

Guidance on the Green Award requirements for Bilge and Sludge Management (R5820, R5821, R5822)

for Annex 3: Oil (3a), Dry Bulk (3b), LNG (3c), Chemical (3d), Container (3e)



Information on Green Award Bilge and Sludge Management requirements

The new requirements (R5820, R5821 & R5822) are drafted in order to prevent ships' crew and their management from criminal charges caused by illegal discharges of oily water. As we have encountered, the inspections/audits carried out by various organisations/governmental bodies and IMO mandatory regulations/standards, are not sufficient to address this issue to the fullest extent. For these reasons we have focussed on the following issues:

1. Equipment involved in the oil / water separation and bilge / water disposal and related problems encountered by the crew onboard;
2. Sludge disposal and incineration problems;
3. Reduction of workload onboard and more structured work practices.

Easier and user-friendly work practices and environment for the crew onboard:

We have introduced alternative requirements for the new builds and the existing ships that are willing or have already installed the latest equipment and also those ships which are willing to dispose their bilge water and/or sludge to shore based reception facilities.

For existing vessels, Green Award believes that management support, user-friendly instructions, efficient and structured operational changes will result in proper management of bilge and sludge.

The problem areas we have focussed on are:

1. Emulsifying characteristics of chemicals and detergents used in the machinery spaces;
2. Cleanliness of the bilge (holding) tank;
3. Wash water from the economiser (soot);
4. The problems encountered with the oil monitoring devices.

In addition to the mandatory requirements, we believe that the MEPC.1/Circ. 642 standard is a good guidance for improvement on the design of the whole bilge and sludge system and the possibility of installing additional tanks and equipment that could be added to assist the personnel responsible for bilge and sludge management onboard.

In our opinion, the important subjects which are misinterpreted in the shipping industry are clean drain tanks and the necessary actions that should be taken before disposal of water from clean drain tanks. For this reason, we have created a Green Award modified MEPC.1/Circ.642 drawing which explains in a user friendly manner the necessary steps that should be followed before disposing bilge water, clean drain tank water, soot and sludge. For easy reference we have included the MEPC.1/Circ.642 as modified by Green Award drawing in this document. The drawing explains clearly the background of our new requirements. Green Award modified drawing also explains clearly the importance of certain procedures that should be followed before disposal.

Clean Drain Tanks & Clean Water Tanks – Oil Presence or Non-presence of Oil:

According to the original diagram (MEPC.1/Circ. 642 Annex page 12) the clean drain tank and clean water tanks shall dispose their waste directly overboard bypassing the Oily Water Separator (OWS). However this is not as per Marpol Annex I regulation. In order to make this more defined we would like to quote some official definitions from MEPC.1/Circ.642.

Definition of "Clean Drain" as per MEPC.1/Circ. 642 Annex 3.1:

Clean drains mean internal drains such as those resulting from the leakage of condensate from equipment used for seawater, fresh water, steam, air conditioning, etc., which are not normally contaminated by oil.

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Definition of “Clean water holding tank” as per MEPC.1/Circ. 642 Annex 3.6:

Clean water holding tank means tanks which hold processed water from the oil filtering equipment.

According to the definitions above, there is no guarantee that there would not be any presence of oil in the water. For this reason we would like to witness that the clean drain tank water passes through an oily water separator with MEPC.107(49) oil content meter as a common practice before disposal.

MEPC.1/Circ.642 as modified by Green Award

The changes applied by Green Award are introduced to ensure compliance with Marpol Annex I regulations and to enforce some guidelines as a common practice onboard.

The following changes to MEPC.1/Circ. 642 have been indicated in green and for easy reference the drawing has been split into three parts.

Drawing 1:

1. Included oil filtering equipment as per Marpol Annex I, Regulation 14;
2. Removed the drains from ballast and freshwater pump seal drains due to the enlarged risk of oil contamination.

Drawing 2:

Soot Collection System (Additional Green Award description)

1. Included Separation and Collection systems;
2. Included reception facilities possibilities;
3. Included fixed overboard discharge system for washing water.

Drawing 3:

1. Oil Residue (Sludge) Service Tank;
2. Replaced Oil Residue Service tank with Oil Residue (Sludge) Settling, Evaporation and Mixing and Service tank;
3. Added additional information on sludge handling for easy reference.

Should you have any questions, please do not hesitate to contact us at research@greenaward.org.

MEPC.1/Circ. 642 as modified by Green Award (Drawing 1)

MEPC.1/Circ.642
ANNEX
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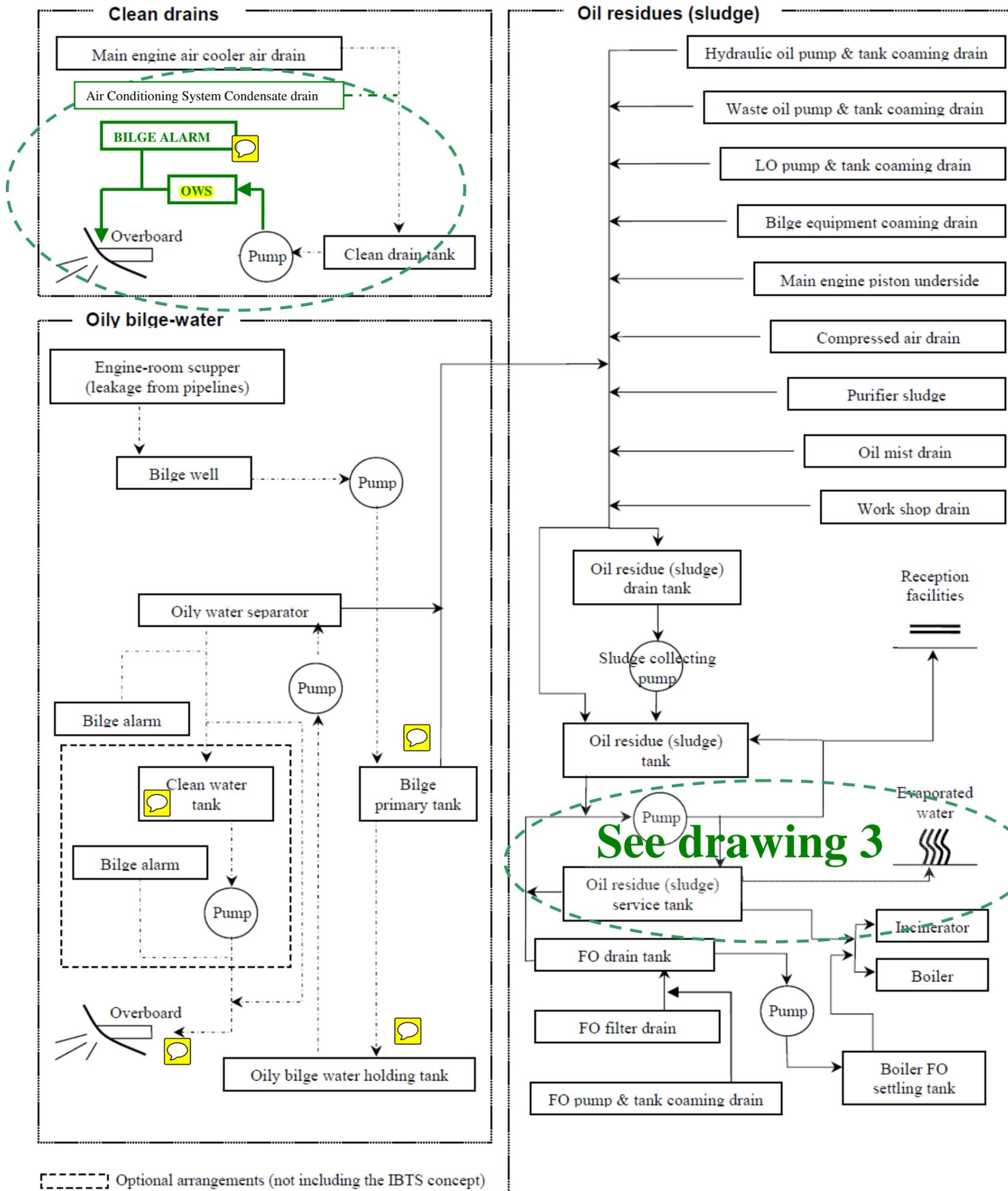
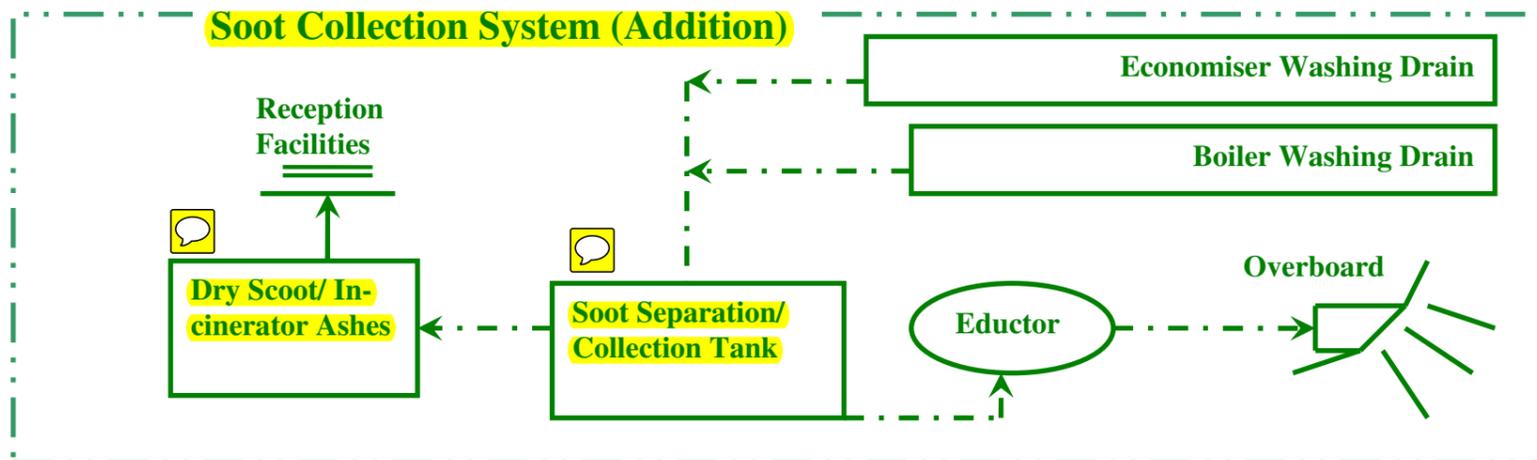


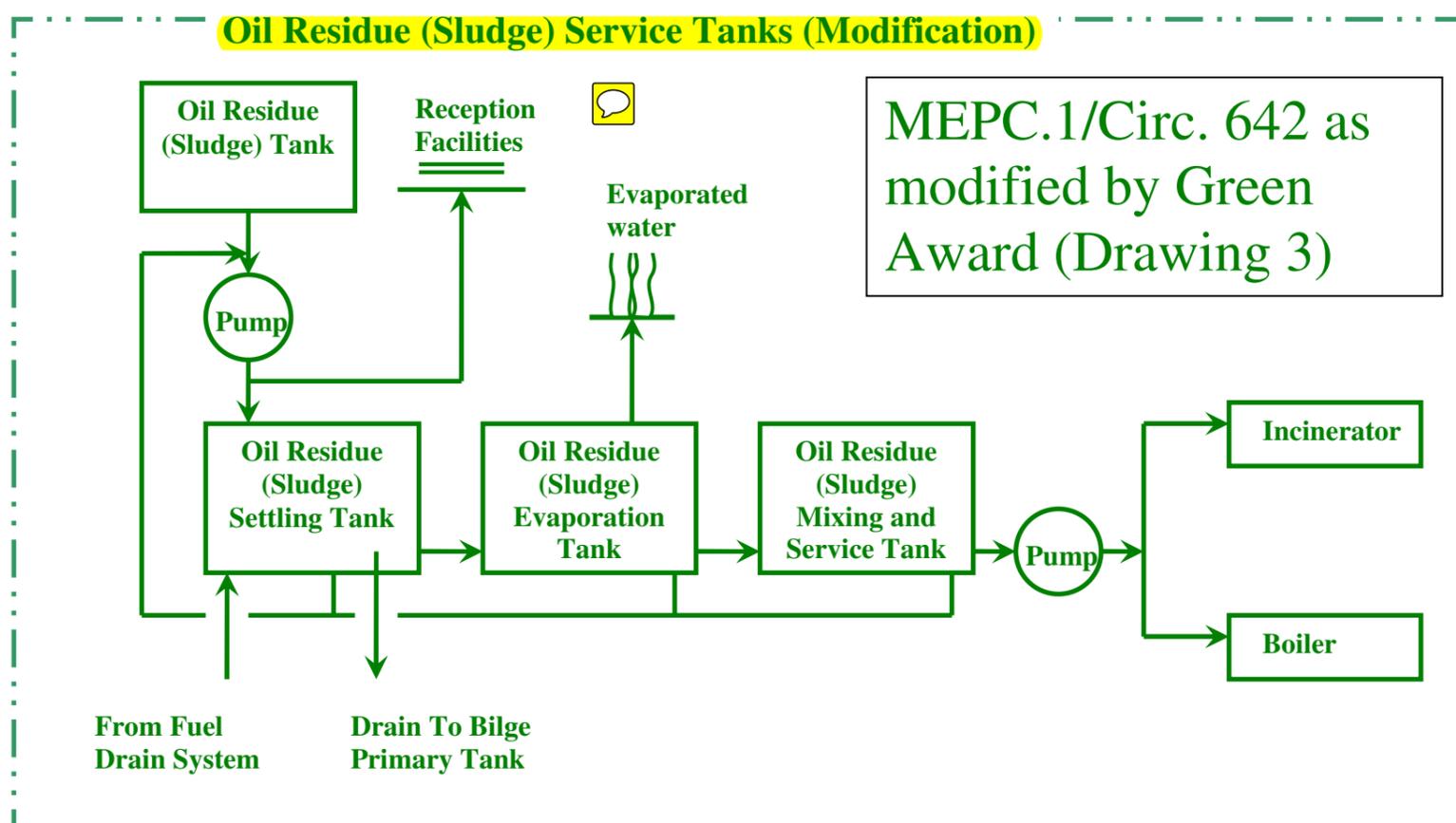
Figure 2 – Flow Diagram of Integrated Bilge Water Treatment System (IBTS)

MEPC.1/Circ. 642 as modified by Green Award (Drawing 2)



Soot Separation / Collection Tank:

- Tank has sufficient capacity to clean the economiser or boiler.
- Tank has a fine mesh filter screen to remove Soot particles from the water.
- Soot is removed from the tank and disposed with the incinerator ashes to reception facilities (as per ships management instruction).
- To avoid clogging of bilge water separator filters and coalesces filters and as there is no contamination with oil, the washing water can be disposed (as per ships management instruction).
- Fixed pump/ educator to overboard (as per ships management instruction).



Oil Residue (Sludge) Settling Tank:

- Tank is heated to 50 to 70°C
- Tank has a drain 10 cm from the bottom, connected to the “Bilge Primary Tank”
- Aim: Remove large amounts of water and preheating of the sludge.

Oil Residue (Sludge) Evaporation Tank:

- Tank is heated to >100°C
- Tank has an insulated vent.
- Aim: Remove remaining water from the sludge

Oil Residue (Sludge) Mixing and Service Tank

- Tank is equipped with a Sludge Improver, Agitator, Mixer or Recirculating pump.
- Aim: Steady sludge mixture for a good incineration at a steady temperature.