

Rpt. C.11.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

23/00.

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~
having R.Q.D.K., BR. ON R.Q.D.K., AND F.C.L.E.

(Type of Superstructures.)

Ship's Name "AVANVILLE"	Nationality and Port of Registry British Liverpool	Official Number 143574	Gross Tonnage 683	Date of Build 1920 8 Mo.
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Moulded Dimensions: Length **177.80** Breadth **28.75** Depth **13.25**
Moulded displacement at moulded draught = 85 per cent. of moulded depth **1260** tons
Coefficient of fineness for use with Tables **.766**

Port of Survey **Newport**
Date of Survey **10th Jan. 1933**
Name of Surveyor **Robt. Cheetham**
Particulars of Classification **+100A1**
S.S. Lan. No. 2.29.

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... 13.25	(a) Where D is greater than Table depth (D - Table depth) R = (13.29 - 11.86) 1.367 = +1.95"	Moulded Breadth (B) 28.75 Standard Round of Beam = $\frac{B \times 12}{50} = 6.9$ Ship's Round of Beam = 7.25 ins. Difference = .35
Stringer plate ... (.48") ... .04	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Restricted to
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Correction = $\frac{\text{Diff}^*}{4} \times (1 - \frac{S_1}{L}) = \frac{.35}{4} \times .25 = -.02"$
Depth for Freeboard (D) = 13.29		

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...						Standard Height of Superstructure 6.0
overhang ...						" " R.Q.D. 3.519
R.Q.D. enclosed ...	101.83	101.83	3.04	.3.04	87.99	Deduction for complete superstructure 23.78
overhang ...						Percentage covered $\frac{S}{L} = 75.50\%$
Bridge enclosed ...	11.08	11.08	7.0 + 3' Wood		11.08	" " $\frac{S_1}{L} = 75.00\%$
overhang aft ...						" " $\frac{E}{L} = 67.20\%$
overhang forward ...	19.51					Percentage from Table, Line A. 58.24%
F'cle enclosed ...	21.08	19.51	7.0 + 2' Wood		19.51	(corrected for absence of forecastle (if required))
overhang ...	SEE SKETCH	.91	WOOD SKETCH		.91	Percentage from Table, Line B.
Trunk aft ...	1.82					(corrected for absence of forecastle (if required))
forward ...						Interpolation for bridge less than .2L (if required)
Tonnage opening aft ...						Deduction = 23.78 x .5824 = -13.85
forward ...						
Total ...	134.24	133.33			119.49	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	27.78	1		27.78	32.00	32.00	1		32.00	Mean actual sheer aft = Excess
$\frac{1}{2}$ L from A.P. ...	12.36	4		49.44	13.03	13.03	4		52.12	Mean actual sheer forward = Excess
$\frac{3}{8}$ L " ...	3.06	2		6.12	3.25	3.25	2		6.50	Mean standard sheer forward
Amidships ...	✓	4		✓	-	-	4		✓	Length of enclosed superstructure forward of amidships = .072 x 1L
$\frac{3}{8}$ L from F.P. ...	6.12	2		12.24	6.51	6.51	2		13.02	" " aft of " = Covered
$\frac{1}{2}$ L " ...	24.72	4		98.88	26.07	26.07	4		104.28	
F.P. ...	55.56	1		55.56	61.00	61.00	1		61.00	
Total ...				250.02					268.92	

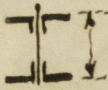
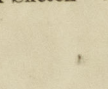
Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{18.90}{18} \times (.75 - .3775) = -.39"$
If limited on account of midship superstructure. **✓** If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

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 $\frac{.766 + .68}{1.36} = \frac{1.446}{1.36}$	19.47
Depth to Freeboard Deck = 16.33	$\Delta =$	Depth Correction ... 1.95	20.70
Summer freeboard = 3.75	Tons per inch immersion at summer load water line	Deduction for superstructures ... ✓ 13.85	
Moulded draught (d) = 12.58	T =	Sheer correction ... ✓ .39	
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 3.14 = 3\frac{1}{4}	Deduction = $\frac{\Delta}{40 T}$ inches =	Round of Beam correction ... ✓ .02	
Addition for Winter North Atlantic Freeboard (if required) =		Correction for Thickness of Deck amidships ... 36.50	
		Other corrections, scantlings, etc. ... ✓	
		38.45	14.26
		Summer Freeboard = 44.89	

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~RAISED QUARTER~~ Steel Deck: **3'-9"**

Tropical Fresh Water Line above Centre of Disc ...	Tropical Fresh Water Freeboard ...
Fresh Water Line " " ...	Fresh Water " " ...
Tropical Line " " ...	Tropical " " ...
Winter Line below " " ... 3\frac{1}{4}	Winter " " ...
Winter North Atlantic Line " " ...	Winter North Atlantic " " ...

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	...	...	No. 1. FBD. DK.	No. 2. R.Q. DK.	COAL H. ON CASING TOP.				
Dimensions of Hatchway	...	...	36'-11" x 18'-0"	35'-0" x 18'-0"	5'-6" x 18'-1"				
COAMINGS	Height above Deck ... Thickness { Sides ... Ends ... Stiffeners ... Brackets, Stays ...	...	38' ✓ .44 ✓ .44 ✓ R&S. 7x3x.46 J 4P. 4S. 6x.45 ✓	38' ✓ .44 ✓ .44 ✓ PS. + 24x and .7x3x.46 J SP. 5S. 7x.45 ✓	.40 ✓ .40 ✓ ✓ ✓				
		...							
		...							
		...							
HATCH BEAMS	Number ... Spacing ... Scantling and Sketch ... 	...	4'-7 1/2" ✓ 17" x .46 ✓ Ang. 4x3x.38 ✓ 3 1/2" ✓	4'-4 1/2" ✓ As No. 1. ✓ 3 1/2" ✓	None. ✓				
		...							
FORE AND AFTERS	Number ... Spacing ... Unsupported Lengths ... Scantling* and Sketch ... 	...	None. ✓	None. ✓	None. ✓				
		...							
HATCH COVERS	Material ... Thickness ... How fitted ... Bearing Surface ...	...	W.P. ✓ 2 3/4" x 3" ✓ 9.42 ✓ 3" x 4" x 8 1/2" ✓ 24" ✓ 2 ✓	As No. 1. ✓	W.P. ✓ 2 3/4" ✓ 9.42 ✓ 2 1/2" ✓ 24" ✓ 2 ✓				
		...							
Spacing of Cleats	...	...	24" ✓						
Number of Tarpaulins	...	...	2 ✓						

*Are wood fore and afters steel shod at all bearing surfaces? Yes. ✓

Are battens and wedges efficient and in good condition? Yes. ✓

Are tarpaulins in good condition and in accordance with rule requirements? Yes. ✓

Are lashings provided in accordance with rule requirements? Yes. ✓

Particulars of fiddley, funnel and ventilator coamings :—

Stockhold gratings Covered by strong steel hinged covers. ✓
Fidley, funnel, and Ventilator Coaming in efficient Condition. ✓
Engine Skylight of steel strongly Constructed. ✓

Particulars of Flush Bunker Scuttles:—

None. ✓

Particulars of Companionways :—

None. ✓

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

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

On Deck. 2 Vents. 6" dia, Coaming 34" x .30 to Accommodate.	} Sales factory no closing arguments provided.
On Deck in Well. 1 Vent. 12" dia, Coaming 36" x .36 to Hold.	
" R.Q. Deck. 2. " " " " " " " " " " }	

All Ventilators constructed in accordance with Rules.

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

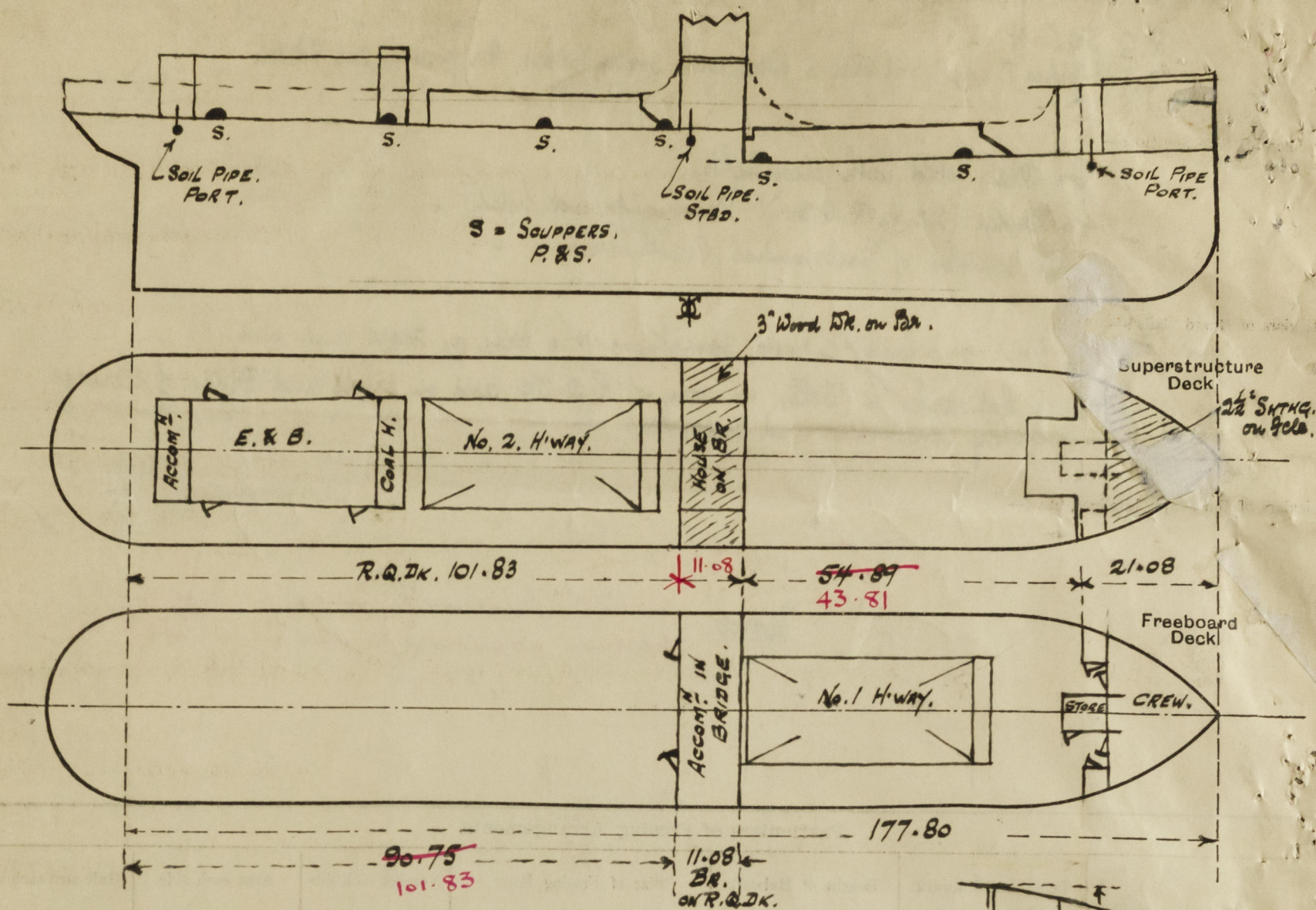
Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks :—

On Side Dr.	1. W.I.	air pipe 3" dia,	3" from deck to mouth,	from F. P. Tank.	} <i>Satisfactory</i> <i>No</i> closing arrangements provided.
On H'd. Dr. in Well.	1. W.I.	air pipe 3" dia,	24" from deck to mouth,	from D. Bot. Tank.	
" R.Q. Dr.	2. "	" " "	13" " " "	" " A. Pk. Tank.	
" " "	1. "	" " "	3" " " "	" " "	

Particulars of Gangway Cargo and Coaling Ports:—

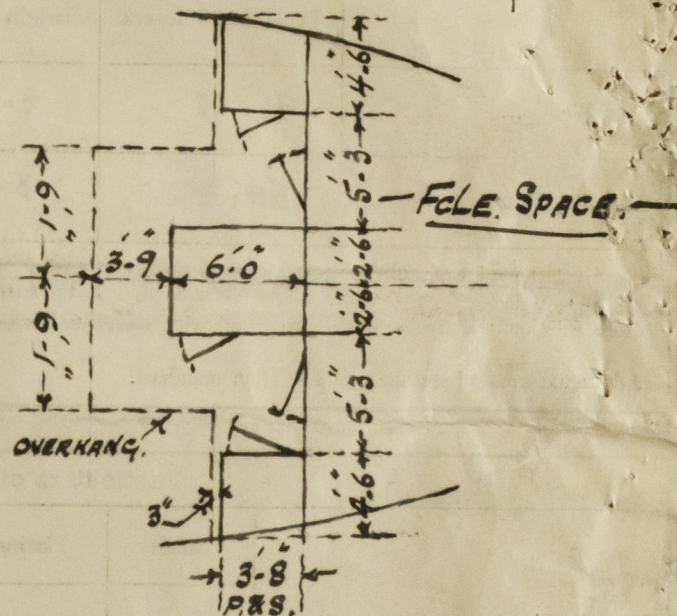
None. ✓

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 shewn on the following sketches:—



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

$$\begin{aligned} \text{DEQUET } \frac{5.25 \times 3.67}{12.25} &= \frac{1.57}{19.51} = \text{Equi} \\ \text{O.H.} &= \frac{1.57}{1.82} \end{aligned}$$



Hatchway Webs.
Webb. Anos. to be faired where necessary.

This vessel was measured afloat.
Nothing done forwards S.S. No. 3 at this time.

D.W. 800 Tons @ 12-3 draught.
" 700 " " 11-5 "
" 600 " " 10-7 "
" 500 " " 9-8 1/2 "
Tons per inch 10-12 @ 12 ft. draught.
" " 10-02 " 11 " "
" " 9-92 " 10 " "
" " 9-82 " 9 " "

Builder's name and yard number

Names of sister ships

Owners

John S. Winks Ltd.

Fee £

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Received by me

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