

AMENDED.

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LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER)

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Ship's Name MOBIL BRILLIANT	Official Number 2445-50	Nationality and Port of Registry PANAMA	Gross Tonnage 17598	Date of Build 1949	Port of Survey <u> </u>
Moulded Dimensions: Length <u>600' B.R.</u> Breadth <u>82.50</u> Depth <u>42.50</u>					Date of Survey <u>28-6-56</u>
Freeboard Length <u>601.1</u> <u>DOF RS</u>					Surveyor's Signature <u> </u>
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) <u>39590</u> tons					Particulars of Classification <u>+100 A.S.</u>
Coefficient of fineness for use with Tables <u>.773</u>					

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth ...	42.50	(a) Where D is greater than Table depth (D-Table depth) R =		Moulded Breadth (B)	82.50
Stringer plate12	(42.62 - 40.07) 3 =	7.65	Standard Round of Beam = $\frac{B \times 12}{50}$	19.80
Wood Sheathing on exposed deck		(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Ship's Round of Beam	20.00
$T \left(\frac{L-S}{L} \right) =$				Difference	.2
Depth for Freeboard (D) =	42.62	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S}{L} \right)$	$\frac{.2}{4} \times .5686 = .03$

DEDUCTION FOR SUPERSTRUCTURES.				
	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Effective Length (E)
Poop enclosed ...	134.49	134.49	8'-6"	134.49
" overhang ...				
R.Q.D. enclosed ...				
" overhang ...				
Bridge enclosed ...	45.86	45.86	8'-6"	45.86
" overhang aft ...				
" overhang forward ...				
F'cle enclosed ...	76.18	76.18	8'-6"	76.18
" overhang ...	5.57	2.79		2.79
Trunk aft ...				
" forward ...				
Tonnage opening aft ...				
" " forward ...				
Total ...	262.10	259.32		259.32

Standard Height of Superstructure 7.50'
 " " R.Q.D.
 Deduction for complete superstructure 42.00"
 Percentage covered $\frac{S}{L} = 43.60$
 " " $\frac{S_i}{L} =$
 " " $\frac{E}{L} = 43.14$
 Percentage from Table, Line A, TANKER, 34.14 (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 = $42.00 \times 34.14 = 14.34$

SHEER CORRECTION.							
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S
A.P. ...	70.11	1		70.11	14.00	50.00	1
$\frac{1}{4}$ L from A.P. ...	31.20	4		124.80	2.00	3.84	4
$\frac{2}{4}$ L " ...	7.71	2		15.42	0	0	2
Amidships ...	0	4		0	0	0	4
$\frac{3}{4}$ L from F.P. ...	15.42	2		30.84	0.50	.50	2
$\frac{1}{4}$ L " ...	62.40	4		249.60	4.30	4.30	4
F.P. ...	140.22	1		140.22	20.00	20.00	1
Total ...				630.99			

Mean actual sheer aft =
 Mean standard sheer aft = } deficient
 Mean actual sheer forward =
 Mean standard sheer forward = }
 Length of enclosed superstructure forward of amidships = } deficient
 " " aft of " = } shears

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{527.43}{18} \left(.75 - \frac{2180}{5120} \right) = 15.59$
 If limited on account of midship superstructure.

Deduction for Tropical Freeboard.		Deduction for Fresh Water.		TABULAR FREEBOARD corrected for Fresh Deck (if required)	
Addition for Winter and Winter North Atlantic Freeboard.				Correction for coefficient	1773.68 = 1453
42.62 Depth to Freeboard Deck =	42.62	Displacement in salt water at summer load water line			
10.42 Summer freeboard =	10.37	$\Delta = 35175$			
32.20 Moulded draught (d) =	32.25	Tons per inch immersion at summer load water line			
Keel allowance =		T = 98.25			
Extreme draught =		Deduction = $\frac{\Delta}{40 T}$ inches			
Deduction for Tropical freeboard and addition for =		= 8.95			
8.05 Winter freeboard = $\frac{d}{4}$ inches = 8.06	2.3	= 227 1/2			
2.04 Addition for Winter North Atlantic Freeboard (if required) = 8.06 + 6.01 = 14.07	356				

Depth Correction ... 7.65
 Deduction for superstructures ... 14.34
 Sheer correction ... 15.59
 Round of Beam correction03
 Correction for Thickness of Deck amidships ...
 Other corrections, scantlings, etc. ...
 Summer Freeboard = 124.90

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc	432 1/2	Tropical Fresh Water Freeboard	2730
Fresh Water Line	229	Fresh Water	2933
Tropical Line	203	Tropical	2957
Winter Line below	203	Winter	3365
Winter North Atlantic Line	356	Winter North Atlantic	3518

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

Poop.

$$\begin{aligned} \text{EQUIV. LENGTH} &= 129.25 + 1.1 + \frac{27.25 \times 6}{39.5} \\ &= 129.25 + 1.1 + 4.14 \\ &= 134.49 \end{aligned}$$

Bridge

$$\begin{aligned} \text{Equiv. length} &= 38.75 + \frac{2}{3} \times 10.67 \\ &= 38.75 + 7.11 \\ &= 45.86 \end{aligned}$$

Forecastle

$$\begin{aligned} \text{Equiv. length} &= 81.75 - \frac{21 \times 8.75}{33} \\ &= 81.75 - 5.57 \\ &= 76.18 \\ \text{O/A.} &= 5.57 \end{aligned}$$

Trade of ship _____

Names of sister ships _____

Builder's name and yard number _____

Owners _____

Fee £ _____ : _____ : _____

List of plans forwarded for reference. (See "Instructions to Surveyors, Part 4, 1950," paragraph 11.)



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