

Amended
Preliminary.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index. No. **37871A**
(For London Office only).

Ship's Name Sin Juan hang 768.770 + 771 734.735 + 737.	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey Date of Survey 2-2-45 Surveyor's Signature Particulars of Classification +100 x 1 carrying petroleum in bulk (contemplated)
Moulded Dimensions: Length 463.46 Breadth 61.75 Depth 34.08 <i>centre of fresh water</i>					
Moulded displacement at moulded draught = 85 per cent. of moulded depth 7 tons					
Coefficient of fineness for use with Tables .769 (assumed)					

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 34.08	(a) Where D is greater than Table depth (D - Table depth) R = (34.14 - 30.89) x 3 = 9.75	Moulded Breadth (B) 61.75
Stringer plate06	3.25	Standard Round of Beam = $\frac{B \times 12}{50} =$ 14.82
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ ✓	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = ✓	Ship's Round of Beam = 15.50
Depth for Freeboard (D) = 34.14	If restricted by superstructures	Difference .68
		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{.68^2}{4} \times .5867 =$ -.10

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)	
Poop enclosed <i>Equilateral</i>	96.79	96.79	8.0	-	96.79	Standard Height of Superstructure 7.5
„ overhang ...	1.33	.66	-	-	.66	„ „ R.Q.D. ✓
R.Q.D. enclosed						Deduction for complete superstructure 42
„ overhang						Percentage covered $\frac{S}{L} =$ 41.76
Bridge enclosed <i>Equilateral</i>	42.67	42.67	8.0	-	42.67	„ „ $\frac{S_i}{L} =$ 41.33
„ overhang aft	3.50	2.63	-	-	2.63	„ „ $\frac{E}{L} =$ 32.33
„ overhang forward	.83	.42	-	-	.42	Percentage from Table, Line A. Tankers 32.33
Fore enclosed <i>Equilateral</i>	48.40	48.40	8.0	-	48.40	(corrected for absence of forecastle (if required))
„ overhang						Percentage from Table, Line B.
Trunk aft						(corrected for absence of forecastle (if required))
„ forward						Interpolation for bridge less than 2L (if required)
Tonnage opening aft						Deduction = 42 x 32.33 = -13.58
„ „ forward						
Total	193.52	191.57			191.57	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	56.35	1		56.35	67.00	56.35	1		56.35	Mean actual sheer aft = <i>mean</i>
$\frac{1}{8}$ L from A.P. ...	25.075	4		100.30	25	25.075	4		100.30	Mean actual sheer forward = <i>Deficient</i>
$\frac{2}{8}$ L „ ...	6.195	2		12.39	6.25	6.195	2		12.39	Mean standard sheer forward
Amidships ...	-	4		-	-	-	4		-	Length of enclosed superstructure forward of amidships =
$\frac{3}{8}$ L from F.P. ...	12.39	2		24.78	12.125	12.125	2		24.25	„ „ aft of „ = <i>Tankers Dry with stability!</i>
$\frac{4}{8}$ L „ ...	50.15	4		200.60	50.25	50.25	4		201.00	
F.P. ...	112.69	1		112.69	111.25	111.25	1		111.25	
Total				507.11					505.54	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75 - S}{2L} \right) = \frac{1.57(-.75 - 20.88)}{18} =$ **+ .05** ✓
 If limited on account of midship superstructure. **18** **.5412** ✓
 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 $\frac{769 + .68}{1.36} = \frac{1.449}{1.36}$ ✓	78.57 ✓
Depth to Freeboard Deck = 34.14 ✓	$\Delta =$ 172.80 ✓		83.72 ✓
Summer freeboard = 6.67 ✓	Tons per inch immersion at summer load water line		
Moulded draught (d) = 27.47 ✓	T = 58.5 ✓	Depth Correction ... 9.75 ✓	
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.87 = 6$\frac{3}{4}$ ✓	Deduction = $\frac{\Delta}{40T}$ inches = 7.39 = 7$\frac{1}{2}$ ✓	Deduction for superstructures ... - 13.58 ✓	
Addition for Winter North Atlantic Freeboard (if required) = 6.87 + 4.63 = 11.50 = 11$\frac{1}{2}$ ✓		Sheer correction05 ✓	
		Round of Beam correction ... - .10 ✓	2-2-45
		Correction for Thickness of Deck amidships ... - ✓	
		Other corrections, scantlings, etc. ... - ✓	
		Summer Freeboard = 79.84 ✓	

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

Tropical Fresh Water Line above Centre of Disc ...	14$\frac{1}{4}$ ✓	Tropical Fresh Water Freeboard ...	6$\frac{1}{8}$ ✓
Fresh Water Line „ „ ...	7$\frac{1}{2}$ ✓	Fresh Water „ „ ...	5$\frac{5}{8}$ ✓
Tropical Line „ „ ...	6$\frac{3}{4}$ ✓	Tropical „ „ ...	6$\frac{1}{2}$ ✓
Winter Line below „ „ ...	6$\frac{3}{4}$ ✓	Winter „ „ ...	7$\frac{1}{4}$ ✓
Winter North Atlantic Line „ „ ...	11$\frac{1}{2}$ ✓	Winter North Atlantic „ „ ...	7$\frac{1}{2}$ ✓

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.

Pop

$$\frac{98.37}{93.62} \times \frac{2}{3} = \frac{3.17}{93.62} = \frac{96.79}{93.62}$$

$$\frac{4.50}{3.17} = 1.33$$

Bridge.

$$\frac{44.00}{40.00} \times \frac{2}{3} = \frac{40.00}{42.67} = \frac{2.67}{42.67}$$

$$\frac{3.50}{2.67} = .83$$

File

Runs

$$\frac{13.5 \times 10}{25.82} = 5.22$$

$$\frac{18 \times 3}{25.82} = 2.09$$

55.71

-7.31

48.40

Trade of ship.....

Names of sister ships.....

Builder's name and yard number.....

Owners.....

Fee £.....



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Foundation