

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name "SHINWA. MARU"	Official Number	Nationality and Port of Registry JAPANESE TOKYO.	Gross Tonnage	Date of Build 1941.	Port of Survey _____
Moulded Dimensions: Length 82.300 m Breadth 12.200 m Depth 6.200 m					Date of Survey 17.10.50
Moulded displacement at moulded draught = 85 per cent. of moulded depth 4025 METRIC tons					Surveyor's Signature _____
Coefficient of fineness for use with Tables 742					Particulars of Classification 100 A1.

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth 6.200	(a) Where D is greater than Table depth (D - Table depth) R = 8.33 (6.25 - 5.48) 20.783 = +126 mms	Moulded Breadth (B) 12.200
Stringer plate 15	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 728	Standard Round of Beam = $\frac{B^2}{50} = \frac{12.200^2}{50} = 244$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures <input checked="" type="checkbox"/>	Ship's Round of Beam = 250
Depth for Freeboard (D) = 6.215		Difference = +6
		Restricted to <input checked="" type="checkbox"/>
		Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{6^2}{4} \times 5707 = -1 \text{ mms}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)
Poop enclosed	26.408	26.408	2.130	<input checked="" type="checkbox"/>	26.408
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
Fore enclosed	8.922	8.922	1.980	<input checked="" type="checkbox"/>	8.922
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	35.330	35.330			35.330

Standard Height of Superstructure **1.891**

" " R.Q.D. ☒

Deduction for complete superstructure **839 mms**

Percentage covered $\frac{S}{L} =$

" " $\frac{S_i}{L} =$ **42.93**

" " $\frac{E}{L} =$

Percentage from Table, Line A. **25.99**

(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 = **839 × .2599 = 218 mms**

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	940	1	940	950	950	1	950
$\frac{1}{2}$ L from A.P.	418	4	1672	420	420	4	1680
$\frac{3}{4}$ L "	104	2	208	150	150	2	300
Amidships	—	4	—	—	—	4	—
$\frac{3}{4}$ L from F.P.	209	2	418	240	240	2	480
$\frac{1}{2}$ L "	835	4	3340	860	860	4	3440
F.P.	1879	1	1879	1900	1900	1	1900
Total			8457				8750

Mean actual sheer aft = **950**

Mean standard sheer aft = **950**

Mean actual sheer forward = **1680**

Mean standard sheer forward = **1680**

Length of enclosed superstructure forward of amidships = **L**

" " aft of " = **NIL.**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{293(.75 - .2146)}{18} = -9 \text{ mms}$

If limited on account of midship superstructure. **Yes NIL.**

If limited to maximum allowance of 1½ ins. per 100 ft. ☒

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **6.215** Ft.

Summer freeboard = **878**

Moulded draught (d) = **5.337**

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d \text{ mms}}{48} = \frac{111 \text{ mms}}{48} = 111 \text{ mms}$

Addition for Winter North Atlantic Freeboard (if required) = **111 + 51 = 162 mms**

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 = $\frac{\Delta}{40 T} \text{ inches} = 120 \text{ mms}$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction	126	218
Deduction for superstructures	—	—
Sheer correction	—	—
Round of Beam correction	—	—
Correction for Thickness of Deck amidships	—	—
Other corrections, scantlings, etc.	—	—
	126	219

Summer Freeboard = **878**

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

Tropical Fresh Water Line above Centre of Disc	231
Fresh Water Line " "	120
Tropical Line " "	111
Winter Line below " "	111
Winter North Atlantic Line " "	162

Tropical Fresh Water Freeboard	878 mms
Fresh Water " "	647
Tropical " "	758
Winter " "	767
Winter North Atlantic " "	989
	1040