

LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER)

Received **18 MAR 1957**
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 Owners C11

Ship's Name "MOBIL DAYLIGHT"	Official Number	Nationality and Port of Registry Panamanian PANAMA	Gross Tonnage 17598	Date of Build 1950 -2	Port of Survey PALERMO
Moulded Dimensions: Length 600 Breadth 82ft 6" Depth 42 ft 6"					Date of Survey 4th February, 1957 and subsequently,
Freeboard Length 600 601-33 ft. to center of keel					Surveyor's Signature P.H.W. Evans.
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) 39590 tons					Particulars of Classification L.R. +100 A1 and A.B. Class
Coefficient of fineness for use with Tables .773					

DEPTH FOR FREEBOARD (D). Moulded depth ... 42.5 Stringer plate ... 0.12 Wood Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 42.62	DEPTH CORRECTION. (a) Where D is greater than Table depth (D-Table depth) R = $(42.62 - 40.09) 3.0 = 7.59$ (b) Where D is less than Table depth (if allowed) (Table depth-D) R = If restricted by superstructures	ROUND OF BEAM CORRECTION. Moulded Breadth (B) 82.5 Standard Round of Beam = $\frac{B \times 12}{50} = 19.58$ Ship's Round of Beam = 20.0 Difference 0.2 Restricted to Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = 0.2 \times \frac{56.78}{4} = .03$
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	136.22	136.22	8.5'-10.5'		133.77
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...	45.86	45.86	8.5'		45.85'
Bridge enclosed ...	38.66'				
" overhang aft ...					
" overhang forward ...	76.33				
F'dle enclosed ...	73.0	76.33	8.5 -14.08'		78.65'
" overhang ...	5.42	2.71			
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	262.83	260.12			260.12

Standard Height of Superstructure **7.50'**
 " " R.Q.D. **✓**
 Deduction for complete superstructure **42.00"**
 Percentage covered $\frac{S}{L} = 43.88$
 " " $\frac{S_1}{L} =$
 " " $\frac{E}{L} =$ } **43.26**
 Percentage from Table, Line A. Tanker. **34.26**
 (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 .3426 = 14.39**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	70.13	1		70.13	78.5	54.50	1		54.50
1/4 L from A.P. ...	31.21	4		124.84	6.5	8.45	4		33.80
1/2 L " ...	7.71	2		15.42	1.25	1.25	2		2.50
Amidships ...	0	4		0	0	0	4		0
3/4 L from F.P. ...	15.43	2		30.86	1.5	1.50	2		3.00
1/4 L " ...	62.42	4		249.68	5	5.00	4		20.00
F.P. ...	140.26	1		140.26	23	23.00	1		23.00
Total ...				631.19					136.80

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{494.39}{18} \left(.75 - \frac{.5306}{2 \times 119.4} \right) = + 14.57$
 If limited on account of midship superstructure. If limited to maximum allowance of 1 1/2 ins. per 100ft.

Deduction for Tropical Freeboard.
 Addition for Winter and Winter North Atlantic Freeboard.

Ft.
 Depth to Freeboard Deck = **42.62**
 Summer freeboard = **10.37**
 Moulded draught (d) = **32.25**
 Keel allowance =
 Extreme draught =
 Deduction for Tropical freeboard and addition for =

Winter freeboard = $\frac{d}{4}$ inches = **8.06" = 20.3**

Addition for Winter North Atlantic Freeboard (if required) = **8.06 + 6.01 = 14.07 = 35.6**

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta = 53475$ **35175**
 Tons per inch immersion at summer load water line
 $T = 98.25$
 Deduction = $\frac{\Delta}{40 T}$ inches
 = **9.75**
 = **229-1/2**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.773 \times 68}{136} = \frac{1.453}{136}$

	+	-
Depth Correction	7.59	✓
Deduction for superstructures	14.39	✓
Sheer correction	14.57	✓
Round of Beam correction	.03	✓
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
22.16	14.42	+ 7.74

Summer Freeboard = **123.82**

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

A.B. FREEBOARDS	Tropical Fresh Water Line above Centre of Disc	43.2
REASSIGNED.	Fresh Water Line	22.9
	Tropical Line	20.3
	Winter Line below	20.3
	Winter North Atlantic Line	35.6

Tropical Fresh Water Freeboard	273.0
Fresh Water	293.3
Tropical	295.9
Winter	336.5
Winter North Atlantic	351.8

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.

W. H. Evans March 1957

Poop
 $E_{7014} = 129.25$
 $+ 6.75 \times \left(\frac{110}{2 \times 80}\right) = 4.64$
 135.22

Bridge
 $at side = 38.75$
 $+ \frac{2}{3} \times 10.57 = 7.11$
 45.86

Forecastle
 $Length of side = 73.00$
 $+ \frac{24}{63} \times 8.75 = 3.33$
 76.33
 $o/h = 8.75 - 3.33 = 5.42$

Shear off
 $AP = 18.5 + (10'6'' - 7'6'')$
 $18.5 + 30.0$
 54.5
 $\frac{1}{6}L = 6.5'' + 36 \left(\frac{30.36}{130.58} \right)^2$
 $= 6.5 + 1.95$
 $= 8.45$

$L = 601.33$
 $\frac{L}{6} = 100.22$
 $\frac{130.58}{30.36}$

Omit

Trade of ship International - Carrying Petroleum in bulk.
 Names of sister ships Mobil Aladdin, Mobil Astral, Mobil Brilliant, Mobil Comet, Mobil Daylight, Mobil Radiant,
 Builder's name and yard number Sun Shipbuilding & Dry Dock Co. Chester, Pa.
 Owners _____

and Fee £ Changed on Apr 8.

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