

17 OCT 1947

Lloyd's Register of Shipping.

Index. No. 35311
(For London Office only).

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name "Grauvenchon" ex Sedan	Official Number ✓	Nationality and Port of Registry French. Le Havre	Gross Tonnage 10296	Date of Build 1945	Port of Survey New York
Moulded Dimensions: Length 503' Breadth 68' Depth 39.25' <i>to centre of rudder stock</i>					Date of Survey 26th May - 23rd July 1947
Moulded displacement at moulded draught = 85 per cent. of moulded depth: 24350 tons					Surveyor's Signature J. Todd.
Coefficient of fineness for use with Tables: .747					Particulars of Classification 100 A1. Class contemplated.

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth 39.25	(a) Where D is greater than Table depth (D—Table depth) R = (39.34 - 33.53) 3 = + 17.43" 5.81	Moulded Breadth (B) 68'
Stringer plate 1.1309	(b) Where D is less than Table depth (if allowed) (Table depth—D) R = ✓	Standard Round of Beam = $\frac{B \times 12}{50} =$ 16.32"
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures ✓	Ship's Round of Beam = equiv 18.46
Depth for Freeboard (D) = 39.34		Difference See over. + 2.14
		Restricted to
		Correction = $\frac{\text{Diff.}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{2.14 \times 5387}{4} =$ 2.32"

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed <i>equiv.</i> ...	109.93	109.87	8.0		109.87
" overhang87				
R.Q.D. enclosed ...					
" overhang97				
Bridge enclosed <i>equiv.</i> ...	38.58	38.97	8.0		38.97
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	52.63	52.63	10.0	✓	52.63
" overhang75	.37			.37
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	202.22	201.84			201.84

Standard Height of Superstructure	7.5'
" " R.Q.D.	✓
Deduction for complete superstructure	42"
Percentage covered $\frac{S}{L} =$	40.2 ✓
" " $\frac{S_1}{L} =$	40.13 ✓
" " $\frac{E}{L} =$	40.13 ✓
Percentage from Table, Line A. TANKER	31.13 ✓
(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 = $42 \times .3113 =$	-13.08 ✓

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	60.30	1	60.30	24.0	24.0	1	24.0
1/2 L from A.P. ...	26.83	4	107.32	4.0	4.0	4	16.0
1/2 L " ...	6.63	2	13.26			2	
Amidships ...		4				4	
1/2 L from F.P. ...	13.27	2	26.54			2	
1/2 L " ...	53.67	4	214.68	6.0	6.0	4	24.0
F.P. ...	120.60	1	120.60	18.0	18.0	1	18.0
Total ...			542.70				82.0

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{460.7}{18} \times (.75 - .201) = + 14.05$ ✓

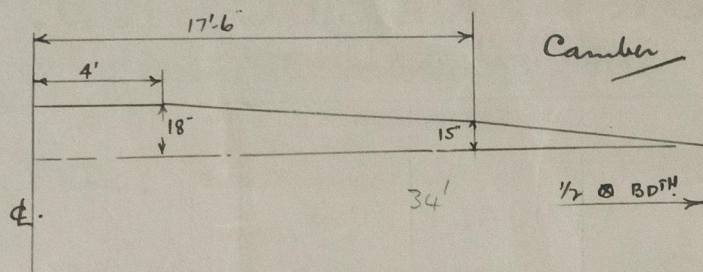
If limited on account of midship superstructure.

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

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD <i>corrected for Flush Deck (if required)</i>	
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient.	88.19 ✓
Depth to Freeboard Deck = 39.34 Ft.	$\Delta =$ 21830	$\frac{747 + 68}{1.36} = \frac{1.427}{1.36}$	92.54 ✓
Summer freeboard = 9.23	Tons per inch immersion at summer load water line	Depth Correction ...	17.43 ✓
Moulded draught (d) = 30.41	T = 67.08	Deduction for superstructures ...	13.08 ✓
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 7.53 7/2	Deduction = $\frac{\Delta}{40T}$ inches = 8 1/4	Sheer correction ...	14.05 ✓
Addition for Winter North Atlantic Freeboard (if required) = 7.53 + .503 = 12.56 1/2		Round of Beam correction32 ✓
		Correction for Thickness of Deck amidships ...	
		Other corrections, scantlings, etc. ...	
		Summer Freeboard = 110.62	

SUMMER FREEBOARD amidships from Centre of Disc. to top of Deck Line, Wood, Steel, Deck:			
Tropical Fresh Water Line above Centre of Disc	15 3/4"	400 mm	Tropical Fresh Water Freeboard ...
Fresh Water Line	8 1/4"	210 "	Fresh Water
Tropical Line	7 1/2"	190 "	Tropical
Winter Line below	7 1/2"	190 "	Winter
Winter North Atlantic Line	12 1/2"	317 "	Winter North Atlantic

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.



	Δ	T.P.I.
29' 6" W.L.	21300	66.75
30' 0" -	21750	66.95
30' 6" -	22100	67.15

Equiv camber :-

$$\begin{aligned} 4' \times 18'' &= 72 \\ 13.5' \times 16.5 &= 222.75 \\ 16.5 \times 7.5 &= 123.75 \\ \hline &418.50 \end{aligned}$$

Boop equiv :-

$$\begin{aligned} 33.57 \quad 3.65 \times 20 &= 73.1 \\ 3.65 \times 23.57 &= 86.03 \\ \hline &159.03 \end{aligned}$$

$$\frac{159.03}{67.14} = 2.37$$

$$\text{at side} = \frac{107.50}{109.87}$$

$$\text{Equiv} = \frac{418.5}{34} \times \frac{3}{2} = \sqrt{18.46''}$$

Bridge equiv :-

$$\begin{aligned} 17.5 \times 4.25 &= 74.375 \\ 16.5 \times 2.125 &= 35.062 \\ \hline &109.437 \end{aligned}$$

$$\frac{109.437}{34} = 3.22'$$

$$\text{at side} = \frac{35.75}{38.97}$$

Trade of ship International

Names of sister ships American built T2 Tankers.

Builder's name and yard number Sum Shipbuilding Co yard no 462.

Owners French Government.

Fee 120=



© 2021

Lloyd's Register
Foundation