

15 NOV 1934 J:102

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Rpt. C.11.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>Bh. Barina</u>
having <u>Complete superstructure with Tonnage Opening</u>					Date of Survey <u>While building</u>
(Type of Superstructures.)					Name of Surveyor <u>M. H. Parkin</u>
Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build	Particulars of Classification <u>4100 A1 with Freeboard.</u>
KOMAKI MARU				1933	
Moulded Dimensions: Length <u>450</u> Breadth <u>61</u> Depth <u>40.06 to Shelly Deck</u>					
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>14470</u> ^{31.06 to 2nd Deck} tons					
Coefficient of fineness for use with Tables <u>.699</u>					

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>31.06</u>	(a) Where D is greater than Table depth (D-Table depth) R = $(31.10 - 30.00) 3.00$ = <u>+ 3.30"</u> ✓	Moulded Breadth (B) <u>61.00</u> Standard Round of Beam = $\frac{B \times 12}{50} = \frac{61 \times 12}{50} = 14.64"Ship's Round of Beam = 15"Difference Excess .36$
Stringer plate <u>.45</u>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <u>✓</u>	Restricted to Correction = $\frac{\text{Diff}^e}{4} \times (1 - \frac{S_1}{L}) = \frac{.36}{4} \times .0062 = .0005625$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		
Depth for Freeboard (D) = <u>31.10</u> ✓	If restricted by superstructures ✓	

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed	<u>24.5</u>	<u>24.50</u>	<u>9' beam to beam</u>		<u>24.50</u>	Standard Height of Superstructure <u>7.50</u>
" overhang						" " R.Q.D. <u>✓</u>
R.Q.D. enclosed						Deduction for complete superstructure <u>42.00"</u>
" overhang						Percentage covered $\frac{S}{L} = 100\%$
Bridge enclosed						" " $\frac{S_1}{L} = 99.50\%$ ^{.50}
" overhang aft	<u>421.0</u>	<u>421.00</u>	<u>9' beam to beam</u>		<u>421.00</u>	" " $\frac{E}{L} = 99.50\%$ ^{.50}
" overhang forward						Percentage from Table, Line A. (corrected for absence of forecastle (if required)) <u>99.38%</u>
F'cle enclosed						Percentage from Table, Line B. (corrected for absence of forecastle (if required))
" overhang						Interpolation for bridge less than .2L (if required)
Trunk aft						Deduction = <u>42.00 × .9938 = -41.74"</u>
" forward						
Tonnage opening aft	<u>4.50</u>	<u>2.25</u>			<u>2.25</u>	
" " forward						
Total	<u>450.00</u>	<u>447.75</u>			<u>447.75</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product	
A.P.	<u>55.00</u>	1	<u>55.00</u>	<u>60.00</u>	<u>78.00</u>	1	<u>78.00</u>	Mean actual sheer aft = <u>Excess</u> Mean standard sheer aft
$\frac{1}{2}$ L from A.P.	<u>24.475</u>	4	<u>97.90</u>	<u>26.63</u>	<u>34.71</u>	4	<u>138.84</u>	Mean actual sheer forward = <u>Excess</u> Mean standard sheer forward
$\frac{3}{8}$ L "	<u>6.05</u>	2	<u>12.10</u>	<u>6.69</u>	<u>8.58</u>	2	<u>17.16</u>	
Amidships	<u>✓</u>	4	<u>✓</u>	<u>✓</u>	<u>✓</u>	4	<u>✓</u>	Length of enclosed superstructure forward of amidships = <u>✓</u> " " aft of " = <u>✓</u>
$\frac{3}{8}$ L from F.P.	<u>12.10</u>	2	<u>24.20</u>	<u>11.13</u>	<u>13.20</u>	2	<u>26.40</u>	
$\frac{1}{2}$ L "	<u>48.95</u>	4	<u>195.80</u>	<u>45.25</u>	<u>53.40</u>	4	<u>213.60</u>	
F.P.	<u>110.00</u>	1	<u>110.00</u>	<u>102.00</u>	<u>120.00</u>	1	<u>120.00</u>	
Total			<u>495.00</u>	<u>+18"</u>			<u>594.00</u>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75 - \frac{S}{2L}}{18} \right) = \frac{99}{18} \left(\frac{.75 - .50}{18} \right) = -1.37"$

If limited on account of midship superstructure.

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard.	Ft. Depth to Freeboard Deck = <u>31.10</u> Summer freeboard = <u>4.04</u> Moulded draught (d) = <u>27.06</u>	Displacement in salt water at summer load water line $\Delta = 14060$ Tons per inch immersion at summer load water line T = <u>51.70</u>	Deduction for Fresh Water. Deduction = $\frac{\Delta}{40T}$ inches = <u>6.77</u> = <u>172</u>	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.699 + .68}{1.36} = \frac{1.379}{1.360}$	<table border="1"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction</td> <td><u>3.30</u></td> <td></td> </tr> <tr> <td>Deduction for superstructures</td> <td></td> <td><u>41.74</u></td> </tr> <tr> <td>Sheer correction</td> <td></td> <td><u>1.37</u></td> </tr> <tr> <td>Round of Beam correction</td> <td></td> <td></td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td></td> <td></td> </tr> <tr> <td>Other corrections, scantlings, etc.</td> <td></td> <td></td> </tr> <tr> <td></td> <td><u>3.30</u></td> <td><u>43.11</u></td> </tr> </table>		+	-	Depth Correction	<u>3.30</u>		Deduction for superstructures		<u>41.74</u>	Sheer correction		<u>1.37</u>	Round of Beam correction			Correction for Thickness of Deck amidships			Other corrections, scantlings, etc.				<u>3.30</u>	<u>43.11</u>
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Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>6.76</u> = <u>172</u> ✓	Addition for Winter North Atlantic Freeboard (if required) = ✓				<u>87.10</u> ✓ <u>88.32</u> ✓ <u>39.81</u> Summer Freeboard = <u>48.51</u>																								

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

Tropical Fresh Water Line above Centre of Disc	<u>344</u> ✓	Tropical Fresh Water Freeboard	<u>888</u> ✓
Fresh Water Line " "	<u>172</u> ✓	Fresh Water " "	<u>1060</u> ✓
Tropical Line " "	<u>172</u> ✓	Tropical " "	<u>1060</u> ✓
Winter Line below " "	<u>172</u> ✓	Winter " "	<u>1404</u> ✓
Winter North Atlantic Line " "	<u>✓</u>	Winter North Atlantic " "	<u>✓</u>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway										
Dimensions of Hatchway										
COAMINGS	{	Height above Deck ...								
		Thickness { Sides ...								
		{ Ends ...								
		Stiffeners								
		Brackets, Stays								
HATCH BEAMS	{	Number								
		Spacing								
		Scantling and Sketch ...								
		Bearing Surface								
FORE AND AFTERS	{	Number								
		Spacing								
		Unsupported Lengths ...								
		Scantling* and Sketch ...								
		Bearing Surface								
HATCH COVERS	{	Material								
		Thickness... ..								
		How fitted								
		Bearing Surface								
Spacing of Cleats										
Number of Tarpaulins										
<div>*Are wood fore and afters steel shod at all bearing surfaces ?</div> <div>Are battens and wedges efficient and in good condition ?</div> <div>Are tarpaulins in good condition and in accordance with rule requirements ?</div> <div>Are lashings provided in accordance with rule requirements ?</div>										

Particulars of fiddley, funnel and ventilator coamings :—

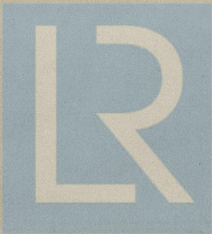
Particulars of Flush Bunker Scuttles :—

Particulars of Companionways :—

Particulars of Ventilators in exposed positions on freeboard and superstructure decks :—

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks :—

Particulars of Gangway Cargo and Coaling Ports :—



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Particulars of Scuppers and Sanitary Discharge Pipes —

Particulars of Side Scuttles :

Particulars of Guard Rails :—

Particulars of Gangways, Lifelines, etc. :—

Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well						
Forward Well						
State position of each freeing port { After Well :— E. and A. position and height above deck edge) { Forward Well :— State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :— Additional area where sheer is less than standard.						

Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Forecastle Bulkhead								
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead								
Bridge, Forward Bulkhead								
Forecastle Bulkhead								
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...								
Exposed Machinery Casings on Super-structure Decks								
Machinery Casings within Superstructures not fitted with Class I Closing Appliances								
Deckhouses on Flush Deck Ships ...								

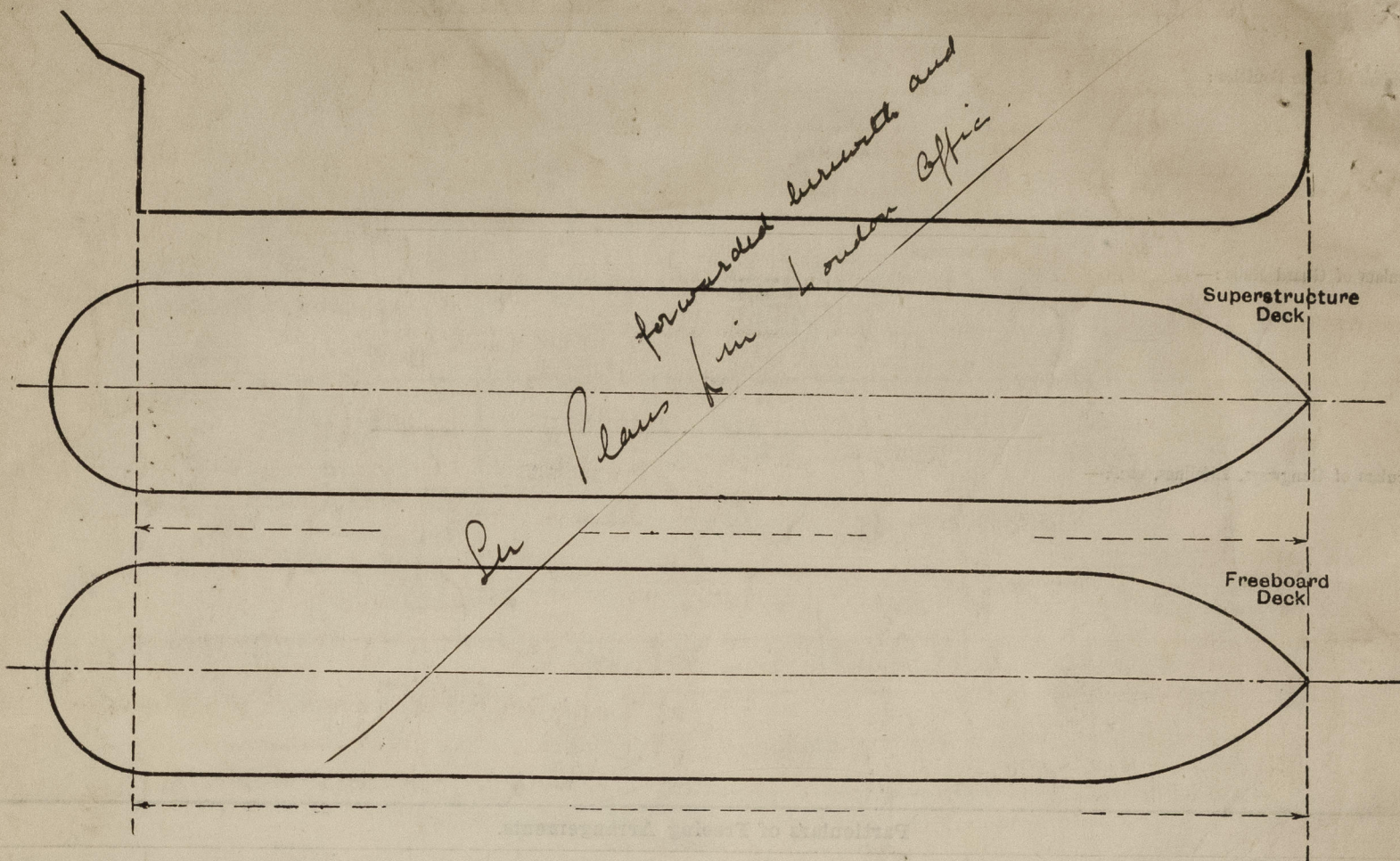
Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Forecastle Bulkhead	Full height shifting board in riveted channels.
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead	Full height shifting boards in riveted channels.
Bridge, Forward Bulkhead	
Forecastle Bulkhead	
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	
Exposed Machinery Casings on Super-structure Decks	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	
Deckhouses on Flush Deck Ships ...	



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Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



State any special features in the construction of the ship:—

Builder's name and yard number

Names of sister ships

Owners

Fee £

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