



Lloyd's approval for the Cargo Oil test

Earlier this month our Laboratory has received the Lloyd's Register approval to carry out test activities according to the new IMO specification MSC.288 (87) "Standard for Protective Coatings for Cargo Oil Tanks of Crude Oil tankers". The specification has been adopted on May 14th 2010.

With this LR approval our Laboratory is the first worldwide to receive this approval.

The IMO MSC.288 (87) is a supplement on the earlier adopted specification for Ballast Coatings (IMO MSC.215 (82)). Our Laboratory also carries out test activities according to this specification, of which the LR approval has been received in 2009.

Coatingsystems, consisting of a shopprimer and a 2 layer epoxy system, are exposed to a humid vapour test (90 days, 60 ± 3 °C) and an immersion in an artificial Crude Oil mixture (180 days, 60 ± 3 °C).

The gasmixture in the vapour test, to simulate the gasphase in a Crude Oil tank, will be added on a weekly basis. The gasmixture consist of:

	Gas	Concentration	
	Nitrogen (N ₂)	83 ± 2 % volume	
	Carbondioxide (CO ₂)	13 ± 2 % volume	
	Oxygen (O ₂)	4 ± 1 % volume	
	Sulphurdioxide (SO ₂)	300 ± 20 ppm	
	Hydrogensulphide (H ₂ S)	200 ± 20 ppm	



The composition of the artificial Crude Oil, based upon a reasonable worse case senario, consists of:

Distillate Marine Fuel, DMA Grade	Density max. 890 kg/m ³ at 15 °C Viscositeit max. 6 mm ² /s at 40 °C
Naphthenic acid	Acid value 2.5 ± 0.1 mg KOH/g
Benzene/Toluene (1:1)	8.0 ± 0.2 % by weight
Seawater (ASTM D1141)	5.0 ± 0.2 % by weight
H ₂ S (in liquid carrier)	5 ± 1 ppm

The coated steel test panels are assessed on defects, such as blisters and rust (ISO 4628) where the specification considers a pass when the coatingsystems show no defects after respectively 90 and 180 days of testing. Discoloration, due to the effect of the Crude Oil, is allowed.

Also for the application and/or the witnessing of the application at the manufacturer facilities, COT can be of assistance. The specification also includes requirements for the application process.

If you require more information about this Cargo Oil test and/or the activities of our organization, please do not hesitate to contact us by telephone +31 23 531 95 44 or e-mail walrave@cot-nl.com.

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