

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
 having Prop and Lug combined and Forecastle.

Port of Survey HULL

Date of Survey 3rd June 1932

Name of Surveyor A. B. Connelley

Particulars of Classification +100A1.

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<u>S.S. TRURO</u>	<u>BRITISH HULL</u>	<u>146434</u>	<u>974</u>	<u>1922-J.H.</u>

Moulded Dimensions: Length 227.31 Breadth 34.0 Depth 16.04

Moulded displacement at moulded draught = 85 per cent. of moulded depth 2171 tons

Coefficient of fineness for use with Tables .722

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>16.04</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(16.05 - 15.15) 1.748 = + 1.57</u>	Moulded Breadth (B) <u>34.0</u>
Stringer plate <u>.34</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>/</u>	Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>8.16</u>
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures <input checked="" type="checkbox"/>	Ship's Round of Beam = <u>9</u>
Depth for Freeboard (D) = <u>16.05</u>		Difference <u>.84</u>
		Restricted to <u>/</u>
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.84}{4} \times .179 = -.04$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>18.73</u>	<u>18.73</u>			<u>18.73</u>
" overhang ...					
R.Q.D. enclosed					
" overhang					
Bridge enclosed...	<u>142.75</u>	<u>116.15</u>	<u>7.6</u>		<u>116.15</u>
" overhang aft					
" overhang forward					
Fore enclosed ...	<u>51.75</u>	<u>51.75</u>	<u>7.6</u>		<u>51.75</u>
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft					
" forward					
Total ...	<u>194.50</u>	<u>186.63</u>			<u>186.63</u>

Standard Height of Superstructure	<u>6.00</u>
" " R.Q.D.	<input checked="" type="checkbox"/>
Deduction for complete superstructure	<u>28.73</u>
Percentage covered $\frac{S}{L} =$	<u>85.56%</u>
" " $\frac{S_1}{L} =$	<u>82.10%</u>
" " $\frac{E}{L} =$	<u>82.10%</u>
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	<u>77.90%</u>
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction = <u>28.73</u> x <u>77.90</u> =	<u>-22.38</u>

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>32.73</u>	1		<u>32.73</u>	<u>44</u>	<u>44.00</u>	1		<u>44.00</u>
$\frac{1}{2}$ L from A.P. ...	<u>14.56</u>	4		<u>58.24</u>	<u>17</u>	<u>16.98</u>	4		<u>67.92</u>
$\frac{2}{8}$ L " ...	<u>3.60</u>	2		<u>7.20</u>	<u>4</u>	<u>4.24</u>	2		<u>8.48</u>
Amidships ...		4					4		
$\frac{2}{8}$ L from F.P. ...	<u>7.20</u>	2		<u>14.40</u>	<u>8.4</u>	<u>8.29</u>	2		<u>16.58</u>
$\frac{1}{2}$ L " ...	<u>29.13</u>	4		<u>116.52</u>	<u>33</u>	<u>33.18</u>	4		<u>132.72</u>
F.P. ...	<u>65.46</u>	1		<u>65.46</u>	<u>78</u>	<u>78.00</u>	1		<u>78.00</u>
Total ...				<u>294.55</u>					<u>347.70</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 = .127
 " " aft of " = .500

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{53.15}{18} (.75 - .4278) = -.95$

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 = 16.05
 Summer freeboard = .58
 Moulded draught (d) = 15.47

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 3.87 $\frac{3}{4}$ "

Addition for Winter North Atlantic Freeboard (if required) = 2"

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$ 2555

Tons per inch immersion at summer load water line

$T =$ 15.9

Deduction = $\frac{\Delta}{40T}$ inches = 4"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction	<u>1.57</u>	
Deduction for superstructures	<u>22.38</u>	
Sheer correction	<u>.95</u>	
Round of Beam correction	<u>.04</u>	
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	<u>1.57</u>	<u>23.37</u>
		<u>-21.80</u>
		<u>7.05</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>7.3</u> "	Tropical Fresh Water Freeboard	<u>0.3</u> "
Fresh Water Line	<u>4</u> "	Fresh Water	<u>0.3</u> "
Tropical Line	<u>3.3</u> "	Tropical	<u>0.3</u> "
Winter Line below	<u>3.3</u> "	Winter	<u>0.3</u> "
Winter North Atlantic Line	<u>5.3</u> "	Winter North Atlantic	<u>1.0</u> "

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
FILED DECK UPPER DECK UPPER DECK BRIDGE DECK UPPER DECK BRIDGE DECK UPPER DECK									
Description of Hatchway	N°1	N°1	N°2	N°3	N°3	N°4	N°4		
Dimensions of Hatchway	16'9 1/2" x 11'0"	16'9 1/2" x 11'0"	23'2" x 13'0"	13'9 1/2" x 13'0"	13'3" x 13'0"	28'1" x 13'0"	28'1" x 13'0"		
COAMINGS	Height above Deck	30'	30'	30'	30'	30'	30'		
	Thickness	44'	44'	45'	42'	48'	43'		
	Sides	44'	44'	45'	42'	48'	43'		
	Stiffeners	7 x 3 x 40	7 x 3 x 40	7 x 3 x 40	7 x 3 x 40	8 x 3 x 40	8 x 3 x 40		
HATCH BEAMS	Brackets, Stays	15 x 2 1/2 x 10	15 x 2 1/2 x 10	15 x 2 1/2 x 10	15 x 2 1/2 x 10	15 x 2 1/2 x 10	15 x 2 1/2 x 10		
	Number	2	2	4	1	2	4		
	Spacing	EQUAL	EQUAL	EQUAL	EQUAL	EQUAL	EQUAL		
	Scantling and Sketch	3 x 3 x 40	3 x 3 x 40	3 x 3 x 40	3 x 3 x 40	3 x 3 x 40	3 x 3 x 40		
FORE AND AFTERS	Bearing Surface	3' x 3'	3' x 3'	3' x 3'	3' x 3'	3' x 3'	3' x 3'		
	Number								
	Spacing								
	Unsupported Lengths								
HATCH COVERS	Scantling* and Sketch								
	Bearing Surface								
	Material	W.P. TH	W.P.	W.P.	W.P.	W.P.	W.P.		
	Thickness	3'	3'	3'	3'	3'	3'		
Spacing of Cleats	How fitted	F.A.	F.A.	F.A.	F.A.	F.A.	F.A.		
	Bearing Surface	3'	3'	3'	3'	3'	3'		
	Number of Tarpaulins	24'	24'	24'	24'	24'	24'		
		2	2	3	3	2	3		
<p>*Are wood fore and afters steel shod at all bearing surfaces? NONE FITTED.</p> <p>Are battens and wedges efficient and in good condition? YES.</p> <p>Are tarpaulins in good condition and in accordance with rule requirements? YES.</p> <p>Are lashings provided in accordance with rule requirements? 3 1/2 MANILLA LASHINGS FOR WEATHERING HATCHES SECURED TO RING PLATES ON HATCH SIDE HORIZONTAL STIFFENER.</p>									

Particulars of fiddle, funnel and ventilator coamings:— *Fiddle gutters round by steel hinges storm cover.*
Coal Hatch 5'4" x 10'3" 10" plate coaming with half round moulding on top. 3' coam, bottom and cleats 2' tarpaulins.
Ventilator efficient 2 B.R., 2 E.R. 1 Gally, 7 muffle room to cabin below.
Engine room skylight steel strongly constructed. Gally skylight of wood efficient.

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:—

Steel deckhouse on poop deck with entrance at after end leading to crew space on upper deck by 2 wood doors 4'6" x 2'11" in timber (vertical) 2" thick. 15' sill, spring locks and handles both sides.
used white gum asphalt in the hull and deck.

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

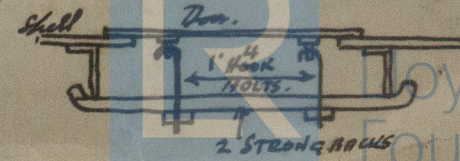
FILED DECK TO FORE PEAK STORE 9' DIA x 24' x 2' COAMING									
UNDER	N°1 HOLD	14"	x	24" x 30"					
BRIDGE	N°2	18"	x	24" x 40"	STAYED TO FILE FRONT.				
POOP	N°3	19"	x	24" x 40"	COAMING P.O.S.				
	CREW SPACES	6"	x	GOOSE NECK 10' TO MOUTH	P.O.S.				
	STORE	5"	x	CAT/HON COAMING 18" HIGH	P.O.S.				

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

FILED DECK AIR PIPE 2 1/2" DIA TO N°1 TANK. GOOSE NECK 10' TO MOUTH									
UPPER	FORE VELL	2	x	2	x	28"			
BRIDGE	2	x	4	x	28"				
POOP	2	x	5	x	28"				
	AFTER PEAK	1	x	11"					

Particulars of Gangway Cargo and Coaling Ports:—

Forward portion of bridge between deck Post - Starboard
After
Port of steel hinges 19" x 19" and 6'0" above upper deck to bottom of post.
Secured by 2 strongbacks 2 3/4" x 3/4" and 4 hook bolts.



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Particulars of Scuppers and Sanitary Discharge Pipes

Starboard side 2" S.V. Ranting waste discharging 24' along upper deck
 Port 4" S.V. Captain's W.C. 24'
 2 1/2" S.V. 1st ATH 24'
 4" S.V. Officers' W.C. 24'
 2 1/2" S.V. Engineers' W.C. 24'

Particulars of Side Scuttles:

In poop side to cum space 9' dia. glass. strongly constructed
 all fitted with deadlights 4 P. 4 S.

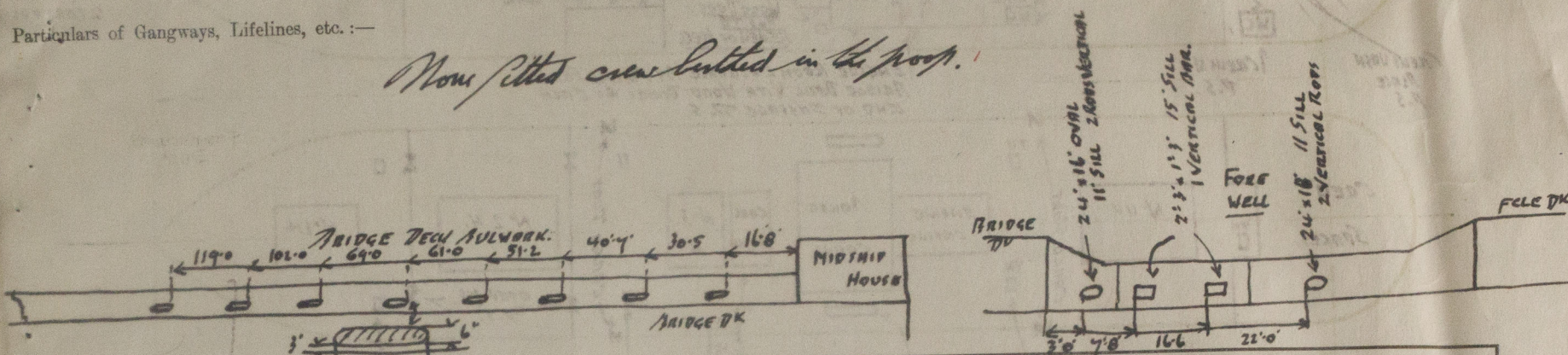
2 deadlights, wiring to be supplied by Cum Superintendent's order.

Particulars of Guard Rails:

On forecastle deck 3'6" high, standing 4'6" apart, 3 3/4 Rods.
 Round pattern steel bulwark 3'6" high for 24'6" aft stem.

Particulars of Gangways, Lifelines, etc.:

Now fitted cum bulwark in the poop.



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 ...	127'9"	3'6"	30" x 6"	11	13 3/4	128 1/2
Forward Well ...	32'10"	5'0"	2 off 2'3" x 1'3" SQUARE 1 24' x 16' OVAL 1 24' x 18'	4	10 4/10	98 1/10

State position of each freeing port ... After Well:—
 (F. 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.

Height above deck 15'0" 11"
 Fore well fitted with Bars.
 Noisy deck None.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

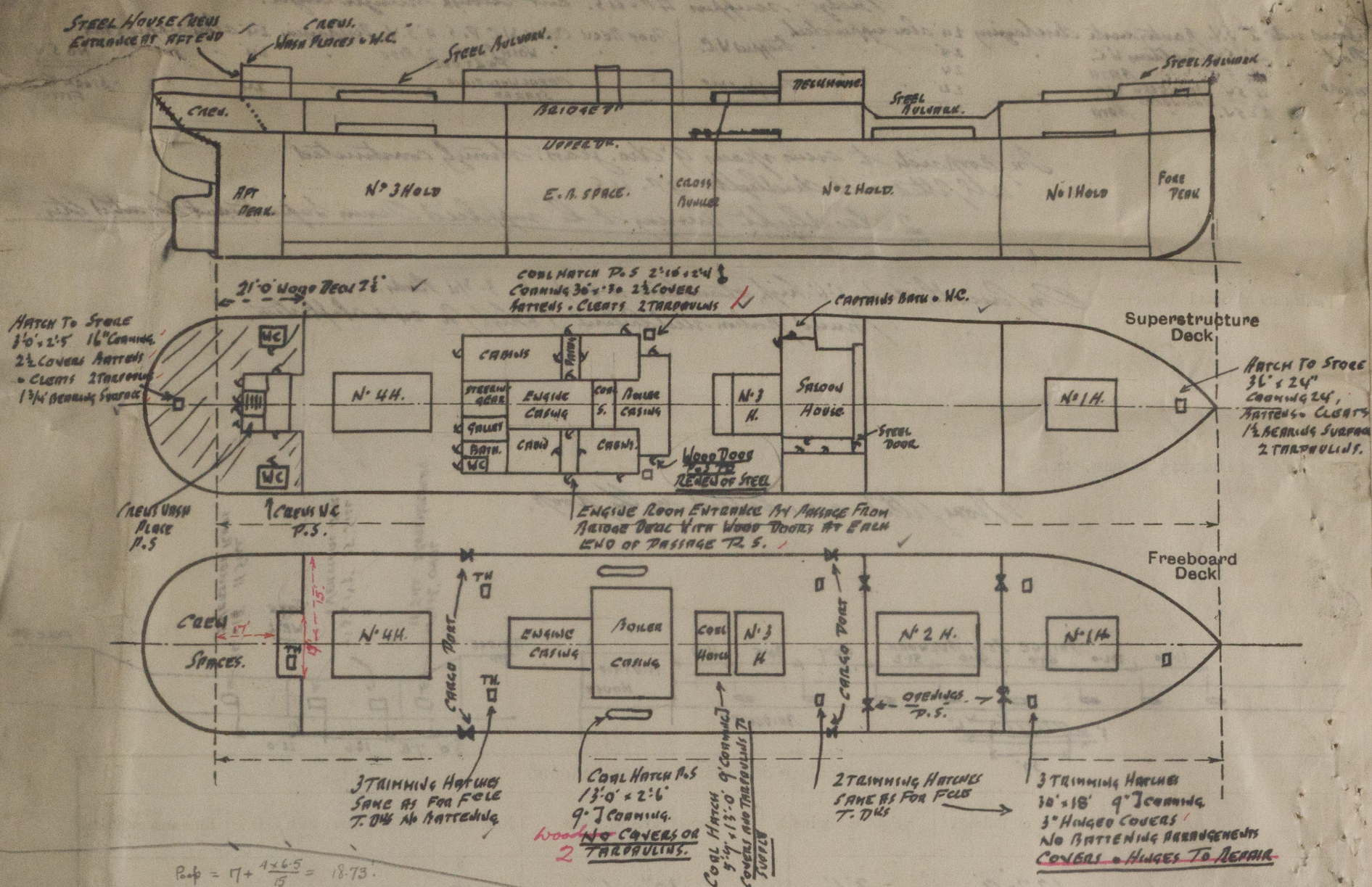
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ...	30	30	2 1/2 x 2 1/2 x 30	30	NONE	NONE	✓	7'6"
Raised Quarter Deck Bulkhead ...	✓	✓	✓	✓	✓	✓	✓	✓
Bridge, After Bulkhead ...	✓	✓	✓	✓	✓	✓	✓	✓
Bridge, Forward Bulkhead ...	35	30	7 x 3 x 40 L	30	KNEES TOP & BOTTOM	2 OPENINGS 5'0" x 4'0"	15'	7'6"
Forecastle Bulkhead ...	35	30	4 1/2 x 3 x 40 L	30	NONE	2 OPENINGS 5'0" x 4'0"	15'	7'6"
Trunk, Aft ...	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Forward ...	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Super-structure Decks ...	30	30	5 x 3 x 35 L	30	NONE	2 4'6" x 2'0" 2 4'6" x 2'0"	18'	7'6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	30	30	4 1/2 x 3 x 40 L	30	NONE	NONE	✓	7'6"
Deckhouses on Flush Deck Ships ...	✓	✓	✓	✓	✓	✓	✓	✓

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead ...	NONE
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead ...	✓
Bridge, Forward Bulkhead ...	2 OPENINGS 5'0" x 4'0" SECURED BY STORM BOARDS 3" THICK IN RIVETED CHANNELS INSIDE. ALSO 1 PORTABLE PLATE ON OUTSIDE SECURED BY 15 TURNBUCKLE BOLTS.
Forecastle Bulkhead ...	2 OPENINGS 5'0" x 4'0" SECURED BY STORM BOARDS 3" THICK IN RIVETED CHANNELS INSIDE. ALSO 1 PORTABLE PLATE OUTSIDE SECURED BY 15 TURNBUCKLE BOLTS.
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	2 1/2" DOORS 4'6" x 2'0" GIVING ENTRANCE TO ENGINE ROOM SPRING LOOMS AND ANCHORS BOTH SIDES. 2 1/2" DOORS 4'6" x 2'0" GIVING ENTRANCE TO ENGINE ROOM SPRING LOOMS AND ANCHORS BOTH SIDES.
Exposed Machinery Casings on Super-structure Decks ...	2 1/2" DOORS 4'6" x 2'0" GIVING ENTRANCE TO ENGINE ROOM SPRING LOOMS AND ANCHORS BOTH SIDES. 2 1/2" DOORS 4'6" x 2'0" GIVING ENTRANCE TO ENGINE ROOM SPRING LOOMS AND ANCHORS BOTH SIDES.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	NO OPENINGS
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:—

This vessel surveyed while lying afloat in the Albert Dock Hull.

Builder's name and yard number *J. DUTHIE TORRY S.B. CO. ABERDEEN.*

Names of sister ships

Owners *ELLERMANS WILSON LINE LTD. HULL.*

Fee £ *6* : *16* : — Received by me



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