conarina

TECHNICAL CIRCULAR No. 018 of 28 July 2011

To:	All Surveyors
Applicable to flag:	All Flags
Subject:	Capacity of sludge tanks
Reference:	POLLUTION -MARPOL Annex I- Reg.12.1, 15

Capacity of sludge tanks

PURPOSE

To assist Conarina Technical Office in determining the adequate capacity of sludge tanks, the following criteria may be used as guidance. These criteria should not be considered as determining the amount of oily residues which will be produced by the machinery installation in a given period of time. The capacity of sludge tanks may, however , be calculated upon any other reasonable assumptions.

APPLICABILITY

All vessels over 400 GT.

CALCULATION OF SLUDGE TANK CAPACITY

1. For ships which do not carry ballast water in oil fuel tanks, the minimum sludge tank capacity V_1 should be calculated by the following formula:

$V_1 = K_1 \times C \times D$ (m^3)

Where:

V_1 = minimum sludge tank capacity (m^3)

K_1 = 0.01 for ships where heavy fuel oil is purified for main engine use or

0.005 for ships using diesel oil or heavy fuel oil which does not require

Purification before use;

C = daily fuel consumption (metric tons); and

D = maximum period of voyage between ports where sludge can be discharged

ashore (days). In the absence of precise data a figure of 30 days should be used.

2. When such ships are fitted with homogenizers, sludge incinerators or other

Recognized means on board for the control of sludge, the minimum sludge tank capacity V_1 should, in lieu of the above, be:

V_1 =   1 m^3 for ships of 400 gross tonnage and above by less than 4,000 GT or

          2 m^3 for ships of 400 gross tonnage and above.

Example:

For the general cargo "ABC" during the initial survey the surveyor find out that the sludge tank volume is 4.60 m^3 in FORM A, Supplement to the International Oil Pollution Prevention Certificate (IOPP Certificate) RECORD OF CONSTRUCTION AND EQUIPMENT FOR SHIPS OTHER THAN OIL TANKERS paragraph 3.1. For this ship the heavy fuel oil is purified for main engine use.

Question: The surveyor to confirm that the sludge tank volume is 4.60 m^3 is greater that the minim volume requirement.

Solution:

The surveyor will ask the chief engineer what is the daily fuel consumption (metric tons) and the captain what is maximum period of voyage between

ports where sludge can be discharged ashore (days). In the absence of precise data a figure of 30 days should be used.

   K_1 = 0.01,   C = 10 MT   ,   D = 30 days

The minimum sludge tank capacity V_1 should be calculated by the following formula:

V_1 = K_1 x C x D (m^3) = 0.01 x 10 x 30 = 3 m^3 < 4.60 m^3

Conclusion: The sludge tank volume is 4.60 m^3 is correct.

REFERENCES:
Mepc 52/24/Add.1 ANNEX 3, Page 8.

ATTACHMENTS:
No.

Kindest Regards,
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