

# USCG MED IMO MEPC 107 (49) Approved Emulsion Breaking Bilge Water Cleaning System EBBWCS MkIII- Model "CD"



**EBBWCS CD-1.0**



**Influent Bilge Water  
including free Oil  
and Emulsions**



**Effluent Water  
Containing < 1 PPM of Oil.**



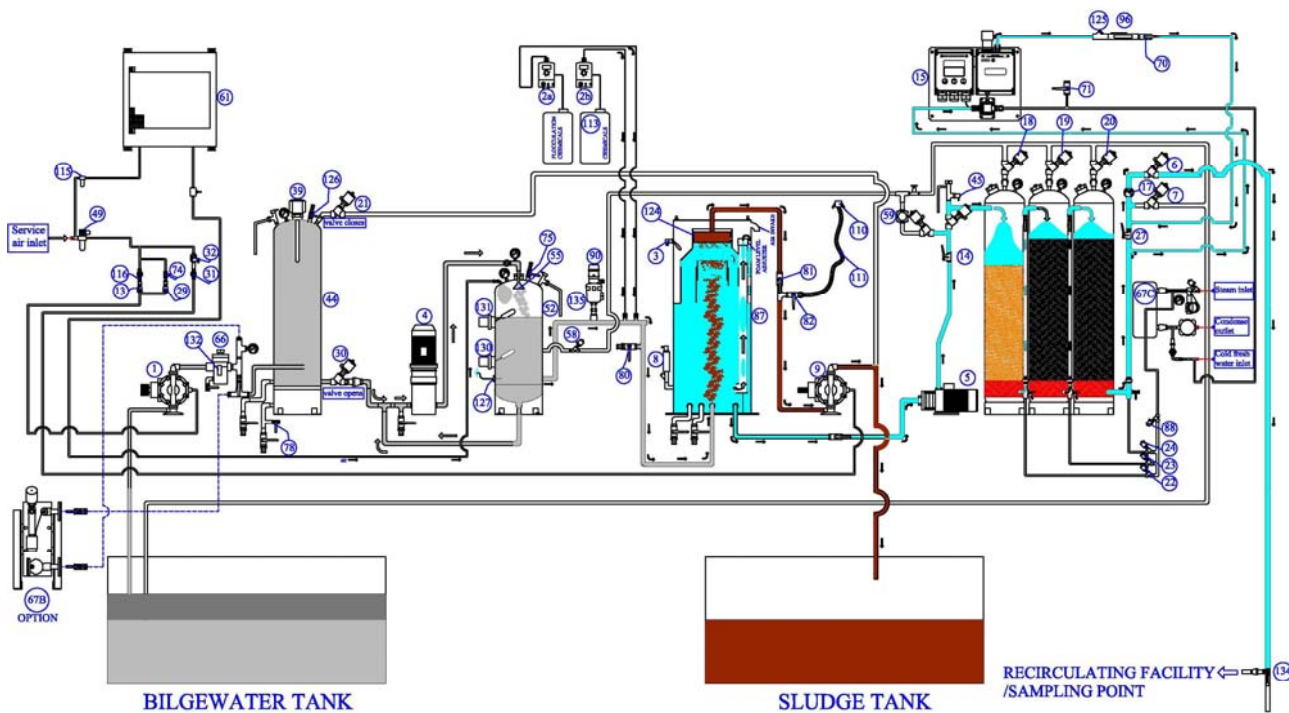
**The sludge/refuse chamber of an CD-1.0**

The Marinfloc CD-Model (EBBWCS) with capacities from **0,25 m<sup>3</sup>/hour up to 5,0 m<sup>3</sup>/hour** is a **fully automatic constant flow Emulsion Breaking Bilge Water Cleaning System.**

## Highlights

- To process your Bilge Water in an EBBWCS CD will only cost you USD 3.0./m<sup>3</sup> cleaned water.
- As its precursors, the effluent processed water from the CD contains < 5 PPM of oil.
- The Mk III "CD" needs less pre-heating of the process water.
- The Mk III "CD" has a higher tolerance to fluctuations in the PH value.
- The material in the Mk III "CD" is AISI 316L stainless steel.
- The Mk III "CD" has very small foot prints in relation to its capacity.
- The separating and emulsion breaking technology used in the Mk III "CD" keeps the water content in the drain/refuse between 2 and 5% of the Processed Bilge Water Volume. I.e. at a minimum.

**MARINFLOC CD MODELS  
FLOW CHART**



**Brief description of the system**

The Marinfloc EBBWCS Type CD is a constant flow system, that means the influent water capacity is equal to the effluent (discharge) water capacity. The influent preheated (> +40C <+60C) Bilge Water, is drawn by the feed pump (01) from the Bilge Water Holding Tank (BWHT) or preferably from a Settling/Primary Tank and via a strainer (66) and then fed into the Oil Descaler (44) for the separation of free oil.

The free oil will automatically be led of to the Sludge Tank while the remaining, emulsified, Bilge Water will be led in to the circulation tank (52). A very small amount of service air is fed into the water (patented part). A circulation pump (4) mixes the Bilge Water and air. A flocculent (and when necessary a polymer) will automatically (2a & 2b) be fed into the emulsified Bilge Water. The mixture of water, flocculent and air is then fed into the expansion/flocculation tank (87). The flocculation process is almost instant, and thus the emulsions are broken in a very short period of time. The drain pump (9) runs continuously and removes the foam, of flocks and air, through a funnel (124) mounted in the top of the expansion/flocculation tank (87).

The almost cleaned water will be fed into the three polishing filter steps (10, 11, 12), by the discharge pump (5). Cleaned, effluent Bilge Water (guaranteed and tested to contain < 5 PPM of oil) passes out of the filters. How-ever before this water can be pumped over board, it has to be checked by the PPM monitor (15). When <15 PPM (or <5 PPM if set to 5 PPM) the water will, be discharged over board via the flow meter (17). If for any reason the PPM value is >15 (or >5 PPM if set to 5 PPM) the effluent water will be returned to the BWHT or Settling /Primary Tank and the CD unit will go into an alarm position. The Filters stages 10, 11, 12 are equipped with an automatic back flushing device including a pre heater (67C).The filter materials in the filters (10, 11, 12) can be regenerated on site and after regeneration the same filter material may be reused. In this way the filter materials only have to be topped up when necessary.

The total cost for running a Marinfloc EBBWCS type CD (excluding the cost for pre-heating if not produced by heat recovery systems) is approx. USD 3.-/m<sup>3</sup> Cleaned Bilge Water.