Calculation of Weight of Upper Deck 4th Coat (Final)

HEMPATHANE TOPCOAT 55210

1: Painting Scheme (Refer to Drawing No.K2310602)

Position	Painting Specification	DFT	Color	Total DFT
Upper Deck	1st: HEMPADUR MASTIC 45880	100 um	red/50630	100+100+50+50 =300 micron
	2nd: HEMPADUR MASTIC 45880	100 um	grey/11480	
	3rd: HEMPADUR 45080	50 um	off white/11630	
	4th(final): HEMPATHANE TOPCOAT 55210	50 um	Grey/11480	

2: Parameter of HEMPATHANE TOPCOAT 55210:

No.	Sign/Title	Content	Value	Unit
1	SVR	Solid volume rate	51 (from HEMPEL Data Sheet)	%
2	DFT	Dry film thickness	50 (4th) (from Painting Scheme, Page 11)	micron
3	Surface area in m^2	A=A1+A2+A3 A1→ A2→ A3→	Including (1): upper deck except accommodation part (2): deck beam (both side with top face plate) (3): deck longitudinal (both side) Refer to drawing "Midship Section"	m^2
5	Loss factor by quantity		0.6	
6	Specific Gravity		1.2 (from HEMPEL Data Sheet)	kg/liter

4: Calculation Process

No.	Sign/Title	Progress	Unit
1	(1): upper deck except accommodation part: A1	[16X0.6(distance between frame)+3X0.8(distance between frame) +(254-43)X0.7(distance between frame)]x32.2 =(16x0.6+2.4+211x0.7)x32.2 =159.7x32.2 =5142.34	m^2
2	(2): deck beam (both side with top face plate) A2:	1.2(height)x28(length)x40(No.)x2(both face) +0.3(width)x28(length)x40(No.)x2(both face) =2688+672 3360	m^2
3	(3): deck longitudinal (both side) A3:	0.22(height)x(254-43)x0.7(distance between frame)x38(No.)x2(both face) =2469.54	m^2
4	A=A1+A2+A3	5142.34+3360+2469.54=10971.88	m^2
5	Theoretical paint consumption	(DFT x A) / (10 x SVR) = (50 x 10971.88) / (10 x 51) =1075.67	liter

6	Planned Practical Consumption with 0.6 quantity loss factor	1075.67x1.6=1721.07	liter
		1721.07/20=86	can/unit
7	Weight of Planned Practical paint consumption with 0.6 quantity loss factor	1721.07x1.2=2065.28	kg