

PRELIMINARY LENGTHENING

Rpt. C.11 (Comp.)

LLOYD'S REGISTER OF SHIPPING
SURVEYS FOR FREEBOARD
(COMPUTATION FOR ~~STEAMER, SAILING SHIP~~, TANKER)

For LONDON OFFICE ONLY

Received
Index No.
Govt. Copy
Owners C11

Ship's Name "MOOIL RADIANT"	Official Number 1351.F.	Nationality and Port of Registry PANAMA	Gross Tonnage 17598 BEFORE LENGTHENING	Date of Build 1950.	Port of Survey LONDON H.Q.
Moulded Dimensions: Length 718.0' Breadth 82.5' Depth 51.1' 51.09					Date of Survey 10.12.63
Freeboard Length 719.1' To CL of Rudder Stock.					Surveyor's Signature
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) 59916 m³					Particulars of Classification +100 A1
Coefficient of fineness for use with Tables .821					OIL TANKER.

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... 51.09 ... 51.10	(a) Where D is greater than Table depth (D-Table depth) R = (51.20 - 47.94) 3 = + 9.78"	Moulded Breadth (B) 82.50'
Stringer plate 1.1810	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{82.50 \times 12}{50} = 19.80"$
Wood Sheathing on exposed deck	If restricted by superstructures	Ship's Round of Beam = 20.00"
$T \left(\frac{L-S}{L} \right) =$		Difference 0.20"
Depth for Freeboard (D) = 51.20'		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.20^2}{4} \times .8226 = -.004$

DEDUCTION FOR SUPERSTRUCTURES.					Standard Height of Superstructure 7.50'	
	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	R.Q.D.
Poop enclosed ...						
" overhang ...						
R.Q.D. enclosed ...						
" overhang ...	49.36					
Bridge enclosed ...	45.86	45.86	8.5	-	45.86	
" overhang aft ...	3.50	2.63	-	-	2.63	
" overhang forward ...						
Fore enclosed (E.A.V.)	76.36	76.36	8.5	-	76.36	
" overhang ...	5.39	2.70	-	-	2.70	
Trunk aft ...	82.75					
" forward ...						
Tonnage opening aft ...						
" " forward ...						
Total ...	131.11	127.55			127.55	

Percentage covered $\frac{S}{L} = \frac{18.23}{100} = 18.23\%$	
" $\frac{S_1}{L} = \frac{17.74}{100} = 17.74\%$	
" $\frac{E}{L} = \frac{12.42}{100} = 12.42\%$	
Percentage from Table, Line A Tanker. 12.42	
(corrected for absence of forecastle (if required))	
Percentage from Table, Line B.	
(corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction = 42.00 x .1242 = - 5.22	

SHEER CORRECTION.							
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S
A.P. ...	81.91	1		81.91	23.62	23.62	1
1/2 L from A.P. ...	36.45	4		145.80	1.18	1.18	4
2/3 L " ...	9.01	2		18.02	0	0	2
Amidships ...	0	4		0	0	0	4
2/3 L from F.P. ...	18.02	2		36.04	0	0	2
1/2 L " ...	72.90	4		291.60	0	0	4
F.P. ...	163.82	1		163.82	70.87	70.87	1
Total ...				737.19			

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{637.98}{18} \times (.75 - .0912) = + 23.35$

If limited on account of midship superstructure.

Mean actual sheer aft = **23.62**
Mean standard sheer aft = **23.62**

Mean actual sheer forward = **0**
Mean standard sheer forward = **0**

Length of enclosed superstructure forward of amidships = **124.79**
aft of " = **137.73**

If limited to maximum allowance of 1 1/2 ins. per 100ft.

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient .821 + .68 = 1.501 / 1.36
Depth to Freeboard Deck = 51.20	$\Delta =$	Depth Correction ... 9.78
Summer freeboard = 13.79	Tons per inch immersion at summer load water line	Deduction for superstructures ... 5.22
Moulded draught (d) = 37.41	$T =$	Sheer correction ... 23.35
Keel allowance =	Deduction = $\frac{\Delta}{40 T}$ inches	Round of Beam correction ... 0.04
Extreme draught =		Correction for Thickness of Deck amidships ...
Deduction for Tropical freeboard and addition for =		Other corrections, scantlings, etc. ...
Winter freeboard = $\frac{d}{4}$ inches =		
Addition for Winter North Atlantic Freeboard (if required) =		

Summer Freeboard = **165.60**

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood , Steel, Deck :-			
Tropical Fresh Water Line above Centre of Disc	...	Tropical Fresh Water Freeboard	...
Fresh Water Line	"	Fresh Water	"
Tropical Line	"	Tropical	"
Winter Line below	"	Winter	"
Winter North Atlantic Line	"	Winter North Atlantic	"