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15 APR 1932

Sbd No. 19. APR 1932

Rpt. C.11.

## Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

WRECK DAY

Index No. 31089  
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker  
having *Raised Quarterdeck, Bridge & Forecastle*

Port of Survey *Hull.*  
Date of Survey *11th + 13th April 1932.*  
Name of Surveyor *G. Moffatt.*  
Particulars of Classification *100 A1*  
*Large battens not fitted.*

Ship's Name *"Harpy"*  
Nationality and Port of Registry *British Goole*  
Official Number *146340*  
Gross Tonnage *909*  
Date of Build *1924.*

Moulded Dimensions: Length *200'* Breadth *32'* Depth *14'*  
Moulded displacement at moulded draught = 85 per cent. of moulded depth *1595.* tons  
Coefficient of fineness for use with Tables *.733*

Depth for Freeboard (D) *14.03*  
Moulded depth ... *14.03*  
Stringer plate ... *8/20*  
Sheathing on exposed deck  
 $T \left( \frac{L-S}{L} \right) =$  *none*  
Depth for Freeboard (D) = *14.03*

Depth correction  
(a) Where D is greater than Table depth  
(D - Table depth) R = *(14.03 - 13.33) x 1.538 = +1.08*  
(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) *32.00*  
Standard Round of Beam =  $\frac{B \times 12}{50} =$  *7.68*  
Ship's Round of Beam = *8"*  
Difference *excess .32*  
Restricted to  
Correction =  $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) =$  *.32 x (1 - .7746) = -.02*

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed	<i>118.62</i>	<i>118.62</i>	<i>4'3"</i>	<i>✓</i>	<i>118.62</i>
" overhang					
Bridge enclosed...	<i>13.12</i>	<i>13.12</i>	<i>7'3"</i>	<i>✓</i>	<i>13.12</i>
" overhang aft					
" overhang forward	<i>22.59</i>	<i>22.59</i>	<i>6'10 1/2"</i>	<i>✓</i>	<i>23.17</i>
Forecastle enclosed	<i>35.59</i>	<i>35.59</i>			
" overhang <i>See sketch</i>	<i>1.16</i>	<i>.58</i>			
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward					
Total ...	<i>155.49</i>	<i>154.91</i>			<i>154.91</i>

Standard Height of Superstructure *6'0"*  
" " R.Q.D. *3.67*  
Deduction for complete superstructure *26.00*  
Percentage covered  $\frac{S}{L} =$  *77.45*  
" "  $\frac{S_1}{L} =$  *77.46*  
" "  $\frac{E}{L} =$  *77.46*  
Percentage from Table, Line A.  
(corrected for absence of forecastle (if required)) *72.17*  
Percentage from Table, Line B.  
(corrected for absence of forecastle (if required)) *✓*  
Interpolation for bridge less than 2L (if required) *✓*  
Deduction = *.7217 x 26.00 = -18.76*

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>30.00</i>	1		<i>30.00</i>	<i>36"</i>	<i>36 42.96</i>	1		<i>42.96</i>
1/4 L from A.P. ...	<i>13.35</i>	4		<i>53.40</i>	<i>15 3/4"</i>	<i>15.8 19.12</i>	4		<i>76.48</i>
1/2 L " ...	<i>3.30</i>	2		<i>6.60</i>	<i>4"</i>	<i>3.95 4.73</i>	2		<i>9.46</i>
Amidships ...		4			<i>0</i>		4		
3/4 L from F.P. ...	<i>6.60</i>	2		<i>13.20</i>	<i>7 1/2"</i>	<i>7.19 4.29</i>	2		<i>14.58</i>
1/4 L " ...	<i>26.40</i>	4		<i>106.80</i>	<i>29"</i>	<i>29.23 29.23</i>	4		<i>116.92</i>
F.P. ...	<i>60.00</i>	1		<i>60.00</i>	<i>66"</i>	<i>66 66.00</i>	1		<i>66.00</i>
Total ...				<i>270.00</i>					<i>326.40</i>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) =$  *56.40 / 18 (.75 - .3888) = -1.13*  
If limited on account of midship superstructure. *✓*  
If limited to maximum allowance of 1 1/2 ins. per 100 ft. *✓*

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 = *.1587*  
" " aft of " = *.5*  
*Sheer aft increased by virtue of intact Raised Quarter Deck having a height in excess of the standard.*

actual R.Q.D. = *4.25'*  
Standard *3.67*  
*58' = 6.96'*

Deduction for Tropical Freeboard.  
Addition for Winter and Winter North Atlantic Freeboard.  
Depth to Freeboard Deck = *18.28*  
Summer freeboard = *4.68*  
Moulded draught (d) = *13.60*  
Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = *13.60 / 4 = 3.40*  
Addition for Winter North Atlantic Freeboard (if required) = *2"*

Deduction for Fresh Water.  
Displacement in salt water at summer load water line  
 $\Delta =$  *1410*  
Tons per inch immersion at summer load water line  
 $T =$  *12.8*  
Deduction =  $\frac{\Delta}{40T}$  inches = *3.34*  
= *3 1/4"*

TABULAR FREEBOARD corrected for Flush Deck (if required)  
Correction for coefficient  $\frac{.733 + .68}{1.36} \times 23.10 =$  *24.00*  
Depth Correction ... *1.08*  
Deduction for superstructures ... *18.46*  
Sheer correction ... *1.13*  
Round of Beam correction ... *.02*  
Correction for Thickness of Deck amidships ... *51.00*  
Other corrections, scantlings, etc. ...  
52.08 19.91 + 32.17  
Summer Freeboard = *56.19*

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steely Deck:  
Tropical Fresh Water Line above Centre of Disc ... *6 3/4"*  
Fresh Water Line " " ... *3 1/2"*  
Tropical Line " " ... *3 1/4"*  
Winter Line below " " ... *3 1/2"*  
Winter North Atlantic Line " " ... *5 1/2"*  
Tropical Fresh Water Freeboard ... *4' 8 1/4"*  
Fresh Water " " ... *4' 1 1/2"*  
Tropical " " ... *4' 4 3/4"*  
Winter " " ... *4' 5 1/4"*  
Winter North Atlantic " " ... *4' 11 1/4"*



## HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

- \*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?

Particulars of Flush Bunker Scuttles:—

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

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

Particulars of Gangway Cargo and Coaling Ports:—



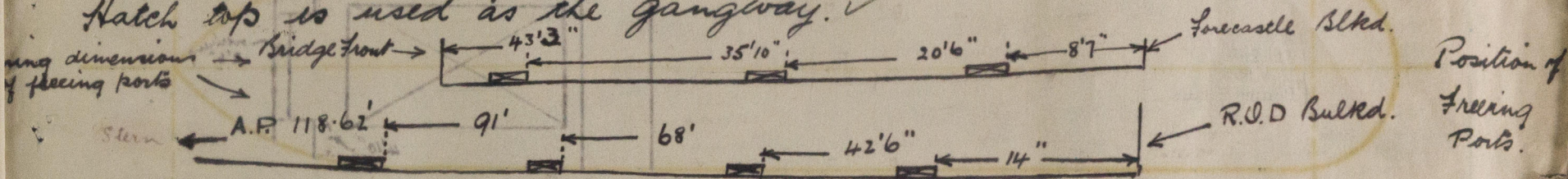
Harpy

Particulars of Scuppers and Sanitary Discharge Pipes: On forewell deck, 3 scuppers each side 5' x 3" in gunwale bar. On R.Q.D., 6 scuppers each side 6' x 3" in gunwale bar. There are 2 Sanitary discharges 4" dia with non return valve at ship's side, leading from enclosed accommodation on R.Q.D.

Particulars of Side Scuttles: All side scuttles to crew spaces in forecastle and bridge, provided with permanent, hinged deadlights. All scuttles are of substantial construction.

Particulars of Guard Rails: Guard rails on forecastle 3'3" high with 2 rods and stanchions 5' apart. Bulwarks on bridge deck 2'9" high, efficiently constructed and supported. Bulwarks on foreboard deck 4ft high, efficiently constructed and supported. Bulwarks on R.Q. Deck 3'3" high, efficiently constructed and supported.

Particulars of Gangways, Lifelines, etc.: From Bridge to Forecastle: 1 row of stanchions fitted along port-side-hatch-craming-stiffeners (permanent sockets). Stanchions are 4 ft high with single manilla rope made fast at each end to ladder rail: stanchions 5'6" apart. Hatch top is used as the gangway.



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 R.Q.D.	118'62"	3'3"	2'9" x 1'10"	5 4	25.2 sq ft 20.2 sq ft	23.75
Forward Well	43'3"	4'	3' x 2'	3	18 sq ft	11.00

State position of each freeing port (F. and A. position and height above deck edge) { After Well: R.Q.D. 9" above deck edge. Forward Well: 10" above deck edge. } See sketch above.

State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: Fitted with 3x1" dia bars (long) evenly spaced.

Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

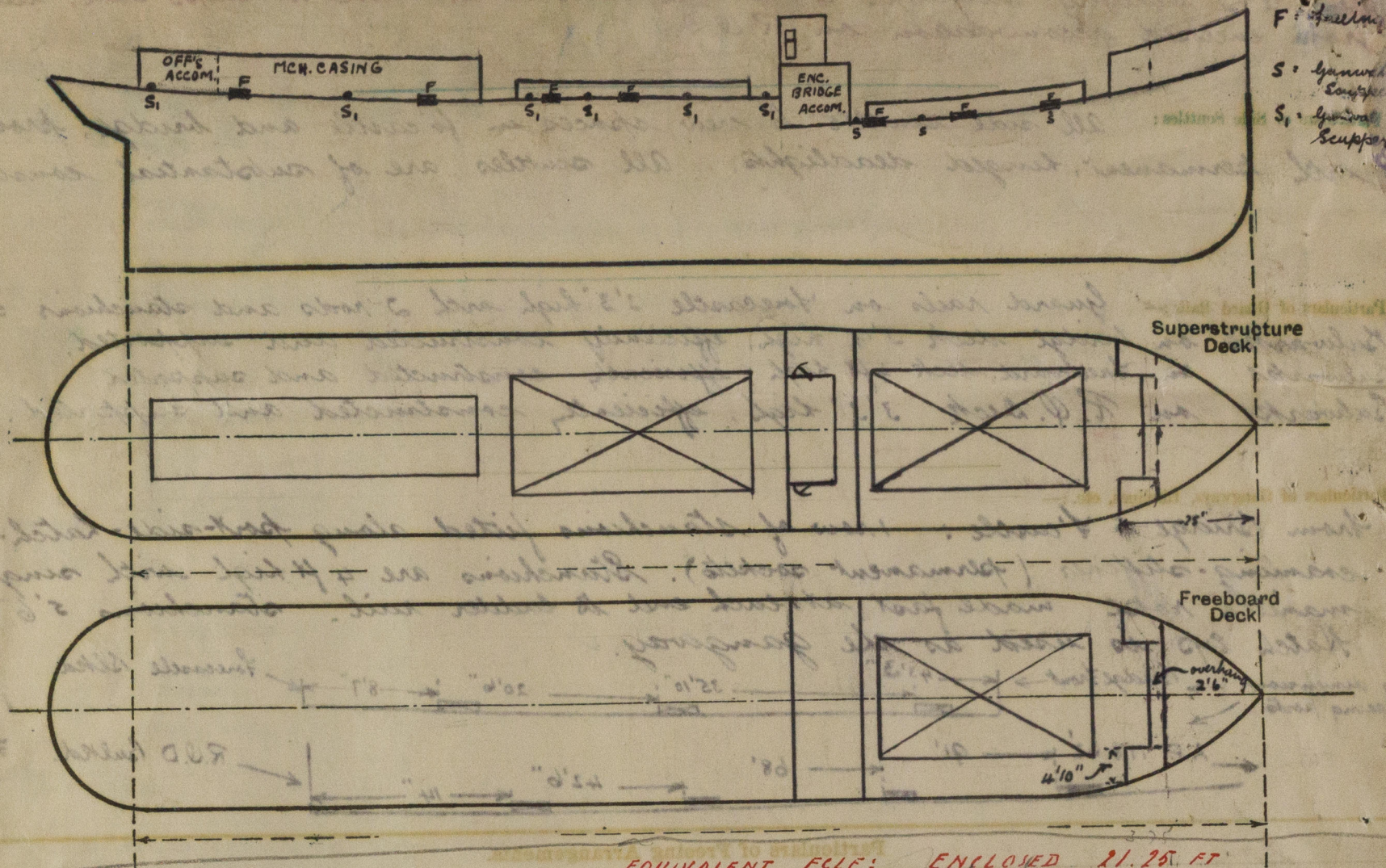
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	none							
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	.35	.35				none	none	10'2"
Bridge, Forward Bulkhead								
Forecastle Bulkhead	.35	.35	3x3"x3"	24"	none	2 doors 4'7"x2'	19"	6'10 1/2"
Trunk, Aft	none		none	none	none	2 " 4'x2'	19"	
Trunk, Forward	none							
Exposed Machinery Casings on Board or Raised Quarter Decks	.3	.3	none	none	none	6 doors 4'x2'	21"	
Exposed Machinery Casings on Superstructure Decks	.3	.3	3x3"x3"	30"	none	1 " 4'3"x2'	19"	6'9"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	none				brackets at top	2 " 4'x2'	21"	
Deckhouses on Flush Deck Ships	none							

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

Poop Bulkhead	none
Raised Quarter Deck Bulkhead	no openings
Bridge, After Bulkhead	no openings
Bridge, Forward Bulkhead	no openings
Forecastle Bulkhead	2 Wood doors (dark) 1 1/2" thick. Opening both sides with spring locks.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	4 Steel hinged doors - spring locks - opening both sides.
Exposed Machinery Casings on Superstructure Decks	1 Wood door to Engineer's accommodation - spring lock - opening both sides. 1 Steel hinged door to bunker (PS) opening 1 side only - screwed clips on outside. 2 Steel hinged doors (in halves) - spring locks - opening both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	
Deckhouses on Flush Deck Ships	none



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:



EQUIVALENT FCL: ENCLOSED 21.25 FT  
SIDE HOUSES  $\frac{3.75 \times 9.67}{27} = 1.34$   
22.59

LENGTH INCL. OVERHANG 23.75  
EQUIV. ENCLOSED 22.59  
2 1.16  
.58  
22.59  
TOTAL 23.14

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

honal.

no alterations for freeboard have yet been carried out.

Builder's name and yard number Gosle S. B. Co. Ltd.

Names of sister ships ✓

Owners J. Hargreaves & Son (Leeds) Ltd.

Fee £ 8 : 0 : 0

Received by me

Less 15% £ 6.16.0 not yet applied for



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