

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.
(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name HARIMA S.B. WORKS Nºs 453-4.	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length 535.75 Breadth 70.21 Depth 37.84					Date of Survey 3/4/50.
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons					Surveyor's Signature
Coefficient of fineness for use with Tables say .74					Particulars of Classification

DEPTH FOR FREEBOARD (D). Moulded depth 37.84 Stringer plate08 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 37.92	DEPTH CORRECTION. (a) Where D is greater than Table depth (D-Table depth) R = (37.92-35.72) × 3 = +6.60 ✓ 2.20 (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) Standard Round of Beam = $\frac{B \times 12}{50} =$ Ship's Round of Beam = Difference Restricted to Correction = $\frac{\text{Diff.}}{4} \times \left(1 - \frac{S_1}{L} \right) =$ STAND. ✓
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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					
F'cle enclosed					
„ overhang					
Trunk aft					
„ forward					
Tonnage opening aft					
„ „ forward					
Total					

Standard Height of Superstructure _____
„ „ R.Q.D. _____
Deduction for complete superstructure _____
Percentage covered $\frac{S}{L} =$ } **40%**
„ „ $\frac{S_1}{L} =$
„ „ $\frac{E}{L} =$
Percentage from Table, Line **TANKER** **31.00**
(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 × .3100 = -13.02 ✓**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.		1					1		
$\frac{1}{2}$ L from A.P.		4					4		
$\frac{3}{4}$ L „		2					2		
Amidships		4					4		
$\frac{3}{4}$ L from F.P.		2					2		
$\frac{1}{2}$ L „		4					4		
F.P.		1					1		
Total									

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ **STANDARD.**
If limited on account of midship superstructure. If limited to maximum allowance of 1½ ins. per 100 ft.

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

Ft.
Depth to Freeboard Deck = **37.92**
Summer freeboard = **7.78**
Moulded draught (d) = **30.14**

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches =
Addition for Winter North Atlantic Freeboard (if required)=

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta =$
Tons per inch immersion at summer load water line
T =
Deduction = $\frac{\Delta}{40 T}$ inches =

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{1.42}{1.36}$

	+	-
Depth Correction	6.60	
Deduction for superstructures	✓	13.02
Sheer correction	✓	✓
Round of Beam correction	✓	✓
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	6.60	13.02

95.57 ✓
99.79 ✓
-6.42 ✓
Summer Freeboard = 93.37 ✓

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

Tropical Fresh Water Line above Centre of Disc	Tropical Fresh Water Freeboard
Fresh Water Line „ „	Fresh Water „ „
Tropical Line „ „	Tropical „ „
Winter Line below „ „	Winter „ „
Winter North Atlantic Line „ „	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.

$$D = 30.14 + \frac{99.79}{12} + \left(\frac{D - 35.72}{12} \right)^3 - \frac{13.02}{12}$$

$$12D = 361.68 + 99.79 + 3D - 107.16 - 13.02$$

$$9D = 341.29$$

$$D = 37.92'$$

$$\begin{array}{r} 361.68 \\ 99.79 \\ \hline 461.47 \\ - 107.16 \\ \hline 354.31 \\ - 13.02 \\ \hline 341.29 \end{array}$$

Trade of ship _____

Names of sister ships _____

Builder's name and yard number _____

Owners _____

Fee £ _____



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Foundation