

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <i>Namoo Shipyard + Eng Wks</i> <i>Nos 30 - 31</i>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length <i>139.42'</i> Breadth <i>27.00'</i> Depth <i>10.33'</i> <i>to c. of rudder stock</i>					Date of Survey
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons					Surveyor's Signature <i>J.</i>
Coefficient of fineness for use with Tables <i>.68 (.65 assumed - see "Pakpanang")</i>					Particulars of Classification <i>+100 AI</i> <i>Contemplated</i>

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... <i>10.33'</i>	(a) Where D is greater than Table depth (D-Table depth) R = <i>10.36 - 9.30 = 1.06</i> <i>1.072 = + 1.14"</i>	Moulded Breadth (B) <i>27.00'</i> Standard Round of Beam = $\frac{B \times 12}{50} = \frac{27.00 \times 12}{50} = 6.48$ Ship's Round of Beam <i>160 mm</i> = <i>6.30</i> Difference <i>.18</i>
Stringer plate ... <i>.03'</i>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Difference
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Restricted to
Depth for Freeboard (D) = <i>10.36'</i>		Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.18}{4} \times \left( 1 - \frac{160}{2700} \right) = .0429 \times .02 = .000858$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed					
" overhang					
R.Q.D. enclosed <i>Equiv</i>	<i>42.32</i>	<i>42.32</i>	<i>3.25</i>	<i>3.25/3263</i>	<i>42.15</i>
" overhang					
Bridge enclosed <i>Equiv</i>	<i>25.04</i>	<i>18.78</i>	<i>7.05</i>		<i>18.78</i>
" overhang aft					
" overhang forward					
Fore enclosed	<i>19.09</i>	<i>19.09</i>	<i>7.05</i>		<i>19.09</i>
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	<i>86.45</i>	<i>80.19</i>			<i>80.02</i>

  

Standard Height of Superstructure	<i>6.00'</i>
" " R.Q.D.	<i>3.263'</i>
Deduction for complete superstructure	<i>19.94'</i>
Percentage covered $\frac{S}{L} =$	<i>62.00</i> <i>18.78 = 13.47</i>
" " $\frac{S_1}{L} =$	<i>57.51</i>
" " $\frac{E}{L} =$	<i>57.39</i>
Percentage from Table, Line A.	<i>42.35</i>
(corrected for absence of forecastle (if required))	<i>43.39</i>
Percentage from Table, Line B.	
(corrected for absence of forecastle (if required))	
Interpolation for bridge less than .2L (if required)	<i>42.35 + (1.0% .347) = 42.35 + .347 = 42.697</i>
Deduction = $19.94 \times 43.05 =$	<i>- 8.59</i>

\* SHEER CORRECTION. \* RQD at all 3-7" (3'-3" per plan for RQD in Layer)  
Sheers reduced by 4" if 3'-7" allowed.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	<i>23.94</i>	1	<i>23.94</i>	<i>21.50</i>	<i>21.50</i>	1	<i>21.50</i>
$\frac{1}{2}$ L from A.P.	<i>10.655</i>	4	<i>42.62</i>	<i>12.00</i>	<i>12.00</i>	4	<i>48.00</i>
$\frac{3}{4}$ L	<i>2.63</i>	2	<i>5.26</i>	<i>3.00</i>	<i>3.00</i>	2	<i>6.00</i>
Amidships		4		<i>7.00</i>		4	<i>28.00</i>
$\frac{1}{4}$ L from F.P.	<i>5.27</i>	2	<i>10.54</i>	<i>6.00</i>	<i>6.00</i>	2	<i>12.00</i>
$\frac{3}{4}$ L	<i>21.31</i>	4	<i>85.24</i>	<i>20.00</i>	<i>20.00</i>	4	<i>80.00</i>
F.P.	<i>47.88</i>	1	<i>47.88</i>	<i>35.50</i>	<i>35.50</i>	1	<i>35.50</i>
Total			<i>215.48</i>				<i>203.00</i>

  

Mean actual sheer aft	<i>&lt; 1</i>
Mean standard sheer aft	
Mean actual sheer forward	<i>&lt; 1</i>
Mean standard sheer forward	
Length of enclosed superstructure forward of amidships	<i>&gt; .16</i>
" " aft of	<i>&lt; .16</i>
Correction = $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{12.48}{18} \left( .75 - \frac{31}{2 \times 139.42} \right) = \frac{12.48}{18} \left( .75 - .111 \right) = \frac{12.48}{18} \times .639 = .44$	<i>+ .30"</i>
If limited on account of midship superstructure.	<i>✓</i>
If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.	<i>✓</i>

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 <i>Nil.</i>
Depth to Freeboard Deck = <i>10.36'</i>	$\Delta =$	Depth Correction ... <i>1.14</i>
Summer freeboard = <i>.58</i>	Tons per inch immersion at summer load water line	Deduction for superstructures ... <i>8.59</i>
Moulded draught (d) = <i>9.78</i>	T =	Sheer correction ... <i>.30</i>
Deduction for Tropical freeboard and addition for	Deduction = $\frac{\Delta}{40 T}$ inches	Round of Beam correction ... <i>.02</i>
Winter freeboard = $\frac{d}{4}$ inches =		Correction for Thickness of Deck amidships ... <i>2.2.51</i>
Addition for Winter North Atlantic Freeboard (if required) =		Other corrections, scantlings, etc. ... <i>1.46</i>
		Summer Freeboard = <i>7.00</i>

## 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.

RQD      10 x 530      5300 ✓  
              12 x 600      7200 ✓  
              Knuckle 1200 ÷ 3      400 ✓  
                              12900 ~ 42.32' ✓

Bdgc      Length at side  
              12 x 600      7200 ✓  
              fore of 47      100 ✓  
                              7300  
              Front 500 x  $\frac{2}{3}$       333 ✓  
                              7633 ~ 25.04' ✓  
                              (25.07)

Effective L = 25.04 x .75  
                      = 18.78 = 13.47 L.

Forecastle  
              AP to A 63      10 x 530      5300  
                              47 x 600      28200  
                              6 x 530      3180  
                              36680  
              Fbd L      42500  
              Length of Forecastle      5820 ~ 19.09' ✓

Trade of ship \_\_\_\_\_

Names of sister ships \_\_\_\_\_

Builder's name and yard number \_\_\_\_\_

Owners \_\_\_\_\_

Fee £ \_\_\_\_\_



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