the provision of a flow switch on the effluent sampling line.

### CASE 1 - OBSTRUCTION OF SAMPLING LINE TO OIL CONTENT METER

These detentions focused on the effluent **sampling line** to the Oil Content Meter and are consistent with the below description:

*“15 ppm alarm arrangements not as required by par. 4.2.6 of MEPC.107(49). Overboard valve still directs water overboard if sample water supply is stopped”.*

Paragraph 4.2.6 of MEPC.107(49) - Revised Guidelines and Specifications for Pollution Prevention Equipment for Machinery Space Bilges of Ships, referenced by Port State Control, relates to maximum response time by which the OCM should trigger an alarm in case of an alteration in the sample content being detected (\*).

(\*) **Note:** MEPC.107(49) contains two response times. A 5 second response time for the alarm and a 20 second response time (inclusive of the 5 second response time for the alarm) allowed for the overboard valve to close from the time a change in sample content is detected.

While the PSC report refers to the response time being exceeded, **the root cause is that the system continues to operate even when no effluent is being sampled by the OCM.** The reason it could be determined that the effluent sample to the OCM was interrupted was due to a manual valve fitted on the **sampling line** (please refer to typical OWS / OCM sketch). This valve may have been fitted for various operational reasons such as to clean the line/perform easier maintenance of the OCM etc. However, inadvertent closure of this valve would prevent the system from operating in accordance with MEPC.107(49), which requires the OCM to operate even when fresh water is used for flushing or zeroing of the system.

### KEY NOTES

- Valves in the sampling water line supplying the content meter of Oily Water Separator may cause PSC DETENTION
- Oily Water Separator sampling point shall be installed in a vertical effluent pipe.
- References:  
[MARPOL Annex I – Prevention of Pollution by Oil](#)  
[MARPOL Annex I, MEPC.107\(49\)](#)

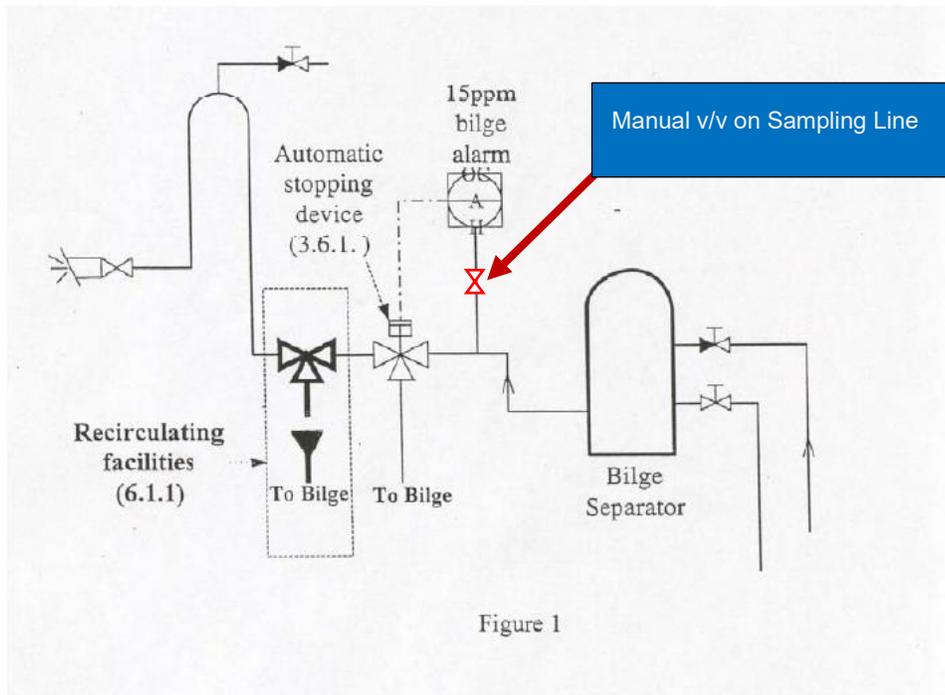


Figure 1

The aforesaid case has brought up the issue of whether a flow switch on the effluent line should be required. Such a device would activate the OCM once effluent flow is detected avoiding inadvertent operation of the system. Whilst the provision of a flow switch on the effluent line would greatly improve the reliability of the system operation, original equipment manufacturers (OEM) assessment of their systems indicated that flow to the OCM should be uninterrupted and thus no valve on the effluent line should ever be fitted. As such, the concept of the OEM fulfills the requirements of MEPC.107(49), and such a requirement for provision of a flow switch would be excessive.

However, PSC Regimes have advised in cases where the flow of effluent sample is not a representative sample, due to blockage of the sample line or incorrect operation of valves, it is expected that, in accordance with MEPC.107(49) requirements, the fail-safe arrangement will activate the automatic stopping device (3-way valve) and stop effluent discharge overboard.

## UPDATE FROM IMO

Provision for a flow switch has been brought up to the IMO by the Flag State of China during MEPC 79 through their submittal MEPC 79/12/1, Proposal for the new output to amend the Revised guidelines and specifications for pollution prevention equipment for machinery space bilges of ships (resolution MEPC.107(49)). The proposal recommends amendments to MEPC.107(49) requiring a flow switch or pressure sensor to be fitted on the **sampling line** to provide for an alarm in the event that the OCM loses sample effluent feed.

At MEPC 79, it was agreed to include in the post-biennial agenda an output on the "Revision of the Revised Guidelines and Specifications for Pollution Prevention Equipment for Machinery Space Bilges of Ships (resolution MEPC.107(49))", with two sessions needed to complete the output, and assigning the PPR Sub-Committee as the associated organ.

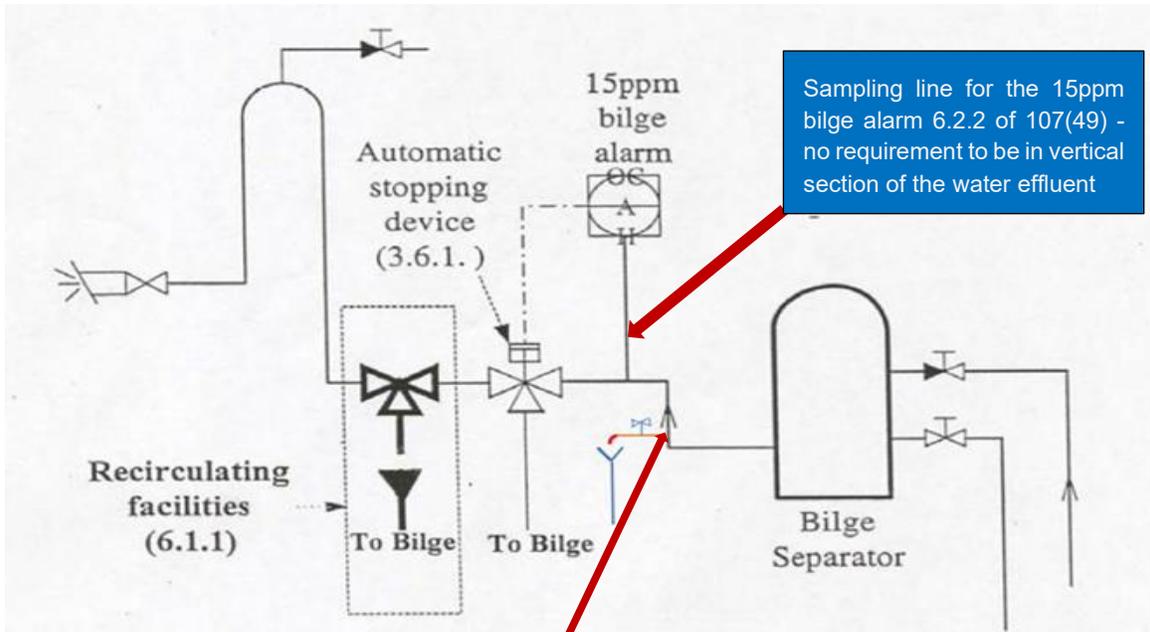
## ABS RECOMMENDATION

Until amendments are made to the MEPC.107(49), ABS recommends that owners check their OWS system(s). If a valve is fitted in the **sampling line**, this valve should be removed. This would safeguard the system operation in accordance with MEPC.107(49).

## CASE 2 - SAMPLING POINT INSTALLED ON A HORIZONTAL SPOOL OF THE EFFLUENT PIPE (INSTEAD OF VERTICAL).

The Oily Water Separator, if installed on ships on or after 1 January 2005, is to comply with the Revised Guidelines and Specifications for Pollution Prevention Equipment for Machinery Space Bilges of Ships in IMO Res. MEPC 107(49) adopted on 18 July 2003.

MEPC.107(49) Chapter 6.1.1, Installation Requirements, states that “For future inspection purposes on board ship, a **sampling point** should be provided in a **vertical** section of the water effluent piping as close as is practicable to the 15ppm bilge separator outlet.” There have been several cases where ships have been detained for not complying with this requirement.



Sampling point for future inspection as 6.1.1 of MEPC 107(49) should be provided in a vertical section of the water effluent piping as close as is practicable to the 15ppm Bilge Separator outlet



## ABS RECOMMENDATION

Ship owners or operators are invited to review the insights provided in this letter and ensure that the **sampling point** is connected to a **vertical** section of the water effluent piping as close as is practicable to the 15 ppm Bilge Separator outlet. Additional information on this issue may be found in [ABS's SAFETY IN MINUTES](#) video [Incorrect Sampling Point for Bilge Separator](#).

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