

① Tanker
Geometric Draught.
Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.
(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index No. 42210
(For London Office only.)

Ship's Name <u>NICHINAN MARU</u>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length <u>296.20'</u> Breadth <u>53.48'</u> Depth <u>29.53'</u> <u>To centre of Rounder Stanchion</u>					Date of Survey <u>26.1.50</u>
Moulded displacement at moulded draught = 85 per cent. of moulded depth					Surveyor's Signature
Coefficient of fineness for use with Tables <u>.74</u>					Particulars of Classification

DEPTH FOR FREEBOARD (D). Moulded depth <u>29.53</u> Stringer plate <u>.06</u> Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <u>29.59</u>	DEPTH CORRECTION. (a) Where D is greater than Table depth (D-Table depth) R = <u>(29.59-26.41) 3 = + 9.54"</u> (b) Where D is less than Table depth (if allowed) (Table depth-D) R = <u>3.18</u> If restricted by superstructures	ROUND OF BEAM CORRECTION. Moulded Breadth (B) <u>53.48</u> Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>12.83</u> Ship's Round of Beam = <u>12.99</u> Difference <u>+ .16</u> Restricted to Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) =$ <u>$\frac{.16}{4} \times .4645 = -.02$</u>
---	---	---

DEDUCTION FOR SUPERSTRUCTURES.					Standard Height of Superstructure <u>7.462</u>
Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	" " R.Q.D. <u>✓</u>
Poop enclosed	<u>115.47</u>	<u>7.55</u>	<u>✓</u>	<u>115.47</u>	Deduction for complete superstructure <u>41.74</u>
" overhang					Percentage covered $\frac{S}{L} =$ <u>54.15</u>
R.Q.D. enclosed					" " $\frac{S_1}{L} =$
" overhang					E } <u>53.55</u>
Bridge enclosed	<u>36.22</u>	<u>7.55</u>	<u>✓</u>	<u>36.22</u>	" " $\frac{E}{L} =$
" overhang aft	<u>9.45</u>	<u>7.09</u>	<u>✓</u>	<u>7.09</u>	Percentage from Table, Line <u>A. Tanker</u> <u>44.91</u>
" overhang forward					(corrected for absence of forecastle (if required))
Fore enclosed	<u>53.39</u>	<u>7.55</u>	<u>✓</u>	<u>53.39</u>	Percentage from Table, Line B. <u>✓</u>
" overhang					(corrected for absence of forecastle (if required))
Trunk aft					Interpolation for bridge less than .2L (if required) <u>✓</u>
" forward					Deduction = <u>41.74</u> \times <u>.4491</u> = <u>18.74</u>
Tonnage opening aft					
" " forward					
Total	<u>214.53</u>	<u>212.17</u>		<u>212.17</u>	

SHEER CORRECTION.								Mean actual sheer aft = <u>Deficient</u>
Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product	Mean standard sheer aft
A.P.	<u>49.62</u>	<u>1</u>	<u>49.62</u>	<u>38.00</u>	<u>38.00</u>	<u>1</u>	<u>38.00</u>	
$\frac{1}{2}$ L from A.P.	<u>22.08</u>	<u>4</u>	<u>88.32</u>	<u>5.00</u>	<u>5.00</u>	<u>4</u>	<u>20.00</u>	Mean actual sheer forward = <u>Deficient</u>
$\frac{3}{4}$ L "	<u>5.46</u>	<u>2</u>	<u>10.92</u>	<u>—</u>	<u>—</u>	<u>2</u>	<u>—</u>	Mean standard sheer forward
Amidships	<u>—</u>	<u>4</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>4</u>	<u>—</u>	
$\frac{3}{4}$ L from F.P.	<u>10.915</u>	<u>2</u>	<u>21.83</u>	<u>—</u>	<u>—</u>	<u>2</u>	<u>—</u>	Length of enclosed superstructure forward of amidships =
$\frac{1}{2}$ L "	<u>44.16</u>	<u>4</u>	<u>176.64</u>	<u>13.00</u>	<u>13.00</u>	<u>4</u>	<u>52.00</u>	" " aft of " =
F.P.	<u>99.24</u>	<u>1</u>	<u>99.24</u>	<u>173.00</u>	<u>173.00</u>	<u>1</u>	<u>73.00</u>	
Total			<u>446.57</u>				<u>183.00</u>	
Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ <u>$\frac{263.57}{18} \left(.75 - \frac{2708}{2708} \right) = + 7.02$</u>								If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.
If limited on account of midship superstructure.								

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = <u>29.59</u> Summer freeboard = <u>5.19</u> Moulded draught (d) = <u>24.40</u> 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 <u>$\frac{74+68}{1.36} = 1.42$</u> Depth Correction <u>9.54</u> Deduction for superstructures <u>18.74</u> Sheer correction <u>7.02</u> Round of Beam correction <u>.02</u> Correction for Thickness of Deck amidships Other corrections, scantlings, etc. <u>16.56</u> <u>18.76</u> <u>- 2.20</u> Summer Freeboard = <u>62.15</u>	<u>61.63</u> <u>64.35</u> <u>81.50</u> <u>21.1</u>
--	---	--	---

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

Bridge

$$122 - 108 = 14 @ 720 = 10.080 =$$

$$\frac{2}{3} \times 1440 = \frac{.960}{11.040} = 36.22' -$$

Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £ : :



© 2021

Lloyd's Register
Foundation