

Newcastle-on-Tyne
no 92728
16 JUL 1935
Index. No. 32310.
(For London Office only.)
Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.
Amended report on account of increased length.

Computation of Freeboard for ~~Steamer~~ *Sailing Ship* Tanker
having *Pop. Bridge - Newcastle Docks.* Port of Survey *Newcastle-on-Tyne.*

(Type of Superstructures.)

Date of Survey *10th July 1935 & subsequent date.*

Name of Surveyor *A. Almon.*

Particulars of Classification *+100.A-1*
carrying petroleum in bulk.

Ship's Name <i>PLYMFIELD</i>	Nationality and Port of Registry <i>British Newcastle.</i>	Official Number <i>149473</i>	Gross Tonnage <i>7365.24</i>	Date of Build <i>1928-7</i>
Moulded Dimensions: Length <i>449.91</i> / Breadth <i>57.50</i> / Depth <i>32.79</i>				
Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>16250</i> tons				
Coefficient of fineness for use with Tables <i>.489</i>				

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <i>32.79</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>(32.85 - 29.99) 3 = + 8.58</i>	Moulded Breadth (B) <i>57.50</i>
Stringer plate <i>.06</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} =$ <i>13.80</i>
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <i>15.00</i>
Depth for Freeboard (D) = <i>32.85</i>		Difference <i>1.2</i>
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) =$ <i>$\frac{1.2}{4} \times \frac{.6142}{.44} = -.18$</i>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed	<i>89.08</i>	<i>89.08</i>	<i>7.5'</i>		<i>89.08</i>	Standard Height of Superstructure <i>7.5'</i>
„ overhang						„ „ R.Q.D. <i>✓</i>
R.Q.D. enclosed						Deduction for complete superstructure <i>42.00</i>
„ overhang						Percentage covered $\frac{S}{L} =$ <i>39.64</i>
Bridge enclosed	<i>35.50</i>	<i>35.50</i>	<i>8.0'</i>		<i>35.50</i>	„ „ $\frac{S_1}{L} =$ <i>38.90</i>
„ overhang aft	<i>4.25</i>	<i>3.19</i>			<i>3.19</i>	„ „ $\frac{E}{L} =$ <i>38.90</i>
„ overhang forward	<i>4.25</i>	<i>2.12</i>			<i>2.12</i>	Percentage from Table, <i>Line A.</i>
„ enclosed <i>44.25</i>	<i>44.25</i>	<i>45.12</i>	<i>7.5'</i>		<i>45.12</i>	(corrected for absence of forecastle (if required))
„ overhang		<i>43.64</i>			<i>43.64</i>	Percentage from Table, <i>Line B. Tanker</i> = <i>29.90%</i>
Trunk aft						(corrected for absence of forecastle (if required))
„ forward						Interpolation for bridge less than 2L (if required)
Tonnage opening aft		<i>173.53</i>			<i>173.53</i>	Deduction = <i>42 x 29.9 = -12.56</i>
„ „ forward		<i>45.01</i>			<i>45.01</i>	
Total	<i>178.33</i>	<i>173.53</i>			<i>173.53</i>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P.	<i>54.99</i>	1		<i>54.99</i>	<i>60.00</i>	<i>60.00</i>	1		<i>60.00</i>	Mean actual sheer aft =
$\frac{1}{2}$ L from A.P.	<i>24.47</i>	4		<i>97.88</i>	<i>24.00</i>	<i>24.00</i>	4		<i>96.00</i>	Mean standard sheer aft =
$\frac{3}{8}$ L „	<i>6.05</i>	2		<i>12.10</i>	<i>4.50</i>	<i>4.50</i>	2		<i>9.00</i>	
Amidships		4					4			Mean actual sheer forward =
$\frac{3}{8}$ L from F.P.	<i>12.10</i>	2		<i>24.20</i>	<i>10.00</i>	<i>10.00</i>	2		<i>20.00</i>	Mean standard sheer forward =
$\frac{1}{2}$ L „	<i>48.94</i>	4		<i>195.76</i>	<i>46.50</i>	<i>46.50</i>	4		<i>186.00</i>	
F.P.	<i>109.98</i>	1		<i>109.98</i>	<i>114.00</i>	<i>114.00</i>	1		<i>114.00</i>	Length of enclosed superstructure forward of amidships =
Total	<i>494.91</i>								<i>485.00</i>	„ „ aft of „ =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ *$\frac{9.91}{18} \times .5518 = +.30$*

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 <i>$\frac{.68+789}{1.36} = \frac{1.469}{1.36}$</i>
Depth to Freeboard Deck = <i>32.85</i>	$\Delta =$ <i>154.56</i>	Depth Correction <i>8.58</i>
Summer freeboard = <i>6.46</i>	Tons per inch immersion at summer load water line	Deduction for superstructures <i>12.56</i>
Moulded draught (d) = <i>26.39</i>	T = <i>52.95</i>	Sheer correction <i>.30</i>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <i>6.59</i>	Deduction = $\frac{\Delta}{40T}$ inches = <i>7.29</i>	Round of Beam correction <i>.18</i>
Addition for Winter North Atlantic Freeboard (if required) = <i>4.499 = 4.5</i>	<i>7.29</i>	Correction for Thickness of Deck amidships <i>.60</i>
		Other corrections, scantlings, etc. <i>.88</i>
		Summer Freeboard = <i>44.2338</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>13.4</i>	Tropical Fresh Water Freeboard	<i>5' 3.4</i>	<i>6' 5.2</i>
Fresh Water Line „ „	<i>7.4</i>	Fresh Water „ „	<i>5' 10.4</i>	<i>5' 10.4</i>
Tropical Line „ „	<i>6.2</i>	Tropical „ „	<i>5' 10.4</i>	<i>5' 11</i>
Winter Line below „ „	<i>6.2</i>	Winter „ „	<i>6' 4.4</i>	<i>7' 0</i>
Winter North Atlantic Line „ „	<i>11</i>	Winter North Atlantic „ „	<i>7' 4.2</i>	<i>7' 4.2</i>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

[illegible]

Particulars of fiddley, funnel and ventilator coamings:—

Particulars of fiddley, funnel and ventilator coamings:—
 Funnels & fiddley ventilators in efficient condition. Large skylight of steel strongly constructed. ✓

Particulars of Flush Bunker Scuttles:—

None. ✓

Particulars of Companionways:—

Particulars of Companionways:—

1 under S.W. entrance	to lower Wagh place. opening in Head 8' 1" x 4' 3". Steel door 5' 3" x 2' 0" x 14" Lill. operated both sides.
1 " "	" Pump Room - - - - - 1' 11" x 4' 0" - - - 5' 4" x 2' 0" x 13" - - - " " "
1 " "	" " amid ship. Steel door in bulkhead 5' 0" x 2' 6" x 18" Lill. Hinged. operates both sides // Dog Handle.
1 off of Bridge	" Bulkhead door. opening in pump room 8' 0" x 6' 0". Steel door 5' 4" x 2' 0" x 10" Lill. operates both sides?
1 " " galley & prop	" Bulkhead door. opening in pump room 8' 0" x 6' 0". Steel door 5' 4" x 2' 0" x 10" Lill. operates both sides?

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

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

Pile No. 11 @ 6' dia = 3'0" x 2'6" li low. ✓ 2 @ 6' S.H. = 8' high L. W.L.s; 2 @ 15' dia = 3'0" x 2'6" L. Fore Hold; 1 @ 12' dia = 3'0" x 2'6" L. Pump Rm.

Bridge on 4 @ 6' dia = 12' x 2'6" L. Bridge T. Co. ✓

Deck on 2 @ 6' dia G.W. = 8' high L. long. Work place 1 W.L.; 1 @ 6' dia = 12' x 2'6" L. access; 1 @ 6' dia = 12' x 2'6" L. Dynamometer Rm. 1 @ 6' dia = 12' x 2'6" L. access?

1 @ 6' dia (head) = 8' high L. steering plat; 4 @ 6' dia = 12' x 2'6" L. access.

Falstern on 1 @ 12' dia 8'0" x 3'6" L. forward pump room; 2 @ 15' dia = 11'3" high 7'6" L. midship pump room efficiently stowed L. house. 2 @ 15' dia a L. side.

8 ft. from bottom 9'0" high. All work constructed as per rules & working done with wood planks & canvas covers. ✓

and mixed quarter or superstructure decks :-

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

[illegible]

Particulars of Gangway Cargo and Coaling Ports:—

Adms. ✓

Particulars of Scuppers and Sanitary Discharge Pipes:—

Scuppers in Bulwark Deck in wells of Litter Type.
All Sanitary Discharges fitted with non return valves.

Particulars of Side Scuttles:—

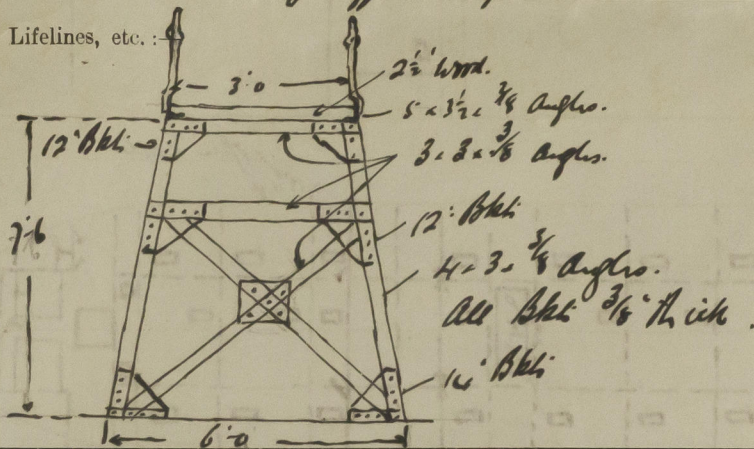
All side scuttles below Bulwark Deck in Forward Turret Deck fitted with hinged dead lights.
Side scuttles in Ttle, Bridge & poop turret Deck fitted with hinged dead lights.
All scuttles of substantial construction.

Particulars of Guard Rails:—

Bulwark Rail stanchions in Ttle 3'6" high with 3 rods & stanchions spaced 4'6" apart.
Bridge 3'6" 3 4'0"
Poop 3'6" 3 4'3"

Steel Bulwarks in Ttle 3'6" high efficiently constructed & with front open rails with 3 rods & stanchions 4'6" apart (See sketch).

Particulars of Gangways, Lifelines, etc.:



Stanchions 3'3" high & 4'0" apart. 2 rods
Gangway supports. Forw. 6'0" to 10'0"
Aft. 7'0" to 9'3"

Particulars of Freeing Arrangements.

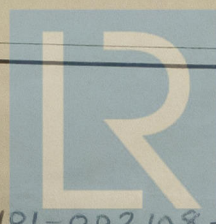
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well ...	189.58	3'6"	4'0" x 1'9" 1'3" x 1'3" 3'10" x 1'9"	11	35.0 } = 110.26 ft ² 1.86 } + 17' open 73.70 } rail.	136 ft ² + 17' open rail
Forward Well ...	82.00	3'6"	4'0" x 1'9" 1'3" x 1'3" 3'10" x 1'9"	3 1 27	21.00 } 42.66 ft ² 1.86 } + 17' open 20.14 } rail.	42.66 ft ² + 17' open rail
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:— 2 rods to each wash port. 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 ...	1/2"	7/16"	10-12 x 3/4" each side down 9-12 x 3/4"	2'6"	Approx. 1/2" high bottom	5'0" x 3'0" (short) only	18"	7'6"
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...	1/4"	1/2"	8 x 3 x 3/4" L	2'10"	high bottom	5'0" x 3'0" (short)	18"	8'0"
Bridge, Forward Bulkhead ...	1/2"	7/16"	9-12 x 3/4" x 3'0"	2'7"	high bottom	5'0" x 3'0" (short)	19"	8'0"
Forecastle Bulkhead ...	✓	1/4"	3' plating	2'9"	✓	(See sketch)		7'6"
Trunk, Aft ...				✓				
Trunk, Forward ...				✓				
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...				✓				
Exposed Machinery Casings on Super-structure Decks ...	5/16"	7/16"	3-3 x 5/16"	2'6"	1/2" high top	10'0" x 2'2" 20'5" x 2'0" 20'5" x 2'10"	6" 10" 10"	7'6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...		5/16"	3-3 x 5/16"	2'6"	✓	(See sketch)		7'6"
Deckhouses on Flush Deck Ships ...				✓				

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

Poop Bulkhead ...	2" steel plate secured with hook bolts passing through door.
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead ...	Fitted with 3" W.P. shifting board in riveted channels full height.
Bridge, Forward Bulkhead ...	2" steel hinged doors stiffened with 3/4" angles & secured with dog handles 17'6" to 23' apart. Open alleyway on center line.
Forecastle Bulkhead ...	
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓
Exposed Machinery Casings on Super-structure Decks ...	Steel doors manipulated both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	Steel doors manipulated both sides.
Deckhouses on Flush Deck Ships ...	✓

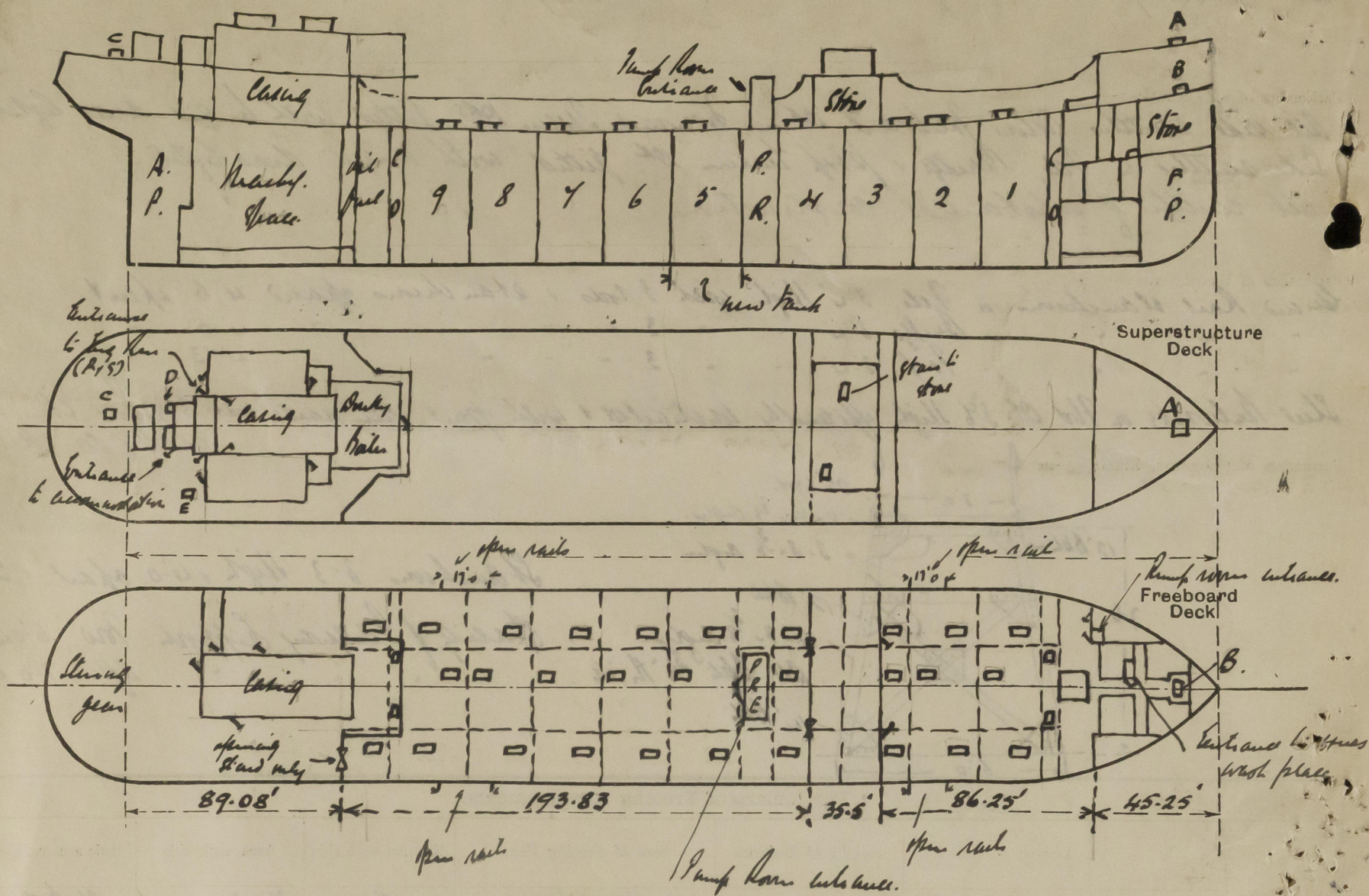


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Clydefield.

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:—



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

This vessel is under Survey in Dry Dock for Lengthening. The vessel has been out in way of the highest nos oil tank and a portion 30'6" in length built in at this point. The London Correspondence is. A. A. Thibb. There is a slight drop in sheer forward of midship. The lowest point, which is 2" lower than midships, is placed 15'3" forward of midships. Extance Δ + T.P.I @ 26'0" W.L. = 15200 tons + 52.85 tons respectively. " " " " 27'0" " = 15830 " + 53.10 " The existing report from C.II is returned herewith.

Builder's name and yard number D. W. Henderson & Co. Ltd. 808 pt.
Names of sister ships
Owners Hunting S.S. Co. Ltd. Hunting & Sons Ltd (Mggs).
Fee £ 20/- charged later Received by me



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