

Rpt. C.11.

Index. No. 303 53
(For London Office only.)Lloyd's Register of Shipping
SURVEYS FOR FREEBOARD.

22 APR 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Forecastle & Raised Q. Decks.

Port of Survey Newcastle

(Type of Superstructures.)

Date of Survey 19th April, 1932.

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

"ANDELLE"

British
Sunderland

146229

1832

1922-1

Name of Surveyor P. D. Brondace

Moulded Dimensions: Length 259'-6" Breadth 37'-3" Depth 19'-8"
Moulded displacement at moulded draught = 85 per cent. of moulded depth 3590 tons
Coefficient of fineness for use with Tables .777

Particulars of Classification +100 A1

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	19.67	(a) Where D is greater than Table depth (D - Table depth) R =	(19.72 - 17.30) .996 +4.83	Moulded Breadth (B)	37.25
Stringer plate	.05	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$	8.94
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	-			Ship's Round of Beam	9.4
				Difference	.31
Depth for Freeboard (D) =	19.72	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	$\frac{.31}{4} (.2950) = -.02$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Roop enclosed					
" overhang					
R.Q.D. enclosed	154'-0"	154.00	4'-9"		154.00
" overhang	+ 2'-0"	1.00			1.00
Bridge enclosed					
" overhang aft					
" overhang forward	26'-5"	26.50	7'-6"		26.50
" enclosed	29'-6"	29.50			29.50
" overhang	3'-0"	1.50			1.50
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	185.50	183.00			183.00

Standard Height of Superstructure	6.09
" " R.Q.D.	4.125
Deduction for complete superstructure	31.95
Percentage covered $\frac{S}{L} =$.7148
" " $\frac{S_1}{L} =$.7050
" " $\frac{E}{L} =$.7050
Percentage from Table, Line A.	.6361
(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 = 31.95 + .6361 =	-20.32

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	35.95	1		35.95	36.00	36.00	1		36.00
$\frac{1}{2}$ L from A.P.	16.00	4		64.00	16.00	16.59	4		66.36
$\frac{3}{8}$ L	3.94	2		7.88	4.00	4.15	2		8.30
Amidships		4					4		
$\frac{3}{8}$ L from F.P.	7.89	2		15.78	9.25	9.28	2		18.56
$\frac{1}{2}$ L	32.00	4		128.00	37.25	37.13	4		148.62
F.P.	70.90	1		70.90	84.00	84.00	1		84.00
Total				323.51					381.52

Mean actual sheer aft = 4.48
Mean standard sheer aft = 4.48Mean actual sheer forward = 4.48
Mean standard sheer forward = 4.48Length of enclosed superstructure forward of amidships = .0935
aft of " = .5000Standard height of R.Q.D. = 4'-1.52"
actual = 4'-9"
7.48Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{58.01}{18} (.75 - .3574) = 1.27$ If limited on account of midship superstructure. 1.2754 - $\frac{14.93}{20.00} = -1.26$

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 19.72
Summer freeboard = 1.66
Moulded draught (d) = 18.06

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 4.52, 4 1/2

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

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 3940$

Tons per inch immersion at summer load water line

T = 19.7

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

= 5.00

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{777.68}{1.36} = 1.457$

	+	-
Depth Correction	4.83	
Deduction for superstructures		20.32
Sheer correction		1.26
Round of Beam correction		.02
Correction for Thickness of Deck amidships	57.00	
Other corrections, scantlings, etc.		

61.83 21.60 + 40.23

Summer Freeboard = 76.98

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

Tropical Fresh Water Line above Centre of Disc	9 1/2
Fresh Water Line	5
Tropical Line	4 1/2
Winter Line below	4 1/2
Winter North Atlantic Line	6 1/2

Tropical Fresh Water Freeboard	5'-7 1/2"
Fresh Water	6'-0"
Tropical	6'-0 1/2"
Winter	6'-9 1/2"
Winter North Atlantic	6'-11 1/2"

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MARKING FORM

RECEIVED 1 APR 1932

MARKING FORM

RECEIVED 10 APR 1932

MARKING FORM

RECEIVED 10 MAY 1932

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
		Upper Decks		Raised Q. Deck		Upper Decks		Casing	
Description of Hatchway		No 1.	No 2.	No 3.	No 4.	Fore Peak.	Chain Locker	Coal Hatch	
Dimensions of Hatchway		24'9" x 24'6"	38'6" x 24'10"	30'3" x 24'9"	24'6" x 24'8"	3'0" x 2'5"	2'0" x 2'6"	6'2" x 23'1"	
COAMINGS	Height above Deck	42"	42"	48"	48"	13"	13"	10' x 32' x 42"	
	Thickness	50"	50"	50"	50"	28"	28"	BA	
	Stiffeners	63 x 3 x 40 BA	63 x 3 x 40 BA	63 x 3 x 40 BA	63 x 3 x 40 BA	-	-	-	
	Brackets, Stays	72 x 38 BA	72 x 38 BA	72 x 38 BA	72 x 38 BA	-	-	-	
HATCH BEAMS	Number	4	7	5	4				
	Spacing	4' 11 1/2"	4' 9 1/2"	5' 0 1/2"	4' 11"				
	Scantling and Sketch	31' x 44"	31' x 44"	31' x 44"	31' x 44"				
	Bearing Surface	3 1/2" x 1 3/4"	3 1/2" x 1 3/4"	4 x 3 1/2" x 50"	4 x 3 1/2" x 50"				
FORE AND AFTERS	Number								
	Spacing								
	Unsupported Lengths								
	Scantling* and Sketch								
HATCH COVERS	Material	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.	
	Thickness	3"	3"	3"	3"	3"	3"	3"	
	How fitted	F.A.	F.A.	F.A.	F.A.	T.	T.	F.A.	
	Bearing Surface	3 1/2"	3 1/2"	3 1/4"	3 1/4"	2 1/2"	2 1/2"	2 3/4"	
Spacing of Cleats		24"	24"	24"	24"	20"	20"	23"	
Number of Tarpaulins		2 sets	2 shares						
<p>*Are wood fore and afters steel shod at all bearing surfaces? <i>Yes.</i></p> <p>Are battens and wedges efficient and in good condition? <i>Yes.</i></p> <p>Are tarpaulins in good condition and in accordance with rule requirements? <i>Yes.</i></p> <p>Are lashings provided in accordance with rule requirements? <i>Yes.</i></p>									

Particulars of fiddle, funnel and ventilator coamings:—

Fiddle gratings are fitted with hinged steel covers.
 L.R. skylight is steel.
 Fiddle, funnel vents good.

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:—

R.Q. Deck: entrance to aft accommodation in steel house with hinged teak door operating both sides. Sill 16".

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

Fore deck: 1 @ 12" dia. led to hold. Coaming 34" x 34"
 Fore well: 1 @ 12" " " " 36" x 34"
 R.Q. Deck: 2 @ 12" " " " 36" x 34"
 5 @ 7" " " " 36" x 32"
 The ventilators are in accordance with rule requirements.
 Closing - wood plugs & canvas covers.

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

Fore deck: 1 @ 4" dia. led to fore peak x 5" to mouth.
 Fore well: 1 @ 3" " " " D.B. tank x 7" 36"
 2 @ 2 1/2" " " " " x 45" "
 R.Q. Deck: 4 @ 2 1/2" " " " " x 42" "
 1 @ 3 1/2" " " " " aft peak x 27" "
 Wood plugs supplied for all air pipes

Particulars of Gangway Cargo and Coaling Ports:—

None.



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Particulars of Scuppers and Sanitary Discharge Pipes —

W. C. Discharges lead to sea. Storm valves fitted ✓

Particulars of Side Scuttles:

Hinged dead-lights fitted in fore and aft accommodation. ✓

Particulars of Guard Rails:—

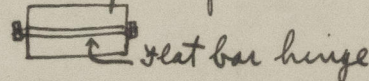
Fore deck:— 2 tier rails 3'0" high. Stanchions 4'0" apart. ✓
Fore well:— bulwarks 4'0" high } Stanchions 8"x40" B.P. Sp. 5'9" apart. ✓
R.Q. Deck:— " 3'7" " }

Particulars of Gangways, Lifelines, etc.:—

Stanchions fitted on starboard side of fore well decks spaced 8'0"-10'0" apart. ✓
and lifelines with adjusting screws are fitted on the starboard side of nos 1 and 2 hatchways in the forward well. ✓

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. ...	154'0" ✓	3'7" ✓	2.75' x 1.50' ✓ 10" above deck.	8	33 sq ft ✓	30.8
Forward Well ...	74'0"	4'0"	2.75' x 1.50' } 14" above 2.50' x 1.50' } deck.	4 1	20.25 sq ft	14.8
State position of each freeing port ... After Well:— 12'0"-35'0"-54'0"-71'0"-88'0"-112'0"-127'0"-144'0" from R.Q.D. bulkhead. (F. and A. position and height above deck edge) Forward Well:— 18'0"-35'0"-47'0"-59'0"-71'0" from fore end. ✓ State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Additional area where sheer is less than standard. ✓						

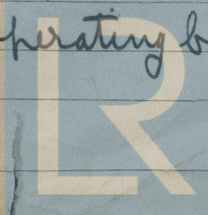


Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ...	—	—	—	—	—	—	—	—
Raised Quarter Deck Bulkhead ...	—	3/4"	6"x3"x35" BA.	21" ✓	Bltd.	None ✓	—	—
Bridge, After Bulkhead ...	—	—	—	(also 5 diaphragm plates).	—	—	—	—
Bridge, Forward Bulkhead ...	—	—	—	—	—	—	—	—
Forecastle Bulkhead ...	—	30"	3"x3"x3/4"	36" ✓	None ✓	1) 4'5"x28"	18"	—
Trunk, Aft ...	—	—	—	—	—	—	—	—
Trunk, Forward ...	—	—	—	—	—	—	—	—
Exposed Machinery Casings on Fore-board or Raised Quarter Decks ...	38" ✓	30" ✓	3 1/2"x3 1/2"x3/4"	26" ✓	Part bltd.	2) 4'6"x24" 2) 4'4"x22"	18" ✓	7'3" ✓
Exposed Machinery Casings on Superstructure Decks ...	—	—	—	—	—	—	—	—
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	—	—	—	—	—	—	—	—
Deckhouses on Flush Deck Ships ...	—	—	—	—	—	—	—	—

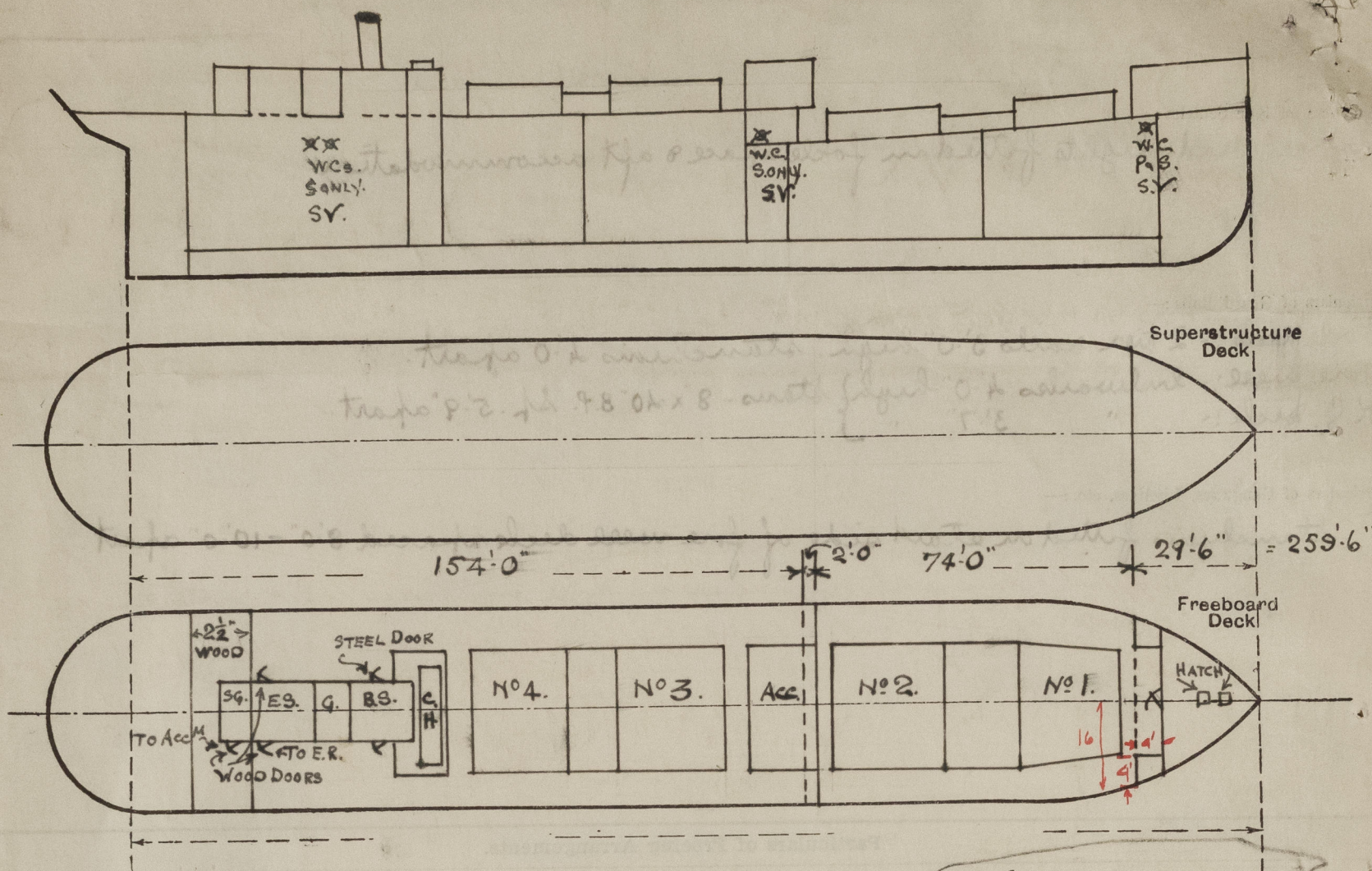
Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead ...	✓
Raised Quarter Deck Bulkhead ...	Intact. ✓
Bridge, After Bulkhead ...	✓
Bridge, Forward Bulkhead ...	✓
Forecastle Bulkhead ...	(covered with steel plates overlapping the opening & fitted with hinges) leading to machinery space
Exposed Machinery Casings on Fore-board or Raised Quarter Decks ...	Hinged wood door - operating both sides. ✓
Exposed Machinery Casings on Superstructure Decks ...	2 hinged steel & 2 hinged teak doors - all operating both sides. ✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	✓
Deckhouses on Flush Deck Ships ...	✓



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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 shown on the following sketches:—



For castle
Side lines $\frac{4 \times 4}{16}$

Gangway

25.5
17.0
26.5
3.0
29.5

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

No Limber Assignment required.

Builder's name and yard number *S.P. Austin & Son, Ltd.*

Names of sister ships

Owners *Westwick S.S. Co. Ltd.*

Fee £ *9 : 7 : 0* Received by me



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