

Rpt. C.11.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having POOP AND FORECASTLE

(Type of Superstructures.)

Ship's Name ENGINEER	Nationality and Port of Registry BRITISH NEWCASTLE	Official Number 145451	Gross Tonnage 317	Date of Build 1915/10
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Port of Survey Newcastle-on-Tyne
Date of Survey 10th Feb. 1933
Name of Surveyor J. B. Crooks
Particulars of Classification +100 A1
55 SW No 3-229

Moulded Dimensions: Length 121.00 Breadth 22.25 Depth 12.00
Moulded displacement at moulded draught = 85 per cent. of moulded depth 621 tons
Coefficient of fineness for use with Tables .791

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>12.00</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(12.00 - 8.07) . 931 = + 3.69</u>	Moulded Breadth (B) <u>22.25</u> Standard Round of Beam = $\frac{B \times 12}{50} = \frac{5.34}{}$ Ship's Round of Beam = <u>6"</u> Difference <u>.66</u>
Stringer plate <u>.03</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Restricted to Correction = $\frac{\text{Diff}^a}{4} \times (1 - \frac{S_1}{L}) = \frac{.66}{4} (1 - \frac{39.66}{100}) = \frac{.66}{4} \times .6034 = .10$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	
Depth for Freeboard (D) = <u>12.03</u>		

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	<u>31.75</u>	<u>31.75</u>	<u>8.3</u>	-	<u>31.75</u>
" overhang	<u>4.00</u>	<u>2.00</u>			<u>2.00</u>
R.Q.D. enclosed	✓				
" overhang					
Bridge enclosed	✓				
" overhang aft					
" overhang forward					
F'cle enclosed	<u>14.24</u>	<u>14.24</u>	<u>7.0</u>		<u>14.24</u>
" overhang	<u>3.50</u>				
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	<u>49.99</u>	<u>47.99</u>			<u>47.99</u>

Standard Height of Superstructure 6'
" " R.Q.D. ✓
Deduction for complete superstructure 18.1
Percentage covered $\frac{S}{L} = \frac{41.31}{100} = 41.31$
" " $\frac{S_1}{L} = \frac{39.66}{100} = 39.66$
" " $\frac{E}{L} = \frac{39.66}{100} = 39.66$
Percentage from Table, Line A. 23.21
(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 = 18.1 x 23.21 = 4.20

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<u>22.10</u>	1		<u>22.10</u>	<u>12.50</u>	<u>12.50</u>	1		<u>12.50</u>
$\frac{1}{8}$ L from A.P.	<u>9.83</u>	4		<u>39.32</u>	<u>4.75</u>	<u>4.75</u>	4		<u>19.00</u>
$\frac{2}{8}$ L "	<u>2.43</u>	2		<u>4.86</u>	<u>1.20</u>	<u>1.20</u>	2		<u>2.40</u>
Amidships	✓	4					4		
$\frac{3}{8}$ L from F.P.	<u>4.86</u>	2		<u>9.72</u>	<u>3.50</u>	<u>3.50</u>	2		<u>7.00</u>
$\frac{4}{8}$ L "	<u>19.67</u>	4		<u>78.68</u>	<u>14.25</u>	<u>14.25</u>	4		<u>57.00</u>
F.P.	<u>44.20</u>	1		<u>44.20</u>	<u>30.50</u>	<u>30.50</u>	1		<u>30.50</u>
Total				<u>198.88</u>					<u>128.40</u>

Mean actual sheer aft = Deficient
Mean standard sheer aft =

Mean actual sheer forward = Deficient
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =
" " aft of " =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{70.48}{18} \left(\frac{.75 - .2065}{2} \right) = +2.13$

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.
Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 12.03
Summer freeboard = 1.21
Moulded draught (d) = 10.82

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $\frac{2.71}{4} = 2\frac{3}{4}$
Addition for Winter North Atlantic Freeboard (if required) =

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
= $\frac{2\frac{3}{4}}{40}$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.791 + .650}{1.36} = \frac{1.441}{1.36}$

	+	-
Depth Correction	<u>3.69</u>	
Deduction for superstructures		<u>4.20</u>
Sheer correction	<u>2.13</u>	
Round of Beam correction		<u>.10</u>
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	<u>5.82</u>	<u>4.30</u>

Summer Freeboard = 14.61

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

Tropical Fresh Water Line above Centre of Disc	Tropical Fresh Water Freeboard
Fresh Water Line " "	Fresh Water " "
Tropical Line " "	Tropical " "
Winter Line below " "	Winter " "
Winter North Atlantic Line " "	Winter North Atlantic " "

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Particulars of fiddley, funnel and ventilator coamings:—

Particulars of Flush Bunker Scuttles:—

None. ✓

Particulars of Companionways:—

Companion on poop deck, leading to enclosed poop, of teak 1" thick.
Dimensions 2'4" x 2'1" x 3'2" high. Door of teak 1 1/2" thick, sill 5 1/2".
Door operated from both sides.

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

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

On Forecastle.	2 @ 5½" dia.	coaming	13" x .28	to Fcls.	with wood plugs & canvas covers
On Well	2 @ 11"	"	32" x .30	to Hold.	"
On Poop.	4 @ 6"	"	7" x .26	} to poop, with 5cm. down mushroom covers.	
	1 @ 6"	"	9" x .26		
	1 @ 6"	"	8"	Goose neck, with canvas cover.	

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

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

On Forecastle deck.	1 @ 2" dia. from F.P. flush with composition	
In well.	3 @ 2½" - " CQB. " " deck - fitted with seam plugs	
In Prop	1 @ 2" - " AP " " wood deck, fitted with wood plug.	

Some plugs provided for all ^{pipes} flush with deck

Particulars of Gangway Cargo and Coaling Ports :—

None.

Sanitary pipes in poop discharge overboard above freeboard deck, and are fitted with stem valves at ship's side. Crews etc. in forecabin side house discharges above freeboard deck. no valve.

Particulars of Side Scuttles :—

Scuttles:—

Side	scuttles in	forecastle	fitted with	hinged	deadlights.
-	-	poop	provided	"	portable "

Particulars of Guard Rails :—

rd Rails:— and poop.
On forecastle, 3'0" high, stanchions 4'0" apart. 2 rails

Particulars of Gangways, Lifelines, etc. :—

~~None. Crew berthed in poop & forecabin~~

Suitable provision is made for rigging lifebuoys available for use in any part of the ship which might 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
After Well						
Forward Well	72.75'	3' 4"	$\frac{24 \times 11.5}{24 \times 15}$ $\frac{3 \text{ ft}}{45 \times 15}$ $\frac{3 \text{ ft}}{2 \text{ ft}}$	5	10.8 f. 15	14.55 sq ft

State position of each freeing port } After Well :-
(F. and A. position and height above deck edge) } Forward Well :- 6', 11' 8", 22' 8", 25' 11", 48' 9" from poop bld. to AE port. 10" above deck

State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :- Angled steel shutters.

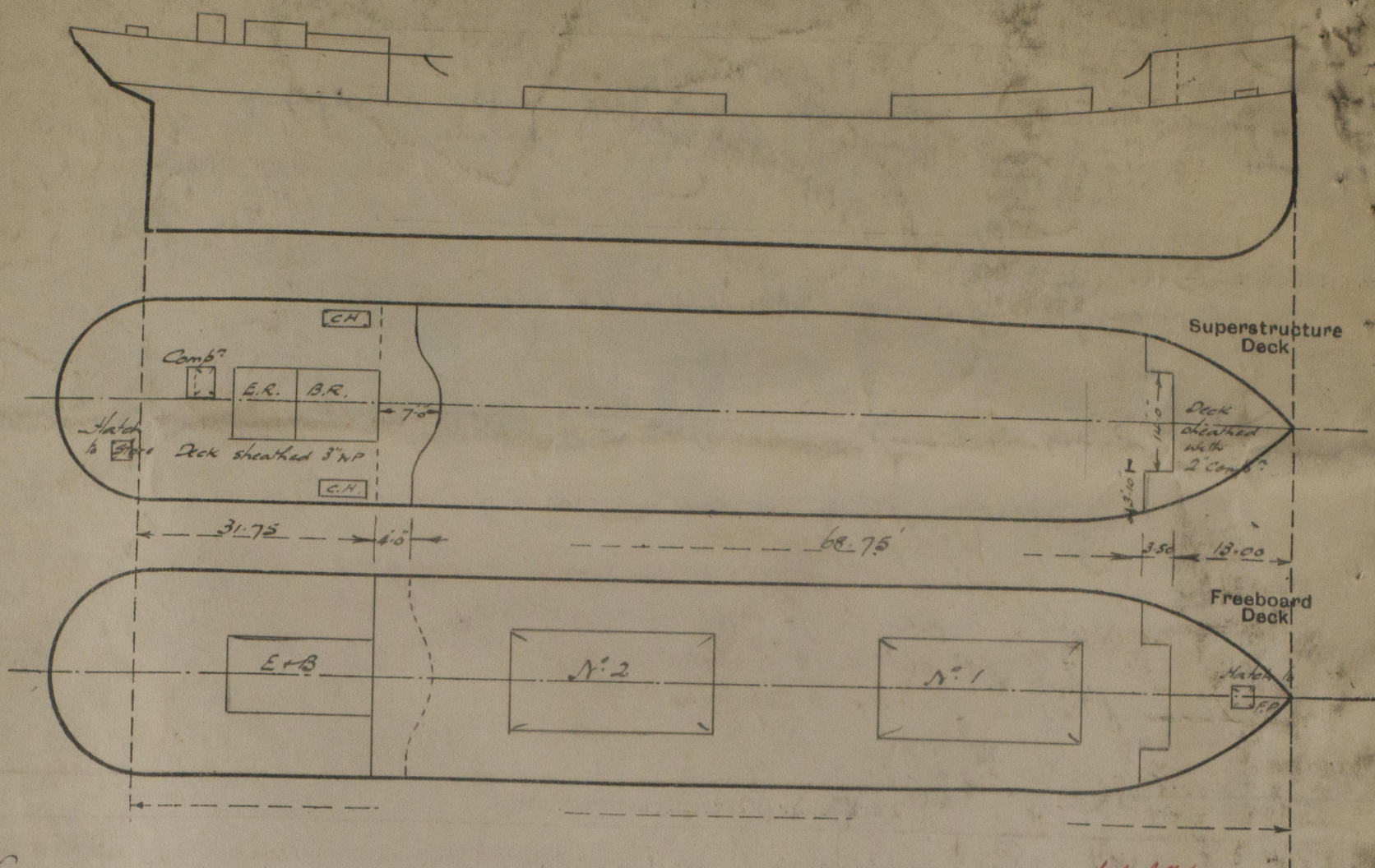
Additional area where sheer is less than standard.

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	✓ 36	✓ 30	5 x 3 x 30 in	27"	Bracketed top & bottom	2 @ 4'6" x 1'10"	18"	8'3"
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead	✓							
Bridge, Forward Bulkhead	✓							
Forecastle Bulkhead		28	Not assigned	21"	do	3 @ 4'6" x 1'11"	18"	7'0"
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓							
Exposed Machinery Casings on Super-structure Decks		28	3 x 3 x 32 1/2	33"	Bracketed at top	None	✓	17"
Machinery Casings within Superstruc-tures 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).

Particulars of Closing Appliances (Class I)			
Poop Bulkhead	...	...	✓
Raised Quarter Deck Bulkhead	...		✓
Bridge, After Bulkhead	...	...	✓
Bridge, Forward Bulkhead	...	...	✓
Forecastle Bulkhead	...	...	✓
Exposed Machinery Casings on Free-board or Raised Quarter Decks	...	...	✓
Exposed Machinery Casings on Super-structure Decks	...	...	✓
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:—



Vessel surveyed afloat for freeboard only.

for 18th
 $13.00 + \frac{3.5 \times 3.53}{10.63}$
 $13.00 + 1.25$
 $= 14.24$

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

Builder's name and yard number. *Aktieb. Lödöse Varf. Lödöse*

Names of sister ships

Owners *J. Steam Coasters Ltd.*

Fee £ *5* : *2* : *0* ✓ Received by me



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