

AMENDED.

Rpt. C.11 (Comp.).

Index No. 38337
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name 'HAI SHUI' EX 'HAISU'	Official Number	Nationality and Port of Registry CHINESE SHANGHAI	Gross Tonnage 1300 APPROX.	Date of Build 1946	Port of Survey
Moulded Dimensions: Length 210.33 Breadth 36.50 Depth 21.67					Date of Survey 16.10.47
Moulded displacement at moulded draught = 85 per cent. of moulded depth 2970 tons					Surveyor's Signature
Coefficient of fineness for use with Tables .735					Particulars of Classification +100 A1 with freeboard.

DEPTH FOR FREEBOARD (D). Moulded depth ... 21.67 Stringer plate3403 2 1/2" Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = \frac{2.5}{12} \left(\frac{210.33-27.50}{210.33} \right) = .18$ Depth for Freeboard (D) = 21.88	DEPTH CORRECTION. (a) Where D is greater than Table depth (D-Table depth) R = (21.88-14.02) 1.618 = +12.72 (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) 36.50 Standard Round of Beam = $\frac{B \times 12}{50} = 8.76$ Ship's Round of Beam = 12.00 Difference +3.24 Restricted to Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{3.24}{4} \times 8788 = -.71"$
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DEDUCTION FOR SUPERSTRUCTURES.					Standard Height of Superstructure 6.0'
					" " R.Q.D. ✓
					Deduction for complete superstructure 27.03
					Percentage covered $\frac{S}{L} = 13.07$
					" " $\frac{S_1}{L} = 12.12$
					" " $\frac{E}{L} = 6.06$
					Percentage from Table, Line A. 6.06 (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 = 27.03 x .0606 = 1.64

	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 ...					
F'cle enclosed ...	23.50	23.50	7.0	✓	23.50
" overhang ...	4.00	2.00			2.00
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	27.50	25.50			25.50

SHEER CORRECTION.							
Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	31.03	1	31.03	27.00	27.00	1	27.00
1/8 L from A.P. ...	13.81	4	55.24	8.50	8.50	4	34.00
3/8 L " ...	3.415	2	6.83	-	-	2	-
Amidships ...	-	4	-	-	-	4	-
5/8 L from F.P. ...	6.83	2	13.66	-	-	2	-
1/8 L " ...	27.62	4	110.48	17.50	17.50	4	70.00
F.P. ...	62.07	1	62.07	45.00	45.00	1	45.00
Total ...			279.31				176.00

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{103.31}{18} (.75 - .0653) = +3.93$
If limited on account of midship superstructure. **✓** **6.847** If limited to maximum allowance of 1 1/2 ins. per 100 ft. **✓**

Mean actual sheer aft = **Deficient**
Mean standard sheer aft = **Deficient**
Mean actual sheer forward = **Deficient**
Mean standard sheer forward = **Deficient**
Length of enclosed superstructure forward of amidships = **Nil.**
" " aft of " = **Nil.**

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Ft. Depth to Freeboard Deck = 21.91 Summer freeboard = 5.46 Moulded draught (d) = 16.45 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 4.11 = 4" Addition for Winter North Atlantic Freeboard (if required) = 4 + 2 = 6"	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 2609$ Tons per inch immersion at summer load water line $T = 15.50$ Deduction = $\frac{\Delta}{40 T}$ inches = 4.21" = 4 1/4"	TABULAR FREEBOARD corrected for Flush Deck (if required) 24.86 Correction for coefficient $\frac{.735 + .68}{1.36} = \frac{1.415}{1.36}$ 25.87 + - Depth Correction ... 12.72 - Deduction for superstructures ... - 1.64 Sheer correction ... 3.93 - Round of Beam correction ... - .71 Correction for Thickness of Deck amidships ... 36 - Other corrections, scantlings, etc. 24.97 to a summer moulded draught of 16'-5 1/4" (16'-5 1/8" Actual) 41.98 235 +39.63 Summer Freeboard = 65.50
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-			
Tropical Fresh Water Line above Centre of Disc ... 8 1/4"	Tropical Fresh Water Freeboard ... 5'-5 1/2"		
Fresh Water Line " " ... 4 1/4"	Fresh Water " " ... 4'-9 1/4"		
Tropical Line " " ... 4"	Tropical " " ... 5'-1 1/4"		
Winter Line below " " ... 4"	Winter " " ... 5'-9 1/2"		
Winter North Atlantic Line " " ... 6"	Winter North Atlantic " " ... 5'-11 1/2"		