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26 MAY 1932

Index No. 33561
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

7th. 70 7871

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having POOP, BRIDGE AND FORECASTLE.

(Type of Superstructures.)

Ship's Name <u>"KOHISTAN"</u>	Nationality and Port of Registry <u>BRITISH LONDON</u>	Official Number <u>161353</u>	Gross Tonnage <u>5884</u> <u>5464</u>	Date of Build <u>1930</u> <u>1mo</u>
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Moulded Dimensions: Length 175.0' Breadth 54.92' Depth 31.0'

Moulded displacement at moulded draught = 85 per cent. of moulded depth 13606 tons

Coefficient of fineness for use with Tables .776

Port of Survey MANCHESTER

Date of Survey 24th MAY 1932

Name of Surveyor A.N. Gibbs

Particulars of Classification + 100 A1.

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth 31.00	(a) Where D is greater than Table depth (D-Table depth) R = <u>(31.04 - 28.33) 3 = + 8.13</u>	Moulded Breadth (B) <u>54.79</u>
Stringer plate04	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <u>2.71</u>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{13.15}{50}$
Sheathing on exposed deck T $\left(\frac{L-S}{L}\right) =$	✓	Ship's Round of Beam = <u>14.5"</u>
Depth for Freeboard (D) = <u>31.04</u>	If restricted by superstructures ✓	Difference <u>1.35</u>
		Restricted to
		Correction = $\frac{\text{Diff}^n}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{1.35}{4} \times \left(1 - \frac{4.971}{175}\right) = -.17$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	<u>38.00</u>	<u>38.00</u>	<u>7.50</u>	✓	<u>38.00</u>
„ overhang	<u>1.81</u>	<u>.81</u>	<u>7.50</u>	<u>+.25</u>	<u>.81</u>
R.Q.D. enclosed	<u>127.84</u>	<u>127.84</u>	<u>7.50</u>	✓	<u>127.84</u>
„ overhang	<u>3.00</u>	<u>3.00</u>	<u>7.50</u>	<u>+.25</u>	<u>3.00</u>
Bridge enclosed	<u>41.01</u>	<u>41.01</u>	<u>7.50</u>	✓	<u>41.01</u>
„ overhang aft	<u>61</u>	<u>61</u>	<u>7.50</u>	<u>+.25</u>	<u>61</u>
„ overhang forward	<u>41.01</u>	<u>41.01</u>	<u>7.50</u>	<u>+.25</u>	<u>41.01</u>
Trunk aft	<u>211.27</u>	<u>211.27</u>	<u>7.50</u>	<u>+.25</u>	<u>211.27</u>
„ forward	<u>213.69</u>	<u>213.69</u>	<u>7.50</u>	<u>+.25</u>	<u>213.69</u>
Tonnage opening aft	<u>211.27</u>	<u>211.27</u>	<u>7.50</u>	<u>+.25</u>	<u>211.27</u>
„ „ forward	<u>211.27</u>	<u>211.27</u>	<u>7.50</u>	<u>+.25</u>	<u>211.27</u>
Total	<u>213.69</u>	<u>211.27</u>	<u>7.50</u>	<u>+.25</u>	<u>211.27</u>

Standard Height of Superstructure 7.50

„ „ R.Q.D. ✓

Deduction for complete superstructure 42.00

Percentage covered $\frac{S}{L} = 50.28\%$

„ „ $\frac{S_1}{L} = 49.71\%$

„ „ $\frac{E}{L} = 49.71\%$

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

Percentage from Table, Line B. 35.75%
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = 42 x .3575 = - 15.02

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<u>52.50</u>	<u>1</u>	<u>52.50</u>	<u>63.00</u>	<u>63.00</u>	<u>63.00</u>	<u>1</u>	<u>63.00</u>	<u>63.00</u>
$\frac{1}{2}$ L from A.P.	<u>23.36</u>	<u>4</u>	<u>93.44</u>	<u>27.25</u>	<u>27.25</u>	<u>27.25</u>	<u>4</u>	<u>109.00</u>	<u>109.00</u>
$\frac{3}{4}$ L „	<u>5.77</u>	<u>2</u>	<u>11.54</u>	<u>6.81</u>	<u>6.81</u>	<u>6.81</u>	<u>2</u>	<u>13.62</u>	<u>13.62</u>
Amidships	<u>0</u>	<u>4</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>4</u>	<u>0</u>	<u>0</u>
$\frac{3}{4}$ L from F.P.	<u>11.55</u>	<u>2</u>	<u>23.10</u>	<u>13.72</u>	<u>13.72</u>	<u>13.72</u>	<u>2</u>	<u>27.44</u>	<u>27.44</u>
$\frac{1}{2}$ L „	<u>46.73</u>	<u>4</u>	<u>186.92</u>	<u>54.90</u>	<u>54.90</u>	<u>54.90</u>	<u>4</u>	<u>219.60</u>	<u>219.60</u>
F.P.	<u>105.00</u>	<u>1</u>	<u>105.00</u>	<u>126.00</u>	<u>126.00</u>	<u>126.00</u>	<u>1</u>	<u>126.00</u>	<u>126.00</u>
Total	<u>472.50</u>	<u>18</u>	<u>472.50</u>	<u>558.66</u>	<u>558.66</u>	<u>558.66</u>	<u>18</u>	<u>558.66</u>	<u>558.66</u>

Mean actual sheer aft = Excess

Mean standard sheer aft = Excess

Mean actual sheer forward = Excess

Mean standard sheer forward = Excess

Length of enclosed superstructure forward of amidships =

„ „ aft of „ =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{86.16}{18} \left(\frac{.75 - .25}{175} \right) = - 2.39$

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.	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 $\frac{.776 + .680}{1.360} \times 79.35$
Depth to Freeboard Deck = <u>31.04</u>	$\Delta = 12787$	Depth Correction <u>8.13</u>
Summer freeboard = <u>6.29</u>	Tons per inch immersion at summer load water line	Deduction for superstructures <u>15.02</u>
Moulded draught (d) = <u>24.75</u>	T = <u>46.8</u>	Sheer correction <u>2.39</u>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>6.19</u> = <u>6 3/4</u>	Deduction = $\frac{\Delta}{40T}$ inches = <u>6.83</u>	Round of Beam correction <u>14.5</u>
Addition for Winter North Atlantic Freeboard (if required) =	= <u>6 3/4</u>	Correction for Thickness of Deck amidships <u>-</u>
		Other corrections, scantlings, etc. <u>-</u>
		Summer Freeboard = <u>75.50</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>13</u>	Tropical Fresh Water Freeboard <u>5.25</u>
Fresh Water Line „ „ <u>6 3/4</u>	Fresh Water „ „ <u>5.83</u>
Tropical Line „ „ <u>6 3/4</u>	Tropical „ „ <u>5.94</u>
Winter Line below „ „ <u>6 1/4</u>	Winter „ „ <u>6.93</u>
Winter North Atlantic Line „ „ <u>✓</u>	Winter North Atlantic „ „ <u>✓</u>

28 MAY 1932

MARKING FORM
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MARKING FORM
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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway	No 1	No 2	No 3	DEEP TANK	No 4	No 5	HATCH TO FORE PEAK STAKE	ESCAPE HATCHES IN BRIDGE DECK	COAL HATCH IN BRIDGE DECK	No 3 Hatch on Bridge Deck
Dimensions of Hatchway	29'3" x 35'0"	35'7 1/2" x 35'0"	26'1 1/2" x 35'0"	11'10 1/2" x 35'0"	26'1 1/2" x 35'0"	33'3" x 35'0"	4'0" x 4'0"	2'1" x 7'7"	3'0" x 3'0"	21'4 1/2" x 35'0"
COAMINGS										
Height above Deck	3 1/2"	3 1/2"	9 x 3 1/2" L	3 1/2"	3 1/2"	3 1/2"	9 x 3 1/2" L	9 x 3" L	9 x 3" L	28 1/2"
Thickens	50	52	✓	50	52	52	✓	✓	✓	7 x 3" L
Stiffeners	4 x 3" x 46 L	11 x 3 1/2" x 5	✓	4 x 3" x 46 L	11 x 3 1/2" x 5	11 x 3 1/2" x 5	✓	✓	✓	2 x 2" Straps
Brackets, Stays	3 x 3" Rods	4 x 3" Rods	✓	1 x 3" Rods	4 x 3" Rods	4 x 3" Rods	✓	✓	✓	3
HATCH BEAMS										
Number	4	5	4	5	5	5				5
Spacing	5'10"	5'11"	5'3 1/2"	5'11"	5'2 1/2"	5'6 1/2"				4 x 3" x 50
Scantling and Sketch	4 x 3" x 50	4 x 3" x 50	4 x 3" x 50	4 x 3" x 50	4 x 3" x 50	4 x 3" x 50	NONE	NONE	NONE	17' x 35
Bearing Surface	3	3	3	3	3	3				3
FORE AND AFTERS										
Number										
Spacing										
Unsupported Lengths										
Scantling and Sketch										
Bearing Surface										
HATCH COVERS										
Material	N.P.						N.P.	N.P.	N.P.	N.P.
Thickens	3 3/4"						3 3/4"	3 3/4"	3 3/4"	3 3/4"
How fitted	F.C.A.						F.C.A.	F.C.A.	F.C.A.	F.C.A.
Bearing Surface	3'3 1/2"						3'3 1/2"	3'	3'	3'3 1/2"
Spacing of Cleats	34"						24"	8 CLEATS	8 CLEATS	18"
Number of Tarpaulins	3	3	2	3	3	3	2	3 CANVAS COVERS	2	3

*Are wood fore and afters steel shod at all bearing surfaces? ✓
 Are battens and wedges efficient and in good condition? ✓
 Are tarpaulins in good condition and in accordance with rule requirements? ✓
 Are lashings provided in accordance with rule requirements? ✓

Looking down filled to No 1 Hatchway at main 29'11'1/2"
fastening bars provided at nos. 1, 2, 3 (0.3") 4.5 Holes
Knigh bolts for lashings also for Deep Tank Hatch

ON HATCHES
 2 COAL HATCHES ON BRIDGE DECK
 9'3" x 3'0": 28 Coaming: 3 3/4" COVERS: Cleats 24"
 Battens and 3 Tarpaulins
 Hatch on roof to hazard deck: 2'8" x 2'2"
 3 1/2" P.P. gratings: 19 1/2" x 35 coaming
 8 Cleats, battens, 2 Tarpaulins, 1 Locking Bar

Particulars of fiddle, funnel and ventilator coamings:—

Stokehold Gratings covered by Strong Hinged Steel covers.
 Funnel and Folly Ventilators in good condition.
 E.R. Skylights of Steel strongly constructed.

Particulars of Flush Bunker Scuttles:—

NONE

to High
Coaming

Particulars of Companionways:—

NONE

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

Forward Head
 3 Vents. 9 dia. x 36 coaming x 30 To Accommodation
 1 " 8 " 35 " 30 " Holds
 2 " 16 " 33 1/2 " 35 " Holds

Forward Well Deck
 2 Vents. 16 dia. x 36 coaming x 35 To Holds
 2 " 17 " 36 " 35 " Holds

Port Deck
 2 Vents. 16 dia. x 36 coaming x 35 To Two Decks
 1 " 10 " 38 " 3 " Accom.
 1 " 12 " 30 " 3 " Tunnel Escape
 1 " 16 " 31 " 3 " Accom.

Bridge Deck
 2 Vents. 11 dia. x 30 coaming x 35 To Tr. Deck
 2 " 13 " 28 " 35 " Accom.
 6 " 8 " 28 " 3 " Accom.
 4 " 6 " 30 " 3 " Accom.

AFTER WELL DECK
 2 Vents. 16 dia. x 36 coaming x 35 To Holds
 2 " 14 " 36 " 35 " Holds
 2 " 10 " 36 " 3 " DEEP TANK
 2 " 8 " 36 " 3 " DEEP TANK

ALL VENTS. ARE STRONGLY CONSTRUCTED AND ARE CLOSED BY WOOD PLUGS AND CANVAS COVERS

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

1 air pipe on Fore Deck 3 dia. x 27 High to Mouth
 1 " " Poop Deck 3 " x 26 "
 6 " " Bridge 5 " x 24 "
 9 " pipes in Well Decks 5 " x 24 "

Nos 1, 2, 3, 4, 6, 7 10. P. Tanks carry oil fuel and the air pipes are closed by ganges which require in a number of cases. The air pipes to the Fore and After Tanks and No. 5 (E.R.F.W.) Tank are not provided with means of closing.

No snifting holes are drilled in the top of the head of all air pipes in wells

Particulars of Gangway Cargo and Coaling Ports:—

NONE



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Particulars of Scuppers and Sanitary Discharge Pipes —

2 N.C.s. (I.P. 15) from accommodation on upper Deck at after end of bridge led overboard 1'-9" below Freeboard Deck and fitted with brass S. Valves at Ship's Side.
 1 bath discharge amidships led overboard 1' below Freeboard Deck and fitted with brass S. Valve at Ship's Side.
 57. Other W.C. discharges are situated above Freeboard Deck and are fitted with Storm Valves.

Particulars of Side Scuttles:

Side Scuttles to all accommodation on Freeboard Deck are of Strong Construction and are fitted with permanent hinged deadlights.

Particulars of Guard Rails:—

3 Yr Guard Rails of substantial construction are fitted round Poop, Bridge and Forecastle Decks.
 Strong Steel Bulwarks are fitted in Forward and after wells 4'-3" high and are supported by 5½" x 3 L Stays 5'-0" to 6'-6" apart.

Particulars of Gangways, Lifelines, etc.:—

Efficient lifelines for the protection of the crew are fitted on the Port & Starboard sides of the Fore and after well decks.

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	116'-4"	4'-3"	4'-0" x 1'-6"	4	24 sq ft	23.32 sq ft
Forward Well	92'-10½"	4'-3"	3'-0" x 1'-5"	4	19.9 sq ft	18.57 sq ft

State position of each freeing port ... After Well: — From Bridge Bulwark 25'-4" to 49'-1" & 49'-1" to 96'-5" F.P.s 2" above S. frame.
 (F. and A. position and height above deck edge) Forward Well: — 13'-0" to 34'-0" & 55'-2" to 78'-0"

State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — F.P.s are fitted with Steel shutters hinges on centre horizontal bar.

Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

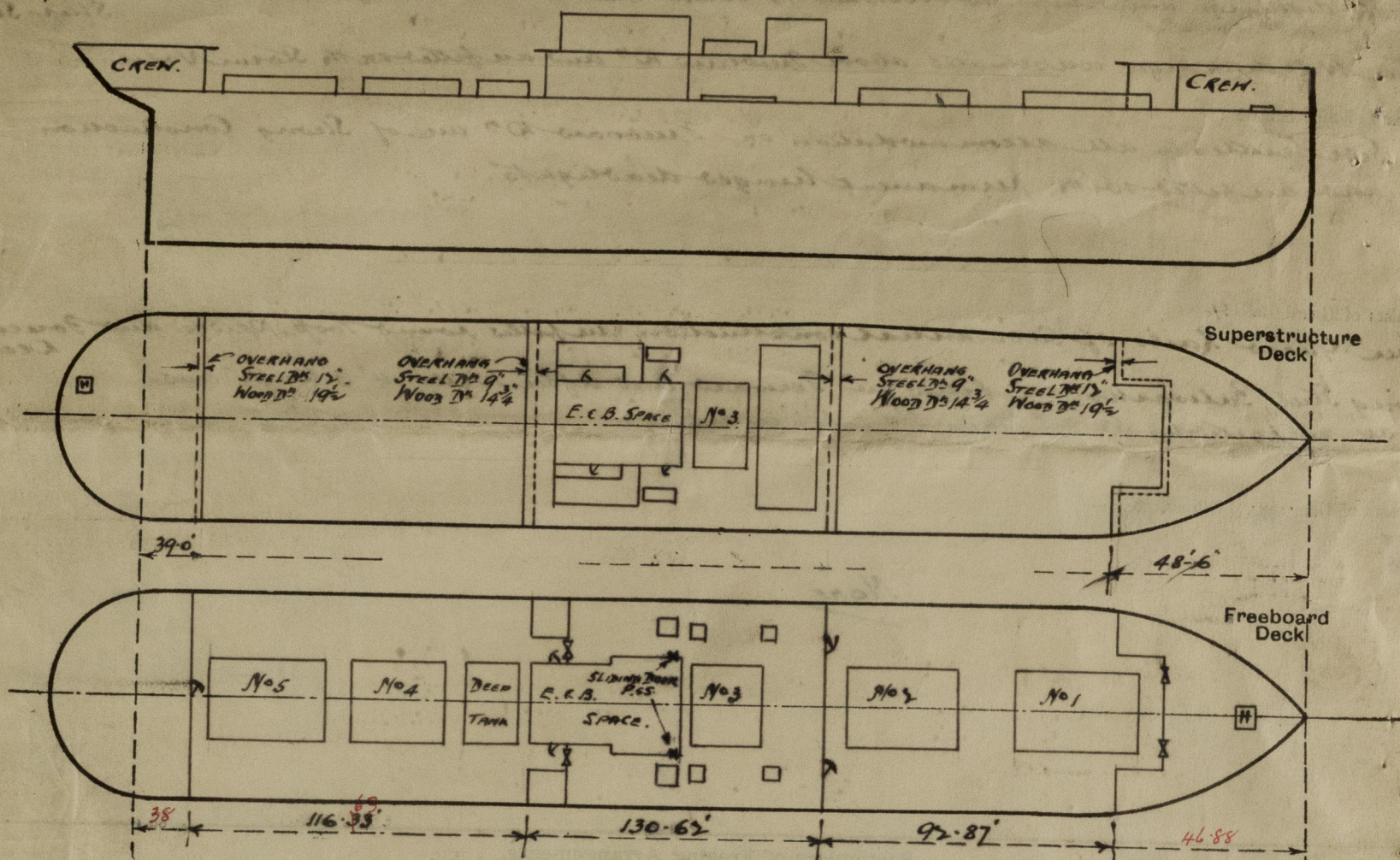
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	✓	40	3 x 3 x 3 L 8 x 3 x 5 L	Average Spacing 36-36" Apart	Banquettes Top and Bottom	4'-6" x 2'-0"	21"	4'-6" to structure
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	✓	30	4½ x 3 x 3 L & 5-7' CB Bridging Plating 4½" x 4'-0" Wings		NONE	4'-6" x 3'-0"	18"	4'-6"
Bridge, Forward Bulkhead	✓	40	9 x 3 x 50 L	30"	WAS TO TOP & BOTTOM	4'-6" x 3'-0"	14½"	4'-6"
Forecastle Bulkhead	✓	35	Bridging plating 4½" x 4'-0" wings	48"	NONE	4'-7" x 3'-0"	19"	4'-6"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓	28	4 x 3 x 32 Ls	4'-9"	NONE	3'-0" x 1'-6" 4'-6" x 3'-0"	19" F. & E. 18" E. & S.	7'-6"
Exposed Machinery Casings on Superstructure Decks	✓	36	4½ x 3 x 34 Ls	4'-1"	BKTS. AT TOP & E. & S. NONE - FIDLEY	4'-6" x 2'-0" 4'-6" x 3'-0"	14½" F. & E. 16" E. & S.	7'-6"
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):

Poop Bulkhead	Hinged wood doors operated from both sides.
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	2½" S.B.s full height in rivets channels. also portable Steel plate doors secured by bolts and strongbacks.
Bridge, Forward Bulkhead	Hinged Steel W.T. doors operated from outside only.
Forecastle Bulkhead	2½" S.B.s full height in rivets channels also portable Steel plate doors secured by bolts and strongbacks.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	Sliding Steel doors with angle stops secured by strong hook & eye bolts and strongbacks. and operated from inside only - FIDLEY.
Exposed Machinery Casings on Superstructure Decks	Hinged Steel doors operated from both sides.
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 shown on the following sketches:—



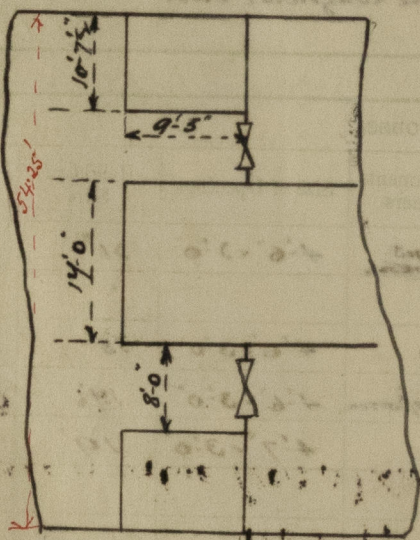
$$\begin{aligned} \text{Eqn. Mtd Bridge} &= 130.62 - (9.42 \times 8 \times 2) \\ &= 127.84 \\ \text{overhang aft } (2.78 + 1.22) &= 4.00 \\ \text{" for } 1.22 \times &= 1.22 \end{aligned}$$

$$\begin{aligned} \text{Eq. Mtd Fore} &= 5.87 \\ 46.88 - (20 \times 11.16) &= 41.01 \end{aligned}$$

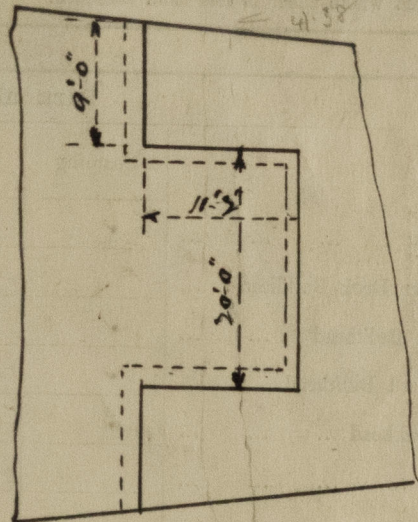
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State any special features in the construction of the ship:—

VESSEL SURVEYED AFLOAT FOR CONVENTION FREEBOARD PURPOSES ONLY.



Sketch of Bridge AFTER BULW.



Sketch of Forecastle BULW.

Builder's name and yard number *J. Reed & Sons Ltd. No. 499*

Names of sister ships *ARABISTAN, GORTISTAN, REGISTAN*

Owners *Stick Line (1923) Ltd.*

Fee £ *13 12 0*

Received by me

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