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Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD

Nº 30883

SURVEYS FOR FREEBOARD:
now named "Gomellons" of Cardiff. now TOZAN MARU of Osaka (4/3/88)

Computation of Freeboard for Steamer, Sailing Ship, Tanker having <u>complete weather deck with tonnage opening aft.</u>		Port of Survey <u>SUNDERLAND</u>	
(Type of Superstructures.)		Date of Survey <u>19/4/32.</u>	
Ship's Name <u>HAMDALE</u>	Nationality and Port of Registry <u>BRITISH CARDIFF</u>	Official Number <u>136641</u>	Gross Tonnage <u>4782</u>
Moulded Dimensions: Length <u>388.41'</u> Breadth <u>53.83'</u> Depth <u>28.54'</u>		Date of Build	
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>11510</u> tons		Name of Surveyor <u>W. J. G. G. G.</u>	
Coefficient of fineness for use with Tables <u>.794</u>		Particulars of Classification <u>Fuller deck with freeboard.</u>	

Depth for Freeboard (D) <u>28.54</u>	Depth correction (a) Where D is greater than Table depth ✓ (D - Table depth) R = <u>28.58 - 25.90 = 2.68</u> <u>+ 8.01</u> ✓ (b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>-</u>	Round of Beam correction Moulded Breadth (B) <u>53'-10"</u> Standard Round of Beam = $\frac{B \times 12}{50} = 12.92$ Ship's Round of Beam = <u>13"</u> Difference = <u>.08</u> Restricted to Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L}\right) =$ <u>NIL</u>
Moulded depth <u>28.54</u> Stringer plate <u>1.11</u> Sheathing on exposed deck <u>none.</u> $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <u>28.58</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 ...	35.41	35.41	8'		35.41
" overhang ...	2.16	1.08	8'		1.08
R.Q.D. enclosed ...	"		"		
" overhang ...	"		"		
Bridge enclosed ...	346.23	346.23	8'		346.23
" overhang aft25	.17			.17
" overhang forward ...	"		"		
W'cle enclosed ...	"		"		
" overhang ...	"		"		
Trunk aft ...	"				
" forward ...	"				
Tonnage opening aft ...	4.36	2.76			2.76
" forward ...	"				
Total ...	388.41	385.65			385.65

Standard Height of Superstructure. ~~28~~ 7384

" " R.Q.D. -

Deduction for complete superstructure 41.23 ✓

Percentage covered $\frac{S}{L} = 1.000$

" " $\frac{S_1}{L} = .9929$

" " $\frac{E}{L} = .9929$

Percentage from Table, Line A. .9913 ✓
(corrected for absence of forecastle (if required)) -

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

Interpolation for bridge less than $2L$ (if required) -

Deduction = $41.23 \times .9913 = 40.88$ ✓

SHEER CORRECTION.

Station	Standard Ordnate	S M	Product	Actual Ordnate	Effective Ordnate	S M	Product
A.P. ...	48.84	1	48.84	58.62	58.62	1	66.01
$\frac{1}{2}$ L from A.P. ...	21.73	4	86.92	24.095	24.10	4	117.52
$\frac{3}{2}$ L " ...	5.37	2	10.74	6.008	6.02	2	14.52
Amidships ...		4		0		4	
$\frac{3}{2}$ L from F.P. ...	10.74	2	21.48	13.321	13.35	2	29.36
$\frac{1}{2}$ L " ...	43.46	4	173.84	53.419	53.42	4	237.44
F.P. ...	97.68	1	97.68	126.0	126.00	1	133.39
Total ...			439.50				598.24

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{8}{21} \right) = \frac{158.74}{18} (.75 - .56) = -2.21$$

If limited on account of midship superstructure.

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

<p>Deduction for Tropical Freeboard.</p> <p>Addition for Winter and Winter North Atlantic Freeboard.</p> <p>Depth to Freeboard Deck = <u>28.58</u> Ft.</p> <p>Summer freeboard = <u>3.20</u></p> <p>Moulded draught (d) = <u>25.38</u></p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>6.34</u></p> <p>Addition for Winter North Atlantic Freeboard (if required) =</p>	<p>Deduction for Fresh Water.</p> <p>Displacement in salt water at summer load water line</p> <p>$\Delta = 12090$</p> <p>Tons per inch immersion at summer load water line</p> <p>T = <u>41.75</u></p> <p>Deduction = $\frac{\Delta}{40T}$ inches = <u>7.24</u></p>	<p>TABULAR FREEBOARD corrected for Flush Deck (if required)</p> <p>Correction for coefficient $\frac{.794 + .68}{1.36} = \frac{1.474}{1.36}$</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">+</th> <th style="text-align: center;">-</th> </tr> </thead> <tbody> <tr> <td>Depth Correction ...</td> <td style="text-align: center;">8.01</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Deduction for superstructures ...</td> <td style="text-align: center;">-</td> <td style="text-align: center;">40.88</td> </tr> <tr> <td>Sheer correction ...</td> <td style="text-align: center;">-</td> <td style="text-align: center;">2.21</td> </tr> <tr> <td>Round of Beam correction ...</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Correction for Thickness of Deck amidships ...</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Other corrections, scantlings, etc. ...</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td></td> <td style="text-align: center;">8.01</td> <td style="text-align: center;">43.09</td> </tr> </tbody> </table> <p>Summer Freeboard = <u>38.52</u></p>		+	-	Depth Correction ...	8.01	-	Deduction for superstructures ...	-	40.88	Sheer correction ...	-	2.21	Round of Beam correction ...	-	-	Correction for Thickness of Deck amidships ...	-	-	Other corrections, scantlings, etc. ...	-	-		8.01	43.09
	+	-																								
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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	13 1/2
Fresh Water Line	"	"	7 1/4
Tropical Line	"	"	6 1/2
Winter Line	below	"	6 1/4
Winter North Atlantic Line	"	"	-

Tropical Fresh Water Freeboard	2 - 1
Fresh Water	" ...	2 - 7 ¹ / ₂
Tropical	" ...	2 - 8 ¹ / ₂
Winter	" ...	3 - 8 ¹ / ₂
Winter North Atlantic	" ...	3 - 8 ¹ / ₂

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS																									
SUPERSTRUCTURE DECK													FREEBOARD DECK												
Description of Hatchway		No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9	No. 10	No. 11	No. 12	No. 13	No. 14	No. 15	No. 16	No. 17	No. 18	No. 19	No. 20	No. 21	No. 22	No. 23	No. 24
Dimensions of Hatchway		21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"	21'-0" x 10'-0"
COAMINGS	Height above Deck	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"
	Thickness	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
	Stiffeners	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Brackets, Stays	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
HATCH BEAMS	Number	THREE	FIVE	FOUR	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE
	Spacing	5'-3"	5'-0"	5'-0"	5'-10"	5'-10"	5'-10"	5'-10"	5'-10"	5'-10"	5'-10"	5'-10"	5'-10"	5'-10"	5'-10"	5'-10"	5'-10"	5'-10"	5'-10"	5'-10"	5'-10"	5'-10"	5'-10"	5'-10"	5'-10"
	Scantling and Sketch	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'
	Bearing Surface	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
FORE AND AFTERS	Number	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE	THREE
	Spacing	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"	5'-9"
	Unsupported Lengths	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"	10'-11"
	Scantling and Sketch	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'	4" x 3" x 40'
HATCH COVERS	Material	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE	WHITE PINE
	Thickness	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
	How fitted	BY A	BY A	BY A	BY A	BY A	BY A	BY A	BY A	BY A	BY A	BY A	BY A	BY A	BY A	BY A	BY A	BY A	BY A	BY A	BY A	BY A	BY A	BY A	BY A
	Bearing Surface	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
Spacing of Cleats		24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"
Number of Tarpaulins		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

*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?

yes except small trimming hatch on freeboard deck.

yes do do do.

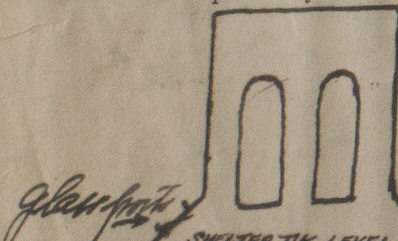
Particulars of fiddle, funnel and ventilator coamings:—

Are wood fore and afters steel shod at all bearing surfaces? *yes except small trimming patches on foreboard deck.*
 Are battens and wedges efficient and in good condition? *yes do do do.*
 Are tarpaulins in good condition and in accordance with rule requirements? *yes do do do.*
 Are lashings provided in accordance with rule requirements? *yes*

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:—



1 steel companion 4'-0" x 11'-0" x 7'-0" high for in the fore deck leading to enclosed forecabin door of steel 18" ribs supported from both sides. 2 glass ports are fitted in Port & Starboard 24" above deck no deadlights.

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

VENTS	DIA	CONNECTIONS	30" x 25" LED TO ACCOMMODATION PART
2	9"	"	"
2	6"	"	"
2	3"	"	"
2	4"	"	"
6	2 1/2"	"	"
6	2 1/2"	"	"
3	2 1/2"	"	"
2	2 1/2"	"	"
1	2 1/2"	"	"

ALL VENTILATORS CONSTRUCTED IN ACCORDANCE WITH RULES AND COAMINGS CLOSED WITH WOOD PLUGS AND CANVAS COVERS
 EXCEPT A SMALL VENTS FOR TO CROWN ACCOMMODATION, removed and made 36" in height with efficient closing appliances

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

1 CI SWAN NECK TO FORE PEAK	2 1/2" DIA	3" HIGH	1 1/2" DIA FROM FORE PEAK TANK
2 WS	2 1/2"	1 1/2"	NO 1 TANK
2 WS	2 1/2"	1 1/2"	NO 2 "
2 WS	2 1/2"	1 1/2"	NO 4 "
2 WS	2 1/2"	1 1/2"	NO 5 "
1 CI	2 1/2"	1 1/2"	AFTER PEAK TANK

ALL AIR PIPES HAVE STOPPING HOLES ON TOP OF BEND AND ARE CLOSED WITH WOOD PLUGS & CANVAS COVERS.

Particulars of Gangway Cargo and Coaling Ports:—

4 watertight cargo doors between shelter & foreboard decks in way of tween deck bulkheads and tween deck No 3 hold 5'-6" x 3'-8" efficiently constructed.

Particulars of Scuppers and Sanitary Discharge Pipes

*2 scuppers (6 Port & 6 Starboard) in enclosed space above foreboard deck fitted with jaws caps at inner end (but no valves fitted)
 2 scuppers 1 Port & 1 Starboard (sanitary discharge from accommodation) fitted with storm valves
 All other sanitary discharges above foreboard deck.*

Particulars of Side Scuttles:—

All side scuttles between upper & foreboard decks fitted with hinged deadlights. Side scuttles to crew spaces provided with portable deadlights except in steel companion.

Particulars of Guard Rails:—

Guard rails on shelter deck 3'-6" high having three rods and stanchions spaced 5'-0" apart, also steel bulwarks in Port & Starboard for a distance of 113' 3'-6" high efficiently constructed supported by bulkhead stanchions 7x3/8" spaced 7'-0" apart.

Particulars of Gangways, Lifelines, etc.:—

None.

Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
TWINNAGE OPENING AFTER WELL	6'-6"	8'-0"	22" x 21"	1	3.2 sq	
BULWARK AMIDSHIP IN FORWARD WELL	113'	3'-6"	30" x 15"	2	6.25 sq	

State position of each freeing port (F. and A. position and height above deck edge)
 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.

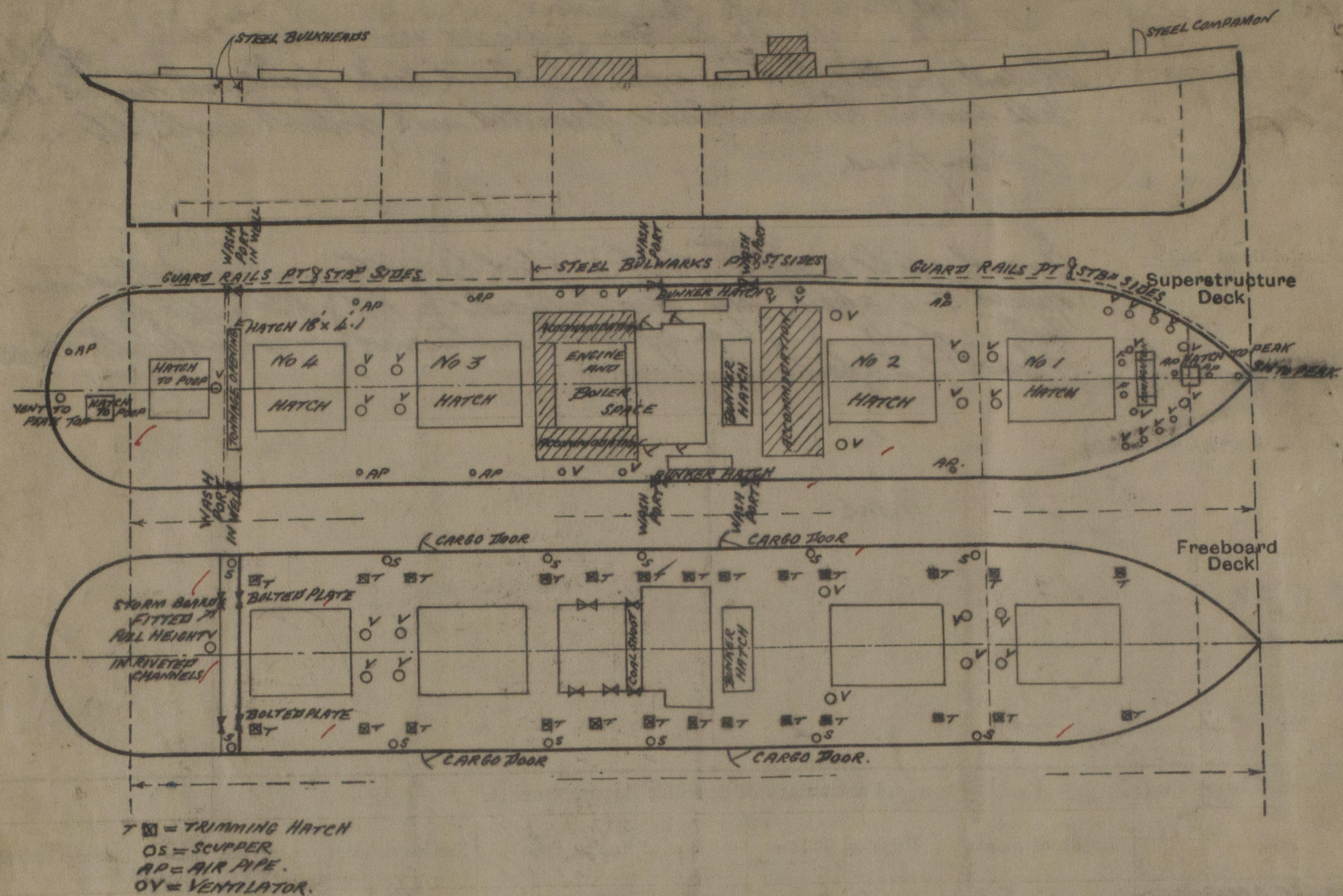
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
TWINNAGE WELL								
Roop Bulkheads	✓	26"	3 1/2" x 3 x 30"	27" to 21"	None	43" x 60"	15"	8'-0"
Raised Quarter Deck Bulkhead	✓							
Bridge, After Bulkhead	✓							
Bridge, Forward Bulkhead	✓							
Forecastle Bulkhead	✓							
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓							
Exposed Machinery Casings on Superstructure Decks	22"	36"	3 1/2" x 3 x 30"	2'-6" to 4'-0"	None	22" x 4'-2"	18"	7'-9"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	36"	3 1/2" x 3 x 30"	4'-0" to 5'-0"	Reinforced to beams	3'-0" x 3'-0"	18"	8'-0"
Deckhouses on Flush Deck Ships	✓							

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

TWINNAGE WELL	
Roop Bulkheads	2 openings in after bulkhead fitted with storm boards full height in riveted channels. 2 openings fitted with bolted steel doors (see fore bulkhead).
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	
Bridge, Forward Bulkhead	
Forecastle Bulkhead	
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	
Exposed Machinery Casings on Superstructure Decks	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	Fitted with steel doors operated from both sides. 1 steel bolted door, 1 pair steel sliding doors, & 1 hinged steel door.
Deckhouses on Flush Deck Ships	

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:—

DRAUGHT	DISPLACEMENT	T.P. 1"
23'-0"	10840	41.60.
24'-0"	11340	41.66.
25'-0"	11840	41.71.

Builder's name and yard number

Messrs J L Thompson & Sons S.S. No 503.

Names of sister ships

Owners

Lumball Coal & Shipping Co. Ltd.

Fee £

12-15-0.

Received by me



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