

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~
having *Quarter, Bridge & Deck*

(Type of Superstructures.)

Port of Survey *Lisbon*

Date of Survey *3rd + 4th Nov. 1932*

Name of Surveyor *A. E. Farmer*

Ship's Name **"HANNAH"** Nationality and Port of Registry *Swedish, Helsingborg* Official Number *7705* Gross Tonnage *1197* Date of Build *1898.8.*

Moulded Dimensions: Length *230'0"* Breadth *34'0"* Depth *16'9"* *16'75"* *16'24"*

Moulded displacement at moulded draught = 85 per cent. of moulded depth *2390* tons

Coefficient of fineness for use with Tables *.757*

Particulars of Classification *T100A.1.*
S.S. Agr. 2nd No. 3. 5.20.
S.S. Agr. No. 2. 29.

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <i>16'75"</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>(16'79" - 15'33") x 1.769 = + 2'58"</i>	Moulded Breadth (B) <i>34'0"</i>
Stringer plate <i>.04</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{8.16}{50} = 8.16$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <i>8.16</i>
Depth for Freeboard (D) = <i>16'79"</i>		Difference <i>.34</i>
		Restricted to <i>.3044</i>
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.34}{4} (1 - .6956) = -.03$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed						Standard Height of Superstructure <i>6.0</i>
" overhang						" " R.Q.D. <i>3.867</i>
R.Q.D. enclosed <i>76.75</i>	<i>76.75</i>	<i>76.75</i>	<i>4'0"</i>	<i>-</i>	<i>76.75</i>	Deduction for complete superstructure <i>29.00</i>
" overhang						Percentage covered $\frac{S}{L} = \frac{69.56}{76.75} = 69.56\%$
Bridge enclosed <i>56.25</i>	<i>56.25</i>	<i>56.25</i>	<i>7'0"</i>	<i>-</i>	<i>56.25</i>	" " $\frac{S_1}{L} = \frac{69.56}{76.75} = 69.56\%$
" overhang aft			<i>2'2"</i>	<i>-</i>		" " $\frac{E}{L} = \frac{69.56}{76.75} = 69.56\%$
" overhang forward						Percentage from Table, Line A. <i>62.25%</i>
Deck enclosed <i>27.00</i>	<i>27.00</i>	<i>27.00</i>	<i>7'0"</i>	<i>-</i>	<i>27.00</i>	(corrected for absence of forecastle (if required))
" overhang						Percentage from Table, Line B.
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than 2L (if required)
Tonnage opening aft						Deduction = <i>29.00 x .6225 = - 18.05</i>
" forward						
Total <i>160.00</i>	<i>160.00</i>	<i>160.00</i>			<i>160.00</i>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. <i>38</i>	<i>33.00</i>	1		<i>33.00</i>	<i>36.00</i>	<i>37.60</i>	1		<i>37.60</i>	Mean actual sheer aft = <i>Exc.</i>
$\frac{1}{4}L$ from A.P. <i>19</i>	<i>14.68</i>	4		<i>58.72</i>	<i>16.98</i>	<i>16.98</i>	4		<i>67.92</i>	Mean actual sheer forward = <i>Exc.</i>
$\frac{2}{4}L$ " <i>9</i>	<i>3.63</i>	2		<i>7.26</i>	<i>4.24</i>	<i>4.24</i>	2		<i>8.48</i>	Mean standard sheer aft = <i>Exc.</i>
Amidships		4					4			Mean standard sheer forward = <i>Exc.</i>
$\frac{3}{4}L$ from F.P. <i>12</i>	<i>7.26</i>	2		<i>14.52</i>	<i>8.19</i>	<i>8.19</i>	2		<i>16.38</i>	Length of enclosed superstructure forward of amidships = <i>.078</i>
$\frac{1}{4}L$ " <i>37</i>	<i>29.37</i>	4		<i>117.48</i>	<i>32.78</i>	<i>32.78</i>	4		<i>131.12</i>	" " aft of " = <i>.50</i>
F.P. <i>76</i>	<i>66.00</i>	1		<i>66.00</i>	<i>75.00</i>	<i>75.00</i>	1		<i>75.00</i>	
Total				<i>296.98</i>					<i>336.50</i>	
Correction = $\frac{\text{Difference between sums of products}}{18} = \frac{296.98 - 336.50}{18} = \frac{-39.52}{18} = -2.19$										
If limited on account of midship superstructure. $.88 \times \frac{.178}{.200} = -.78$										

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 $\frac{751 + 68}{1.36} = \frac{819}{1.36} = 602.2$
Depth to Freeboard Deck = <i>16'79"</i>	$\Delta =$	Depth Correction <i>2.58</i>
Summer freeboard = <i>1'14"</i>	Tons per inch immersion at summer load water line	Deduction for superstructures <i>- 18.05</i>
Moulded draught (d) = <i>15'65"</i>	T =	Sheer correction <i>- 78</i>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <i>3.91 = 99%</i>	Deduction = $\frac{\Delta}{40 T}$ inches = <i>99%</i>	Round of Beam correction <i>- .03</i>
Addition for Winter North Atlantic Freeboard (if required) = <i>2" = 51%</i>		Correction for Thickness of Deck amidships <i>-</i>
		Other corrections, scantlings, etc. <i>-</i>
		Summer Freeboard = <i>13.71</i>

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

Tropical Fresh Water Line above Centre of Disc <i>198 1/2</i>	Tropical Fresh Water Freeboard <i>13.71</i>	<i>348 1/2</i>
Fresh Water Line " " <i>99 1/2</i>	Fresh Water " " <i>150 1/2</i>	<i>249 1/2</i>
Tropical Line " " <i>99 1/2</i>	Tropical " " <i>249 1/2</i>	<i>447 1/2</i>
Winter Line below " " <i>99 1/2</i>	Winter " " <i>447 1/2</i>	<i>498 1/2</i>
Winter North Atlantic Line " " <i>150 1/2</i>	Winter North Atlantic " " <i>498 1/2</i>	

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS		Main deck. Quarter deck							
Description of Hatchway		No 1	No 2	No 3	No 4				
Dimensions of Hatchway		22-7x14-10	22-7x14-10	20-6x14-10	22-7x14-10				
COAMINGS	Height above Deck	28"	28"	28"	28"				
	Thickness	7/16"	7/16"	7/16"	7/16"				
	Stiffeners	NONE	NONE	NONE	NONE				
	Brackets, Stays	2x4x1/2"	2x4x1/2"	2x4x1/2"	2x4x1/2"				
	Stays	2x4x1/2"	2x4x1/2"	2x4x1/2"	2x4x1/2"				
HATCH BEAMS	Number	2	2	2	2				
	Spacing	7'-6"	7'-6"	6'-10"	7'-6"				
	Scantling and Sketch	3x3x3/4"	3x3x3/4"	3x3x3/4"	3x3x3/4"				
	Bearing Surface	3"	3"	3"	3"				
FORE AND AFTERS	Number	3	3	3	3				
	Spacing	3'-8 1/2"	3'-8 1/2"	3'-8 1/2"	3'-8 1/2"				
	Unsuppported Lengths								
	Scantling and Sketch	1x3x3/4"	1x3x3/4"	1x3x3/4"	1x3x3/4"				
	Bearing Surface	2"	2"	2"	2"				
HATCH COVERS	Material	Pine	Pine	Pine	Pine				
	Thickness	2 1/2"	2 1/2"	2 1/2"	2 1/2"				
	How fitted	Flush	Flush	Flush	Flush				
	Bearing Surface	2"	2"	2"	2"				
Spacing of Cleats		18"	18"	18"	18"				
Number of Tarpaulins		3	3	3	3				

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

Particulars of fiddle, funnel and ventilator coamings:

Fiddle gratings closed by hinged shut covers.
Funnel coamings strongly constructed in good condition.
2. Boiler room vents, 120" dia. coaming 30" above bridge deck.
E.R. Skylight (wood) strongly constructed in good condition.

Particulars of Flush Bunker Scuttles:

None.

Particulars of Companionways:

2. Stair companion hatchways on bridge deck leading to Engineer's quarters. Stair casing + wood doors, opening both sides. 3'-6" x 21" sill. 16"

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

Forecastle deck: 12 9/2" dia. coaming 7 1/2" high. closed by wood plug & canvas cover. 3. New closing mushroom vents.
Main deck: 22 10" dia. coaming 25" high. closed by wood plug & canvas cover.
Bridge deck: 3 new closing mushroom vents, 6" dia. 1 and one on to my quarters.
R.Q. deck: 22 10" dia. coaming 25" high. closed by wood plug & canvas cover.

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

Forecastle. Fairpeak: 1x2x1/2"
Main deck. No 1 tank: 1x2x1/2"
" No 2: 1x2x1/2"
R.Q. deck. No 3: 1x2x1/2"
The afterpeak tank has trunk hatch in deck with manhole entrance. Means of closing provided

Particulars of Gangway Cargo and Coaling Ports:

None.

Particulars of Scuppers and Sanitary Discharge Pipes:

No scuppers. Sanitary discharge pipes from forecabin and bridge spaces fitted with official storm valves at the ship's side.

Particulars of Side Scuttles:

Fiddle grates quarters. Scuttles fitted with attached dead lights.
Bridge deck spaces. Scuttles not fitted with dead lights.
Engine room coamings on bridge deck. Scuttles not fitted with dead lights.

Particulars of Guard Rails:

Fiddle. Rails 3 feet high, stanchions 4'-6" apart.
Bridge deck. " 3 " " " " " "

Particulars of Gangways, Lifelines, etc.:

No gangways. Life lines facilitate getting in fore and aft wells.

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	84'-0"	38"	33" x 19"	2		
Forward Well	69'-3"	52"	33" x 25"	3		

State position of each freeing port (F. and A. position and height above deck edge) After Well: *Equal opening*
 Forward Well: *Equal opening*
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: *Shutters, hinged on bars.*
 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	✓							
Raised Quarter Deck Bulkhead	✓	1/4"	4" x 3" x 3/8"	27"	None	None	✓	✓
Bridge, After Bulkhead	✓	1/4"	4" x 3" x 3/8"	27"	None	None	✓	✓
Bridge, Forward Bulkhead	✓	1/4"	3" x 3" x 1/4"	29"	None	4'-10" x 28"	11"	7'-0"
Forecastle Bulkhead	✓	1/4"	3" x 3" x 1/4"	29"	None			
Trunk, Aft	✓							
Trunk, Forward	✓	1/4"	3" x 2 1/2" x 5/16"	27"	None	4'-2" x 26"	18"	7'-0"
Exposed Machinery Casings on Freeboard or Raised Quarter Deck	✓							
Exposed Machinery Casings on Superstructure Decks	✓							
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓							
Deckhouses on Flush Deck Ships	✓							

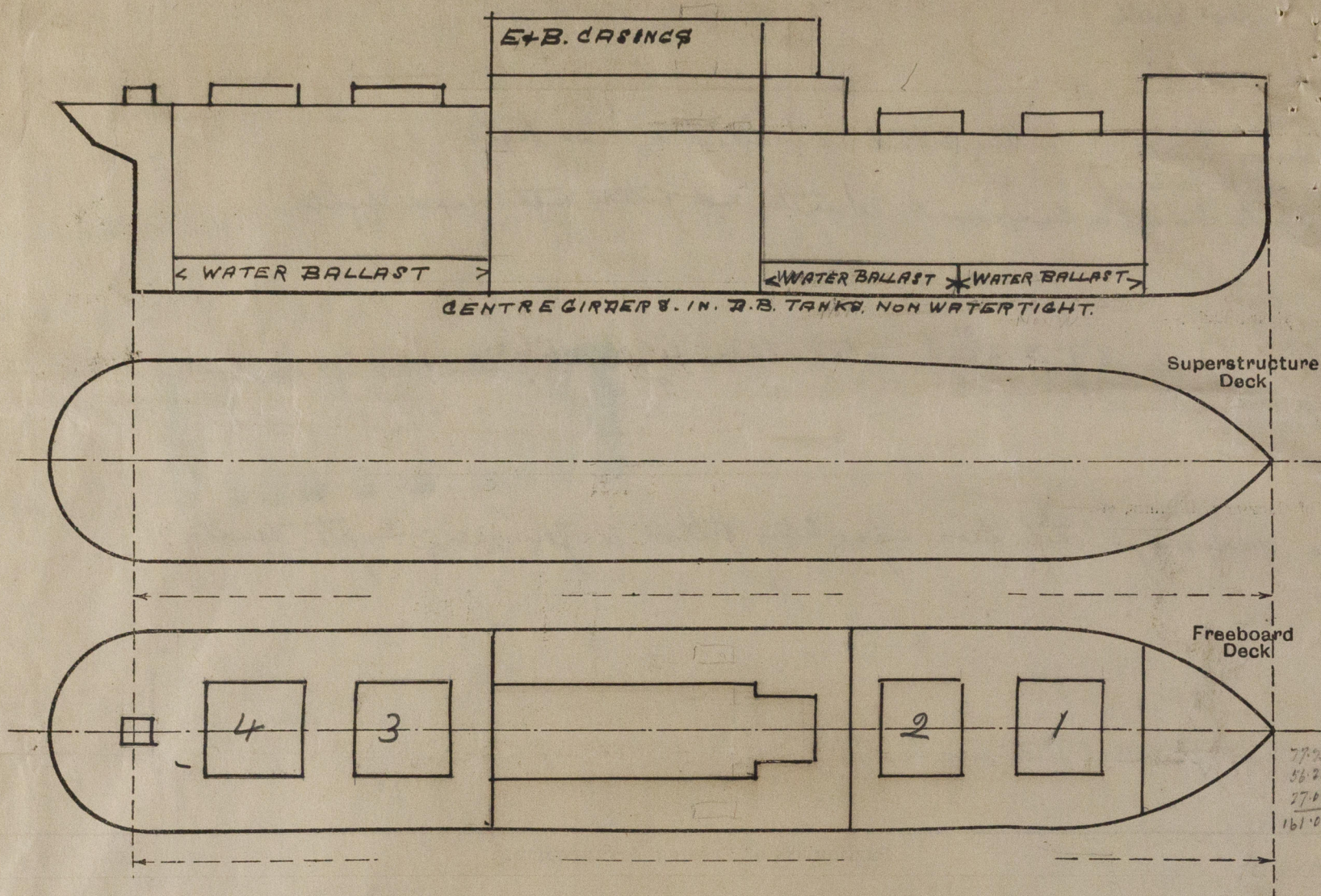
Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead	✓
Raised Quarter Deck Bulkhead	None
Bridge, After Bulkhead	None
Bridge, Forward Bulkhead	None
Forecastle Bulkhead	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Deck	✓
Exposed Machinery Casings on Superstructure Decks	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓
Deckhouses on Flush Deck Ships	✓

Wood hinged down closing both sides.
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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:—



The permanent fittings for timber uprights & lashings are to be fitted at Hull, vessel sailing from Harrogate on the 8th instant.

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

$$85 \times 16.75 = 14' 3''$$

$$\text{Kul} = 8''$$

$$114' 11''$$

$$\text{Dist. on 12' 11''} = 1550$$

$$\text{Rgt.} = 850$$

$$\text{Dist.} = 2400 = 2390 \text{ hld}$$

Builder's name and yard number

J. Shearer Sons No 24

Names of sister ships

Owners Frederi A/B. Hamaah (G. H. Dalgren)

Fee £

8 : 10 : 0
Exp. 1 : 13 : 0

Received by me

25 NOV 1932



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