

Rpt. C.11.

Index. No. 24 DEC 1932
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

N^o 31131Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~

having

Poop, Bridge & Forecastle

Port of Survey Sunderland

(Type of Superstructures.)

Date of Survey 22nd Dec. 1932

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

"KING IDWAL"British
London14753751151920
5Name of Surveyor M. L. SwintonMoulded Dimensions: Length 400.2 Breadth 52 Depth 31Moulded displacement at moulded draught = 85 per cent. of moulded depth 12034 tonsCoefficient of fineness for use with Tables 768Particulars of Classification + 100A1S.S. No. 228

Depth for Freeboard (D)

Moulded depth

31.0

Stringer plate

46Sheathing on exposed deck ☒

$$T \left(\frac{L-S}{L} \right) =$$

Depth for Freeboard (D) =

31.04

Depth correction

(a) Where D is greater than Table depth
(D - Table depth) R =

$$(31.04 - 26.68) 3.00 = + 13.08$$

(b) Where D is less than Table depth (if allowed)
(Table depth - D) R =If restricted by superstructures ☒

Round of Beam correction

Moulded Breadth (B)

$$\text{Standard Round of Beam} = \frac{B \times 12}{50} = \frac{52 \times 12}{50} = 12.48$$

$$\text{Ship's Round of Beam} = 13$$

Difference

$$\text{Correction} = \frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{52}{4} \times .49 = - .06$$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>49.25</u>	<u>49.25</u>	<u>7.87</u>		<u>49.25</u>
„ overhang ...	<u>.25</u>	<u>.12</u>			<u>.12</u>
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed ...	<u>112.66</u>	<u>112.66</u>	<u>7.87</u>		<u>112.66</u>
„ overhang aft ...	<u>3.33</u>	<u>2.50</u>			<u>2.50</u>
„ overhang forward ...	<u>.25</u>	<u>.12</u>			<u>.12</u>
Forecastle enclosed ...	<u>39.0</u>	<u>39.00</u>	<u>7.87</u>		<u>39.00</u>
„ overhang ...	<u>1.0</u>	<u>.50</u>			<u>.50</u>
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ forward ...					
Total ...	<u>205.74</u>	<u>204.15</u>			<u>204.15</u>

Standard Height of Superstructure 7.50

„ „ R.Q.D.

Deduction for complete superstructure 42.00

$$\text{Percentage covered } \frac{S}{L} = 51.41\%$$

$$\frac{S_1}{L} = 51.01\%$$

$$\frac{E}{L} = 51.01\%$$

Percentage from Table, Line A.
(corrected for absence of forecastle (if required))Percentage from Table, Line B. 37.01%
(corrected for absence of forecastle (if required))

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

$$\text{Deduction} = 42 \times .3701 = - 15.54$$

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P. ...	<u>50.02</u>	1	<u>50.02</u>	<u>59.5</u>	<u>59.50</u>	1	<u>59.50</u>
$\frac{1}{4}$ L from A.P. ...	<u>22.26</u>	4	<u>89.04</u>	<u>26.86</u>	<u>26.86</u>	4	<u>107.44</u>
$\frac{3}{4}$ L „ ...	<u>5.50</u>	2	<u>11.00</u>	<u>6.7</u>	<u>6.70</u>	2	<u>13.40</u>
Amidships ...		4				4	
$\frac{3}{4}$ L from F.P. ...	<u>11.00</u>	2	<u>22.00</u>	<u>13.49</u>	<u>13.49</u>	2	<u>26.98</u>
$\frac{1}{4}$ L „ ...	<u>44.52</u>	4	<u>178.08</u>	<u>54.11</u>	<u>54.11</u>	4	<u>216.44</u>
F.P. ...	<u>100.04</u>	1	<u>100.04</u>	<u>119.5</u>	<u>119.50</u>	1	<u>119.50</u>
Total ...			<u>450.18</u>				<u>543.26</u>

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{93.08}{18} (.75 - .257) = - 2.55$$

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.

Depth to Freeboard Deck = 31.04 Ft.Summer freeboard = 5.94Moulded draught (d) = 25.10

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = $6\frac{1}{4}$ inches = 6.28

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$$\Delta = 11580$$

Tons per inch immersion at summer load water line

$$T = 41.3$$

Deduction = $\frac{\Delta}{40T}$ inches

$$= 7$$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.68 + .768}{1.36} = \frac{1.448}{1.36}$ Depth Correction ... 13.08Deduction for superstructures ... 15.54Sheer correction ... 2.55Round of Beam correction06

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

13.08 18.15 - 5.07

Summer Freeboard = 71.13SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc ...	<u>13 1/4</u>	Tropical Fresh Water Freeboard ...	<u>4' 10"</u>
Fresh Water Line „ „ ...	<u>7</u>	Fresh Water „ „ ...	<u>5' 4 1/4"</u>
Tropical Line „ „ ...	<u>6 1/4</u>	Tropical „ „ ...	<u>5' 5"</u>
Winter Line below „ „ ...	<u>6 1/4</u>	Winter „ „ ...	<u>6' 3 1/2"</u>
Winter North Atlantic Line „ „ ...	<u>✓</u>	Winter North Atlantic „ „ ...	<u>✓</u>

29 DEC 1932

5m, 3, 32.

MARKING FORM
26 JAN 1938
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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	N° 1.	N° 2.	N° 3.	N° 4.	CROSS RUNNER BRIDGE	CROSS RUNNER FREE DK	DOOR	Coaling hatchways on Bridge deck	
Dimensions of Hatchway	32'6" x 26'0"	34'8" x 26'0"	34'8" x 26'0"	28'2" x 26'0"	10'10" x 18'0"	10'10" x 18'0"	8'6" x 10'0"	4 @ 8'8" x 4'0"	Coam. 18' x 36' to peak.
COAMINGS	Height above Deck	30"			18"		18"	2	Coaling hatchways on Bridge deck
	Thickness	4 1/4"	As W. 1.		4 1/4"		4 1/4"		Coam. 18' x 36' to peak.
	Sides	4 1/4"			4 1/4"		4 1/4"		Coaling hatchways on Bridge deck
	Stiffeners	As W. 1.			As W. 1.		As W. 1.		Coaling hatchways on Bridge deck
HATCH BEAMS	Number	6	6	6	5				Coam. 12' x 34' to peak.
	Spacing	4'7 1/2"	4'11 1/2"	4'11 1/2"	4'8 1/2"				Coam. 12' x 34' to peak.
	Scantling and Sketch	2 1/2" x 18"	As W. 1.		None	None	None		Coam. 12' x 34' to peak.
	Bearing Surface	3 1/2"							Coam. 12' x 34' to peak.
FORE AND AFTERS	Number				3	3	1		Coam. 12' x 34' to peak.
	Spacing				4'6"	4'6"	5'0"		Coam. 12' x 34' to peak.
	Unsupported Lengths				10'3"	10'3"	7'11"		Coam. 12' x 34' to peak.
	Scantling* and Sketch				10' x 36"	10' x 36"	10' x 36"		Coam. 12' x 34' to peak.
HATCH COVERS	Material	W.P.	As W. 1.		W.P.	W.P.	W.P.		Coam. 12' x 34' to peak.
	Thickness	2 1/2"	As W. 1.		2 1/2"	2 1/2"	2 1/2"		Coam. 12' x 34' to peak.
	How fitted	As W. 1.	As W. 1.		As W. 1.	As W. 1.	As W. 1.		Coam. 12' x 34' to peak.
	Bearing Surface	3"	As W. 1.		3"	3"	3"		Coam. 12' x 34' to peak.
Spacing of Cleats	24"	As W. 1.			24"	30"	23"		Coam. 12' x 34' to peak.
Number of Tarpaulins	2	As W. 1.			X.2	None	X.2		Coam. 12' x 34' to peak.
<p>*Are wood fore and afters steel shod at all bearing surfaces? <i>Yes.</i></p> <p>Are battens and wedges efficient and in good condition? <i>Yes.</i></p> <p>Are tarpaulins in good condition and in accordance with rule requirements? <i>Yes.</i></p> <p>Are lashings provided in accordance with rule requirements? <i>Yes.</i></p>									

Particulars of fiddley, funnel and ventilator coamings:—

Stockhold ventilator, fiddley & funnel in efficient condition.
 Stockhold gratings covered with strong steel hinged covers firmly attached.
 Engine room skylight steel, strongly constructed.
~~A number of glasses to be removed.~~
 No means provided for securing when closed.

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:—

None.

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

1 on Side deck 9' dia. Coam. 27' x 28' to peak.
 2 " 12 " 30' x 28' to crew.
 2 " 18 " 30' x 40' to hold.
 2 " 6 " 16' x 26' to crew.
 4 in fore well 18 " 36' x 38' to hold.
 2 " 18 " 96' x 44' stayed.
 4 Vents in aft well 18' dia. Coam. 36' x 38' to hold.
 1 " on poop 12 " 36' x 22' to tunnel.
 all vents constructed in accordance with the Rules & coamings of hold vents closed with wood plug & canvas cover.

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

1 on Side deck 3' dia. 12' high to peak.
 4 in fore well 2 1/2" 34' to D.B.T.
 6 " aft 2 1/2" 30' "
 2 " 2 1/2" 16' "
 6 on Bridge deck 2 1/2" 6' "
 1 on poop 2 1/2" 6' to peak.

Efficient Closing provided
 No plug or covers provided.

Particulars of Gangway Cargo and Coaling Ports:—

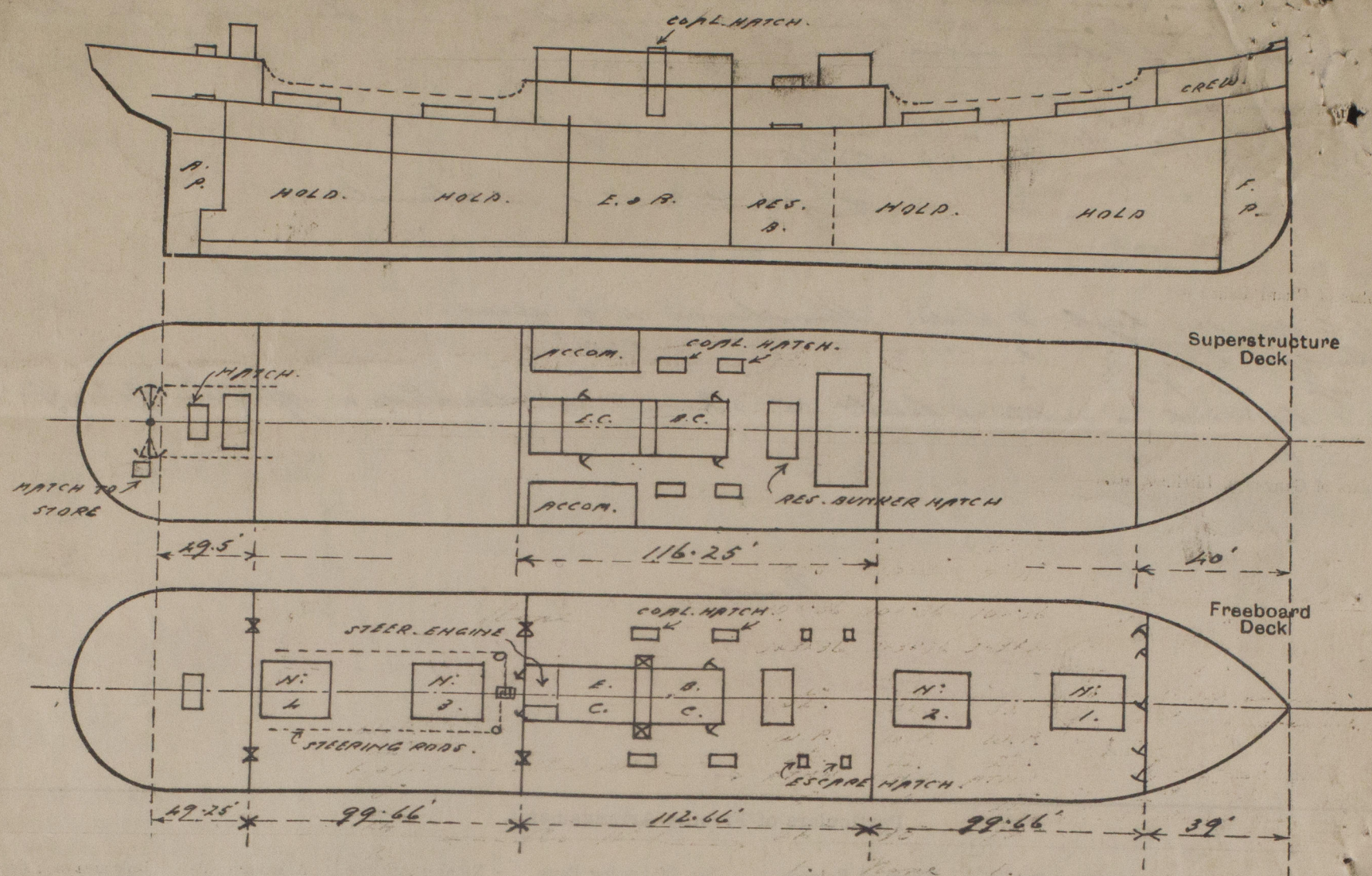
None.



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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:—

Vessel surveyed afloat whilst undergoing Special Survey No. 3 which will be completed at this time. Freeboard Assignment for carrying timber deck cargoes also required.

Timber requirements: Double bottom tanks within midship half length of vessel subdivided. Steel bulwarks in wells 3'-8" high stiffened on upper edge with 8 x 3 x 1/2 B.A. & supported by 8 x 3 x 1/2 B.A. stays spaced from 5'-0" to 6'-6" apart but not arranged on beams. Steering engine situated on freeboard deck at after end of engine casing, with chains & rods led aft alongside hatchways, & thence up to poop deck. Rods not protected. Emergency steering tackle operated from steam winch on poop deck.

~~No eyeplates or fittings for uprights provided.~~
Eyeplates for lashings riveted to sheenstake at intervals of not more than 10 feet, the distance from end bulkheads not more than 6'-6". Strong metal sockets for uprights secured to sheenstake spaced not more than 10' apart.

Builder's name and yard number *Taikoo Dock & E. C. of N. Ry. Ltd.*

Names of sister ships *✓*

Owners *King Line Ltd. (Dodd Thomson & Co. Ltd. Mgrs.)*

Fee £ *13 : 12 : 0*

Received by me



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