

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name "REMBRANDT"	Official Number 168048	Nationality and Port of Registry British London	Gross Tonnage 5559	Date of Build 1940	Port of Survey
Moulded Dimensions: Length 425.56' Breadth 57.75' Depth 37.31'					Date of Survey 9th April 1941
Moulded displacement at moulded draught = 85 per cent. of moulded depth					Surveyor's Signature
Coefficient of fineness for use with Tables .764 (estimated)					Particulars of Classification + 100 A.1 with freeboard.

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 37.31'	(a) Where D is greater than Table depth (D - Table depth) R = (37.37 - 28.46) 30 = + 27.00"	Moulded Breadth (B) 57.75'
Springer plate70	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 9.00	Standard Round of Beam = $\frac{B \times 12}{50} = \mathbf{13.86"}$
Sheathing on exposed deck T $\left(\frac{L-S}{L}\right) =$	If restricted by superstructures ✓	Ship's Round of Beam = 14.50"
Depth for Freeboard (D) = 37.37		Difference Excess .64
		Restricted to ✓
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{.64}{4} \times .9331 = \mathbf{-.15"}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
.. overhang ...					
R.Q.D. enclosed ...					
.. overhang ...					
Bridge enclosed ...					
.. overhang aft ...					
.. overhang forward ...					
Forecastle enclosed ...	28.46	28.46	7.0'	7.0' x .5	16.56
.. overhang ...					
Trunk aft ...					
.. forward ...					
Tonnage opening aft ...					
.. forward ...					
Total ...	28.46	28.46			16.56

Standard Height of Superstructure **7.5'**
" " R.Q.D. **✓**
Deduction for complete superstructure **42.40"**
Percentage covered $\frac{S}{L} = \mathbf{6.69}$
" " $\frac{S_1}{L} = \mathbf{6.69}$
" " $\frac{E}{L} = \mathbf{6.24}$
Percentage from Table, Line A. **3.12**
(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" x .0312 = -1.31"**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	52.56	1		52.56	54.00	54.00	1		54.00
$\frac{1}{4}$ L from A.P. ...	23.39	4		93.56	24.00	24.00	4		96.00
$\frac{2}{8}$ L " ...	5.78	2		11.56	6.00	6.00	2		12.00
Amidships ...	-	4		✓	✓	✓	4		✓
$\frac{3}{8}$ L from F.P. ...	11.56	2		23.12	12.00	12.00	2		24.00
$\frac{1}{4}$ L " ...	46.78	4		187.12	48.00	48.00	4		192.00
F.P. ...	105.12	1		105.12	108.00	108.00	1		108.00
Total ...				473.04					486.00

Mean actual sheer aft = **Excess**
Mean standard sheer aft = **Excess**
Mean actual sheer forward = **Excess**
Mean standard sheer forward = **Excess**
Length of enclosed superstructure forward of amidships = **12.00**
" " aft of " = **0**
Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{12.96}{18} \times \left(\frac{.75 - .0335}{1} \right) = \mathbf{-.52"}$
If limited on account of midship superstructure **7.5, no allowance** If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. **✓**

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 .764 + .65 = 1.414 + 1/36	81.92
	Tons per inch immersion at summer load water line		86.98
Depth to Freeboard Deck = 37.37'	$\Delta = \mathbf{14030}$	Depth Correction ... 27.00	
Summer freeboard = 10.69	T = 49.34	Deduction for superstructures ... 1.31	
Moulded draught (d) = 26.68	Deduction = $\frac{\Delta}{40T}$ inches	Sheer correction ... 1.15	
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.67 = 6 3/4	= 7.11	Round of Beam correction ... 1.15	
Addition for Winter North Atlantic Freeboard (if required) =	= 4"	Correction for Thickness of Deck amidships ... 1.15	
		Other corrections, scantlings, etc. to be corrected	
		6 a summer moulded draught of 26.6 3/4	
		Summer Freeboard = 128.25	

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

Tropical Fresh Water Line above Centre of Disc ...	13 3/4"	Tropical Fresh Water Freeboard ...	10 - 8 1/4"
Fresh Water Line " " " "	4"	Fresh Water " " " "	9 - 6 1/2"
Tropical Line " " " "	6 3/4"	Tropical " " " "	10 - 1 1/4"
Winter Line below " " " "	6 3/4"	Winter " " " "	10 - 1 1/2"
Winter North Atlantic Line " " " "	6 3/4"	Winter North Atlantic " " " "	11 - 3"

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