

AMENDED

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

 Index No. **42310**
 (For London Office only).

12 JUL 1950

Ship's Name SS. NICHINAN MARU	Official Number	Nationality and Port of Registry JAPAN Tokyo MAIZURU.	Gross Tonnage 5296	Date of Build 9/1942	Port of Survey MAIZURU
Moulded Dimensions: Length 120.760 m. Breadth 16.30 m. Depth 9.00 m. <i>To centre of Rudder Stock.</i>					Date of Survey 5/50
Moulded displacement at moulded draught = 85 per cent. of moulded depth 10,900 tons					Surveyor's Signature <i>Y. Inoue</i>
Coefficient of fineness for use with Tables 74.717 ✓					Particulars of Classification 100 A1 CARRYING PETROLEUM IN BULK (CONTEMPLATED)

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 9.00	(a) Where D is greater than Table depth (D - Table depth) R = 8.33(9.017 - 8.051)30 = +241 m/m	Moulded Breadth (B) 16.30 m
Stringer plate ... 17 1/4 ✓	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 9.66 ✓	Standard Round of Beam = $\frac{B}{50} = \frac{16.30}{50} = 326$ m/m
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures ✓	Ship's Round of Beam = 330 1/4 ✓
Depth for Freeboard (D) = 9.017		Difference Excess = + 4 m/m
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{4}{4} \times 4645 = \text{NIL}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	35.19 ✓	35.19	2.3	✓	35.190
„ overhang ...					
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed ...	11.040	11.040	2.3	✓	11.040
„ overhang aft ...	10.08	12.24			
„ overhang forward	2.88	2.160			2.160
F'cle enclosed ...	16.27	16.27	2.3	✓	16.270
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward					
Total ...	65.380	64.660			64.660

Standard Height of Superstructure **2.278** ms.
 „ „ R.Q.D. ✓
 Deduction for complete superstructure **1060** m/m.
 Percentage covered $\frac{S}{L} = 54.14$
 $\frac{S_1}{L} =$
 $\frac{E}{L} =$ } **53.55**
 Percentage from Table, Line **Tanker** **44.91**
 (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 = **1060 × 44.91 = 476** m/m

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	1260	1		1260	1.000	1000	1		1000
1/8 L from A.P. ...	560	4		2240	.090	90	4		360
3/8 L „ ...	140	2		280	NIL	—	2		—
Amidships ...	—	4		—	NIL	—	4		—
5/8 L from F.P. ...	280	2		560	NIL	—	2		—
7/8 L „ ...	1120	4		4480	320	320	4		1280
F.P. ...	2520	1		2520	2.000	2000	1		2000
Total ...				11340					4640

Mean actual sheer aft = **Deficient**
 Mean standard sheer aft =
 Mean actual sheer forward = **Deficient**
 Mean standard sheer forward =
 Length of enclosed superstructure forward of amidships = } **Deficient**
 „ „ aft of „ = } **Shear.**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{6700}{18} \left(\frac{75-2707}{4793} \right) = +178$ m/m. ✓
 If limited on account of midship superstructure. ✓
 If limited to maximum allowance of 1 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 $\frac{717+68}{1.36} = \frac{1.397}{1.36}$
Depth to Freeboard Deck = 9.017 Ft.	Δ = 10.994	Depth Correction ... 241 ✓
Summer freeboard = 1.551	Tons per inch immersion at summer load water line	Deduction for superstructures ... 476 ✓
Moulded draught (d) = 7.466	T = 42.30	Sheer correction ... 178 ✓
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{48}$ inches = 156 m/m	Deduction = $\frac{\Delta}{40T}$ inches = 165 m/m	Round of Beam correction ... —
Addition for Winter North Atlantic Freeboard (if required) = 156 + 99 = 255 m/m		Correction for Thickness of Deck amidships ... —
		Other corrections, scantlings, etc. ... —
		Summer Freeboard = 1551 ✓

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

Tropical Fresh Water Line above Centre of Disc	321 m/m
Fresh Water Line	165 „
Tropical Line	156 „
Winter Line below	156 „
Winter North Atlantic Line	255 „

Tropical Fresh Water Freeboard	1230 ✓
Fresh Water	1386 „
Tropical	1395 „
Winter	1707 „
Winter North Atlantic	1806 „

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.

$$\frac{2}{3} \times 1.440$$
$$= \frac{0.960 \text{ m}}{11.040 \text{ m}} = \text{Equivalent length.}$$

Trade of ship INTERNATIONAL

Names of sister ships

Builder's name and yard number EAST JAPAN HEAVY INDUSTRIES (EX MITSUBISHI) YOKOHAMA 9/1942

Owners: MESSRS. IINO KAIUN KAISHA LTD. 3 HARANOUCHI CHiyoda-Ku
Tokyo

Fee £ 70