

(as a steamer actual section sheer standard)

# LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

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Ship's Name <b>KYOKUTO MARU</b>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length <b>529.50</b> Breadth <b>65.00</b> Depth <b>37.07</b>					Date of Survey <b>22/11/51</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing)					Surveyor's Signature
Coefficient of fineness for use with Tables <b>.74</b>					Particulars of Classification <b>Re-classification Carrying Petroleum (calculated) in Bulk.</b>

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... .. <b>37.07</b>	(a) Where D is greater than Table depth (D-Table/depth) R = <b>(37.14 - 35.97) 3 = +3.51"</b>	Moulded Breadth (B) <b>65.00</b>
Stringer plate ... .. <b>.07</b>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 15.60$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <b>16.50</b>
Depth for Freeboard (D) = <b>37.14</b>		Difference <b>+0.90</b>
		Restricted to
		Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{.90}{4} \times .5468 = -.12"$

**DEDUCTION FOR SUPERSTRUCTURES.**

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed	160.50	160.50	7.75		160.50
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed	38.84	38.84	8.00		38.84
" overhang aft					
" overhang forward					
F'cle enclosed	45.16	45.16	7.50		45.16
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	244.50	244.50			244.50

Standard Height of Superstructure **7.50**

" " R.Q.D. **✓**

Deduction for complete superstructure **42.00**

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

" "  $\frac{S_1}{L} =$  **45.32**

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

Percentage from Table, Line A. **28.02**

(corrected for absence of forecastle (if required)) **✓**

Percentage from Table, Line B. **32.02**

(corrected for absence of forecastle (if required))

Interpolation for bridge less than .2L (if required) **29.46**

Deduction = **42.00 x .2946 = -12.37**

**SHEER CORRECTION.**

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.		1				1	
$\frac{1}{4}L$ from A.P.		4				4	
$\frac{2}{8}L$ "		2				2	
Amidships		4				4	
$\frac{2}{8}L$ from F.P.		2				2	
$\frac{1}{4}L$ "		4				4	
F.P.		1				1	
Total							

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

If limited on account of midship superstructure.

**NIL** If limited to maximum allowance of 1 1/2 ins. per 100 ft.

<p><b>Deduction for Tropical Freeboard.</b></p> <p><b>Addition for Winter and Winter North Atlantic Freeboard.</b></p> <p>Ft.</p> <p>Depth to Freeboard Deck = <b>37.14</b></p> <p>Summer freeboard = <b>9.12</b></p> <p>Moulded draught (d) = <b>28.02</b></p> <p>Keel allowance =</p> <p>Extreme draught =</p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = <math>\frac{d}{4}</math> inches =</p> <p>Addition for Winter North Atlantic Freeboard (if required) =</p>	<p><b>Deduction for Fresh Water.</b></p> <p>Displacement in salt water at summer load water line</p> <p><math>\Delta =</math></p> <p>Tons per inch immersion at summer load water line</p> <p>T =</p> <p>Deduction = <math>\frac{\Delta}{40 T}</math> inches =</p>	<p><b>TABULAR FREEBOARD</b> corrected for Flush Deck (if required)</p> <p>Correction for coefficient <math>\frac{.74 + .68}{1.36} = \frac{1.42}{1.36}</math></p> <table border="1"> <tr> <td>+</td> <td>-</td> </tr> <tr> <td>Depth Correction</td> <td>3.51</td> </tr> <tr> <td>Deduction for superstructures</td> <td>12.37</td> </tr> <tr> <td>Sheer correction</td> <td></td> </tr> <tr> <td>Round of Beam correction</td> <td>.12</td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td></td> </tr> <tr> <td>Other corrections, scantlings, etc.</td> <td></td> </tr> <tr> <td><b>3.51</b></td> <td><b>12.49</b></td> </tr> </table> <p>Summer Freeboard = <b>109.59</b></p>	+	-	Depth Correction	3.51	Deduction for superstructures	12.37	Sheer correction		Round of Beam correction	.12	Correction for Thickness of Deck amidships		Other corrections, scantlings, etc.		<b>3.51</b>	<b>12.49</b>	<p><b>113.56</b></p> <p><b>118.57</b></p> <p><b>27/11/51</b></p>
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**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.

$$\text{Bridge less the } .2L = 7.20\%$$

$$\text{line A} = 28.02 \checkmark$$

$$\text{line B} = \underline{32.02} \checkmark$$

$$\text{diff} = 4.00\% \checkmark$$

$$\text{allowance} = 28.02 + \left( \frac{.072}{2} \times 4 \right)$$

$$= 28.02 + 1.44$$

$$= 29.46\%$$

.036.  
144

$$\begin{aligned} \text{Bridge Equiv. length} &= 34 + \frac{2}{3} \times 6 + \frac{2.47 \times 22}{65} \\ &= \underline{\underline{38.84}} \end{aligned}$$

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

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

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

Owners \_\_\_\_\_

Fee £ \_\_\_\_\_



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