

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Index. No. **24695**  
(For London Office only.)

28 SEP 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker  
having **RAISED QUARTER DECK, BRIDGE ON R.Q.D., & FORECASTLE**

Port of Survey **NEWCASTLE**

(Type of Superstructures.)

Date of Survey **26<sup>th</sup> SEPT. 1932.**

Ship's Name

Nationality and Port of Registry  
**BRITISH  
NEWCASTLE**

Official Number  
**133583**

Gross Tonnage  
**2677**

Date of Build  
**1916**

**HORDEN.**

Name of Surveyor **J. Young**

Moulded Dimensions: Length **321.0** Breadth **43.0** Depth **21'-9"**

Moulded displacement at moulded draught = 85 per cent. of moulded depth **5550** tons

Coefficient of fineness for use with Tables **.761**

Particulars of Classification **+ 100 A.I.**

**S.S. No. 11, 38**

Depth for Freeboard (D)

Moulded depth ... **21'-9"**

Stringer plate ... **.05**

Sheathing on exposed deck

$T \left( \frac{L-S}{L} \right) =$

Depth for Freeboard (D) = **21'-8"**

Depth correction

(a) Where D is greater than Table depth

(D - Table depth) R =  
**(21'-8" - 21'-4") 2.469 = + 0.99"**

(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) **43'-0"**

Standard Round of Beam =  $\frac{B \times 12}{50} =$  **10'-32"**

Ship's Round of Beam = **10'-3"**

Difference **.43"**

Restricted to ☒

Correction =  $\frac{\text{Diff}^{\circ}}{4} \times \left( 1 - \frac{S_1}{L} \right) =$  **.43**

### 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 ...	<b>122'-7"</b>	<b>122.58</b>	<b>4'-3"</b>	<b>x .425</b>	<b>105.34</b>
" overhang ...					
Bridge enclosed on R.Q.D. ...	<b>63'-0"</b>	<b>63.00</b>	<b>7'-0"</b>		<b>63.00</b>
" overhang aft ...					
" overhang forward ...	<b>26.20</b>				
Fore enclosed ...	<b>32'-0"</b>	<b>32.00</b>	<b>7'-0"</b>		<b>32.00</b>
" overhang ...	<b>5.80</b>				
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	<b>217.58</b>	<b>217.58</b>			<b>200.34</b>

Standard Height of Superstructure **6.71**

" " R.Q.D. **4.946**

Deduction for complete superstructure **36.73**

Percentage covered  $\frac{S}{L} =$  **67.78%**

" "  $\frac{S_1}{L} =$  **67.76%**

" "  $\frac{E}{L} =$  **62.41%**

Percentage from Table, Line A.

(corrected for absence of forecastle (if required)) **50.10%**

Percentage from Table, Line B.

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = **36.73 x .501 = - 18.40"**

### SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<b>42.10</b>	<b>1</b>		<b>42.10</b>	<b>30</b>	<b>30.00</b>	<b>1</b>		<b>30.00</b>
1/4 L from A.P. ...	<b>18.74</b>	<b>4</b>		<b>74.96</b>	<b>13</b>	<b>13.23</b>	<b>4</b>		<b>52.92</b>
1/4 L " ...	<b>4.63</b>	<b>2</b>		<b>9.26</b>	<b>3</b>	<b>3.30</b>	<b>2</b>		<b>6.60</b>
Amidships ...		<b>4</b>			<b>0</b>		<b>4</b>		
1/4 L from F.P. ...	<b>9.26</b>	<b>2</b>		<b>18.52</b>	<b>9.5</b>	<b>9.47</b>	<b>2</b>		<b>18.88</b>
1/4 L " ...	<b>37.47</b>	<b>4</b>		<b>149.88</b>	<b>39</b>	<b>37.91</b>	<b>4</b>		<b>151.36</b>
F.P. ...	<b>84.20</b>	<b>1</b>		<b>84.20</b>	<b>87</b>	<b>87.00</b>	<b>1</b>		<b>86.54</b>
Total ...				<b>378.92</b>					<b>346.30</b>

Mean actual sheer aft = **Deficient (.709).**

Mean standard sheer aft =

Mean actual sheer forward = **Excess.**

Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = **.077**

" " aft of " = **.500**

Sheers aft.

Standard Actual

42.10 1 42.10 30.00 1 30.00

18.74 3 56.22 13.23 3 39.69

4.63 2 9.26 3.30 2 6.60

112.21 79.59

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

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 = **26.05** Ft.

Summer freeboard = **7.15**

Moulded draught (d) = **18.90**

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = **4.725**

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

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$

Tons per inch immersion at summer load water line

$T =$

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

$=$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{68 + .761}{1.36} = \frac{1.441}{1.36}$

Depth Correction ... **0.99**

Deduction for superstructures ... **- 18.40**

Sheer correction ... **.75**

Round of Beam correction ... **.03**

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc. ... **51.00**

**52.74**

**18.43**

**+ 34.31**

Summer Freeboard = **85.86**

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck, Line, Wood, Steel, Deck: **7'-1 3/4"**

Tropical Fresh Water Line above Centre of Disc ...

Fresh Water Line " " ...

Tropical Line " " ...

Winter Line below " " ... **4 3/4"**

Winter North Atlantic Line " " ...

Tropical Fresh Water Freeboard ...

Fresh Water " " ...

Tropical " " ...

Winter " " ... **7'-6 1/2"**

Winter North Atlantic " " ...

1906 Freeboard





# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	N°1	N°2	N°3	N°4	FORWARD			U. DK.	
					BUNKER HATCH	SIDE BUNKER	BUNKER		
Dimensions of Hatchway	42'6" x 29'6"	42'9" x 29'6"	38'3" x 29'6"	39'6" x 29'6"	3'9" x 13'2"	6'9" x 2'5"	2'5" x 1'9"		
COAMINGS	Height above Deck	36"	36"	32"	32"	9" B.A.	31"	9" B.A.	
	Thickness	50"	50"	50"	50"	ON CASING	44"		
	Stiffeners	8" x 3" B.A.	8" x 3" B.A.	8" x 3" B.A.	8" x 3" B.A.	2'8"			
	Brackets, Stays	8" x 3" B.A.	8" x 3" B.A.	8" x 3" B.A.	8" x 3" B.A.	ABOVE B. DK.			
HATCH BEAMS	Number	4	4	3	3	ALSO			
	Spacing	8'6"	8'6"	9'7"	9'10"	4'4" x 16'3"			
	Scantling and Sketch	28 1/2" x 24 1/2"	ALL SIMILAR TO N°1			9" B.A.			
	Bearing Surface	5 1/2"				ON CASING			
FORE AND AFTERS	Number	5	5	5	5	ABOVE B. DK.			
	Spacing	4'11"	4'11"	4'11"	4'11"				
	Unsupported Lengths	8'6"	8'6"	9'7"	9'10"				
	Scantling and Sketch	10" x 8"	10" x 8"	10 1/2" x 8"	10 1/2" x 8"				
HATCH COVERS	Material	W.P.	W.P.	W.P.	W.P.				
	Thickness	3"	3"	3"	3"				
	How fitted	ATH.	ATH.	ATH.	ATH.				
	Bearing Surface	2"	2"	2"	2"				
Spacing of Cleats	23"	23"	23"	23"	24"	23"	14"		
Number of Tarpaulins	2	2	2	2	2	2	2		

Particulars of fiddle, funnel and ventilator coamings:—

Fiddle gratings protected by hinged steel covers.  
Funnel & Vents in efficient condition (Replaced new funnel which is being fitted now)  
E.R. Skylight well constructed of steel.

Particulars of Flush Bunker Scuttles:—

NONE

Particulars of Companionways:—

NONE

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

Forecastle to Crow 6" diam 12" high.  
U.D. & W. 1 Hold 15" x 36" (well stayed)  
W. 2 " 15" x 30" (well stayed)  
Bridge Dk & Accom 6" x 12 1/2" " (well stayed)  
R.Q.D. & W. 3 15" x 36" (well stayed)  
" W. 4 15" x 36" (well stayed)  
Vents are well constructed to Rule requirements.  
Wood Plugs and Canvas Covers are on board.

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

Forecastle & F.P. 2" diam. 7 1/2" high.  
U.D. & D.B. tank 2" x 30" "  
R.Q.D. & " 2" x 30" "  
" to A.P. 2 1/4" x 6'3" (well stayed & of house)  
Efficient means of closing provided for all air pipes

Particulars of Gangway Cargo and Coaling Ports:—

NONE

Particulars of Scuppers and Sanitary Discharge Pipes:—

Upper Dk & R.Q.Dk. scuppers are through gunwale bar.  
Bridge Dk scuppers are bent pipe thro. deck and shell.  
Sanitary discharges are of iron pipe fitted with storm valves.

Particulars of Side Scuttles:—

In crew spaces. 8" diam all fitted with hinged iron deadlights.

Particulars of Guard Rails:—

Forecastle 3'0" high, Stanchions 4'0" apart. 2 Rails.  
Fore Well Bulwark 5'4" high. Stays 2" diam. 5'10" apart Rail 6" x 3" B.A.  
Bridge " 3'0" " 2" " 4'9" to 6'0" " 5" x 2 1/2" B.A.  
R.Q. Dk " 3'6" " 2" " 6'1" " 6" x 3" B.A.

Particulars of Gangways, Lifelines, etc.:—

None. X Inutile provision made for rigging lifelines which are available in any part of the ship which may have to be used by the crew in the regular working of the ship

Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
RAISED QUARTER DK	122'7"	3'6"	6'3" x 9"	2	24'65	24.5 #
Forward Well	103'5"	5'4"	1 @ 2'6" x 1'6" 4 @ 3'6" x 1'9"	5	28.2 #	20.7 #

State position of each freeing port ... After Well:— FROM BRIDGE. 13'0", 38'0", 61'6", 79'6"  
(F. and A. position and height above deck edge) Forward Well: 5'0", 11'3", 29'6", 63'6", 91'0"  
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—  
HINGED SHUTTERS

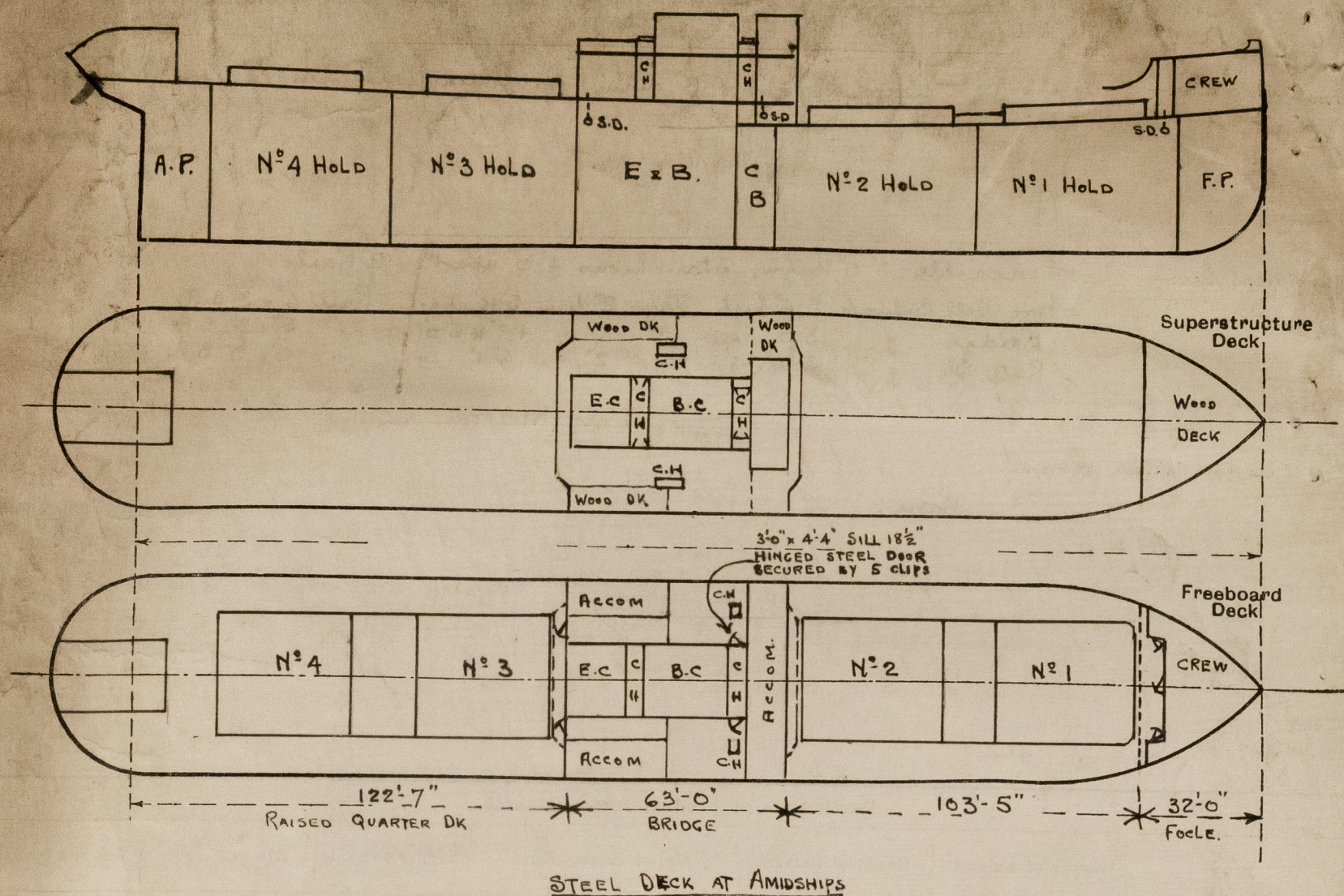
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead								
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	30	30	3" x 3" x 30	2'6"	NONE	2'2" x 4'3"	18"	7'0"
Bridge, Forward Bulkhead	45	40	8" x 3 1/2" B.A.	2'6"	BKTS T.B.	NONE	✓	11'3"
Forecastle Bulkhead	30	30	2 1/2" x 2 1/2" x 30	TO SUIT BHD'S	NONE	3'1" x 5'1"	18"	7'0"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	40	35	3" x 3" x 35	2'6"	NONE	2'2" x 4'4"	19"	7'0"
Exposed Machinery Casings on Superstructure Decks	40	35	3" x 3" x 35	2'6"	BKTS TOP	1'10" x 4'6"	16"	7'2"
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	
Bridge, After Bulkhead	Hinged Wood door 1 1/4" Solid. Operated both sides.
Bridge, Forward Bulkhead	✓
Forecastle Bulkhead	Hinged Steel door Operated both sides
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	Hinged Steel door " " "
Exposed Machinery Casings on Superstructure Decks	Hinged Steel door " " "
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	
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:—

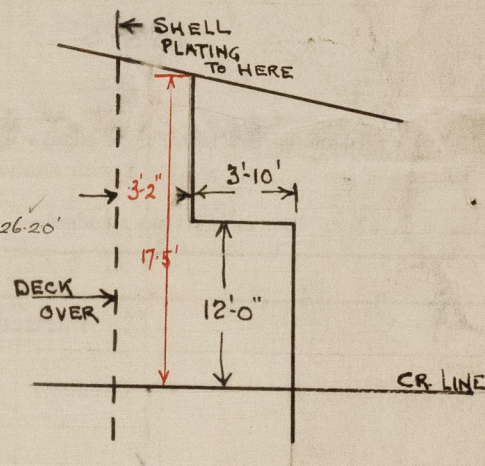


State any special features in the construction of the ship:—

VESSEL WAS SURVEYED IN DRY DOCK  
WHILE IN FOR DAMAGE SURVEY.

$$\text{Forecastle} = 25' + \frac{1.83 \times 5.5}{17.5} = 26.20'$$

$$\text{Overhang} = 5.80'$$



#### FROM BUILDERS

DRAFT.	Δ	T.P.I.
19-0	5755	28.6
20-0	6095	28.8
19-2	5810	28.6

Builder's name and yard number WOOD SKINNER & CO. LTD NEWCASTLE ON TYNE.

Names of sister ships

Owners TYNEDALE SHIPPING CO. (KIRSOP, MARSHALL & CO.)

Fee £ 11 : 1 : 0 Received by me



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