

17 MAR 1932

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(For London Office only.)

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having

Poop, BRIDGE &amp; FOULE

Port of Survey NEWCASTLE

(Type of Superstructures.)

Date of Survey 24<sup>th</sup> FEB. 1932.

Ship's Name

ALACRITY

Nationality and Port of Registry  
BRITISH  
NEWCASTLEOfficial Number  
148062Gross Tonnage  
2383Date of Build  
1924-4

Name of Surveyor P. J. Crandall

Moulded Dimensions: Length 289.43 Breadth 43.00 Depth 22.50  
 Moulded displacement at moulded draught = 85 per cent. of moulded depth 5320 tons  
 Coefficient of fineness for use with Tables .781

Particulars of Classification \*100A1.

## Depth for Freeboard (D)

Moulded depth ... .. 22.50

Stringer plate ... .. .04

Sheathing on exposed deck

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

Depth for Freeboard (D) = 22.54

## Depth correction

(a) Where D is greater than Table depth  
(D - Table depth) R =

$$(22.54 - 19.30) 2.226 = +7.21$$

(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)

$$\text{Standard Round of Beam} = \frac{B \times 12}{50} = 10.33$$

$$\text{Ship's Round of Beam} = 10.12$$

$$\text{Difference} = .17$$

Restricted to

$$\text{Correction} = \frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.17}{4} (.649) = -.03$$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed + House	<u>23.23</u>	<u>23.23</u>	<u>7.50</u>	<u>+2.22</u>	<u>23.23</u>
" overhang ...	-	-	-	-	-
R.Q.D. enclosed	-	-	-	-	-
" overhang	-	-	-	-	-
Bridge enclosed...	<u>49.50</u>	<u>49.50</u>	<u>7.50</u>	-	<u>49.50</u>
" overhang aft	-	-	-	-	-
" overhang forward	<u>4.50</u>	<u>2.25</u>	<u>7.50</u>	-	<u>2.25</u>
Circle enclosed + House	<u>23.23</u>	<u>23.03</u>	-	-	<u>23.03</u>
" overhang	<u>3.40</u>	<u>3.40</u>	-	-	<u>3.40</u>
" aft	-	-	-	-	-
forward	-	-	-	-	-
Opening aft	-	-	-	-	-
" forward	-	-	-	-	-
Total	<u>103.66</u>	<u>101.41</u>	-	-	<u>101.41</u>

Standard Height of Superstructure

6.394

R.Q.D.

Deduction for complete superstructure

34.63

$$\text{Percentage covered } \frac{S}{L} = 35.82\%$$

$$\frac{S_1}{L} = 35.04\%$$

$$\frac{E}{L} = 35.04\%$$

Percentage from Table, Line A.

(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)  $19.28 + (400 \times \frac{.17}{200}) = 22.86$ 

$$\text{Deduction} = 34.63 \times .2286 = -7.92$$

## SHEER CORRECTION. - See sketch

	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
... ..	<u>38.94</u>	1	<u>38.94</u>	<u>54.00</u>	<u>54.00</u>	1	<u>54.00</u>
from A.P. ...	<u>17.33</u>	4	<u>69.32</u>	<u>21.30</u>	<u>20.25</u>	4	<u>81.00</u>
L " ...	<u>4.28</u>	2	<u>8.56</u>	<u>5.30</u>	<u>2.50</u>	2	<u>5.00</u>
amidships ...	-	4	-	-	-	4	-
L from F.P. ...	<u>8.56</u>	2	<u>17.12</u>	<u>10.60</u>	<u>13.25</u>	2	<u>26.50</u>
L " ...	<u>34.66</u>	4	<u>138.64</u>	<u>42.60</u>	<u>43.00</u>	4	<u>172.00</u>
F.P. ...	<u>77.88</u>	1	<u>77.88</u>	<u>99.00</u>	<u>99.00</u>	1	<u>99.00</u>
Total	-	-	<u>350.46</u>	-	-	-	<u>437.50</u>

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{87.04}{18.00} (.75 - .1791) = 2.76$$

$$\text{If limited on account of midship superstructure. } 2.76 \times \frac{.171}{.20} = -2.36$$

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 = 22.54  
 Summer freeboard = 3.39  
 Moulded draught (d) = 19.15

Deduction for Tropical freeboard and addition for

$$\text{Winter freeboard} = \frac{d}{4} \text{ inches} = 4.79 = 4 \frac{3}{4}$$

Addition for Winter North Atlantic Freeboard (if required) =

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

$$\Delta = 5377$$

Tons per inch immersion at summer load water line

$$T = 24.71$$

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

$$= 5377$$

$$40 \times 24.71 = 5.44 = 5 \frac{1}{2}$$

## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction ... ..	<u>7.21</u>	-
Deduction for superstructures ... ..	-	<u>7.92</u>
Sheer correction ... ..	-	<u>2.36</u>
Round of Beam correction ... ..	-	<u>.03</u>
Correction for Thickness of Deck amidships ... ..	-	-
Other corrections, scantlings, etc. ... ..	-	-
	<u>7.21</u>	<u>10.31</u>

Summer Freeboard = 40.81

40.87

43.91

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

Tropical Fresh Water Line above Centre of Disc ...	<u>10 1/4</u>	<u>8 1/2</u>	Tropical Fresh Water Freeboard ...	<u>2 7/8</u>	<u>2 7/8</u>
Fresh Water Line " " ...	<u>5 1/2</u>	<u>5 1/2</u>	Fresh Water " " ...	<u>2 11/4</u>	<u>2 11/4</u>
Tropical Line " " ...	<u>4 3/4</u>	<u>3</u>	Tropical " " ...	<u>3 0</u>	<u>3 0</u>
Winter Line below " " ...	<u>4 3/4</u>	<u>3</u>	Winter " " ...	<u>3 9/2</u>	<u>3 6 3/4</u>
Winter North Atlantic Line " " ...	<u>6 3/4</u>	<u>5</u>	Winter North Atlantic " " ...	<u>3 11/2</u>	<u>3 8 3/4</u>



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
UPPER DECK										
Description of Hatchway	No. 1.	No. 2.	BUNKER HATCH.	No. 3.	No. 4.	ESCAPE HATCHES.	FORE PEAK.	COAL HATCH.	COAL HATCH.	CASING TOP.
Dimensions of Hatchway	31'6" x 30'0"	30'0" x 30'0"	9'9" x 30'0"	33'9" x 30'0"	33'9" x 30'0"	2'0" x 1'9"	2'0" x 2'4"	6'5" x 8'1"	4'7" x 3'0"	
COAMINGS	Height above Deck ... 4'1"	4'1"	4'1"	4'1"	4'1"	2'0" x 1'9"	2'0" x 2'4"	6'5" x 8'1"	4'7" x 3'0"	
	Thickness ... 50"	50"	50"	50"	50"	7 1/2" ABOVE RAISED DK.	7 1/2" ABOVE RAISED DK.	15'0"	9'	
	Stiffeners 2" x 3" x 40 BA.	2" x 3" x 40 BA.	2" x 3" x 40 BA.	2" x 3" x 40 BA.	2" x 3" x 40 BA.	7 1/2" x 3 1/2" x 48 L.	7 1/2" x 3 1/2" x 48 L.	9' x 3 1/2" x 48 L.	9' x 3 1/2" x 48 L.	
	Brackets, Stays 2" DIA.	2" DIA.	2" DIA.	2" DIA.	2" DIA.					
	3 EACH SIDE	3 EACH SIDE	3 EACH SIDE	3 EACH SIDE	3 EACH SIDE					
HATCH BEAMS	Number ... 5	5	1	6	7					
	Spacing ... 5'3"	5'0"	4'10 1/2"	4'10"	4'9 1/2"					
	Scantling and Sketch	25' x 40'	25' x 40'	25' x 40'	25' x 40'					
		ANGLES 6" x 3 1/2" x 52'								
	Bearing Surface ... 3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"					
FORE AND AFTERS	Number ...		POOP HATCH SIZE 2'6" x 2'3"							
	Spacing ...		COAMINGS 10" x 25"							
	Unsupported Lengths ...		HATCHES 2 1/2" W.P. REST 2"							
	Scantling and Sketch ...		CLEATS 2 1/2" APART.							
			3 TARPULINS.							
	Bearing Surface ...									
HATCH COVERS	Material ... W.P.	W.P.	W.P.	W.P.	W.P.	STEEL COVER JOINTED.	STEEL COVER JOINTED.	W.P.	W.P.	W.P.
	Thickness ... 3"	3"	3"	3"	3"	WITH 6"	WITH 8"	2 1/2"	2 1/2"	2 1/2"
	How fitted ... F.A.	F.A.	F.A.	F.A.	F.A.	BUTTER-FLY NUTS.	BUTTER-FLY NUTS.	2 1/2"	2 1/2"	2 1/2"
	Bearing Surface ... 3'6"	3'6"	3"	3'6"	3'6"			2 1/2"	2 1/2"	2 1/2"
Spacing of Cleats ...	24"	24"	24"	24"	24"			18"	20"	24"
Number of Tarpaulins ...	TWO	SETS	9 PARES.					2	2	2

Particulars of fiddle, funnel and ventilator coamings:—

FIDDLE GRATINGS ARE FITTED WITH HINGED STEEL COVERS. ✓  
ENGINE ROOM SKYLIGHT IS STEEL. ✓  
FIDDLE & FUNNEL VENTS GOOD. ✓

Particulars of Flush Bunker Scuttles:—

TWO ON BRIDGE DECK 20 DIA. WITH BAYONET JOINT. ✓

Particulars of Companionways:—

POOP DECK: STEEL COMPANION WITH 1 3/4" SOLID TEAK DOOR. OPERATING BOTH SIDES. ✓  
SILL 15" 18" accept

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

POOP DECK: 1 @ 9" DIA. LED TO TUNNEL COAMING 36" x 38" VENTILATORS ARE IN ACCORDANCE WITH RULE REQUIREMENTS CLOSING - WOOD PLUGS AND CANVAS COVERS. ✓  
AFT WELL: 4 @ 6" POOP HOLD 36" x 36" 36" x 38" 36" x 38" attached to Poop Bk.  
FORE WELL: 1 @ 15" 36" x 38"  
FOCLE DECK: 1 @ 14" 36" x 38"

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

POOP DECK: 2 C.I. 3" DIA. LED TO AFT PEAK. HEIGHT 4' TO MOUTH. 18" NO CLOSING  
AFT WELL: 2 C.I. 2 3/4" POOP D.B. TANKS. 23" 36" 18" all air pipes fitted with canvas covers to be fitted with satisfactory means of closing  
BRIDGE: 4 C.I. 2 3/4" 23" 36" 18"  
FOCLE DECK: 2 C.I. 3" FORE PEAK. 23" 36" 18"  
FOCLE 1 C.I. 3"

Particulars of Gangway Cargo and Coaling Ports:—

NONE

Particulars of Scuppers and Sanitary Discharge Pipes:—

N.C. DISCHARGES LEAD M.I. STORM VALVES FITTED. FOR POSITION SEE SKETCH ON BACK.

Particulars of Side Scuttles:—

DEAD-LIGHTS FITTED IN POOP SPACE, permanently attached.

Particulars of Guard Rails:—

POOP DECK & FOCLE DK. 2 TIER RAILS 3'0" IN HEIGHT. STANCHIONS SPACED 4'9" APART. ✓  
BRIDGE DECK - BULWARKS 3'0" IN HEIGHT SUPPORTED BY 6 1/2" x 36" B.P. STANCHIONS SPACED ABOUT 6'0" APART. ✓  
WELLS: 3'9" " " 6 1/2" x 40" B.P. 5'6"

Particulars of Gangways, Lifelines, etc.:—

NONE FITTED  
manilla lifelines fitted over the hatches in both wells.

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 ...	96'75	3'9"	4'00 x 1'83	3	21'96 1/4	19'35 1/4'
Forward Well ...	87'50	3'9"	4'00 x 1'83	3	21'96 1/4	17'50 1/4'

State position of each freeing port ... After Well:— 12'0" - 47'0" & 80'9" FROM BRIDGE END. 13 ABOVE DECK.  
(F. and A. position and height above deck edge) Forward Well:— 12'0" - 40'9" & 71'4" FROM FOCLE END.  
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— 12" APART.

Additional area where sheer is less than standard.

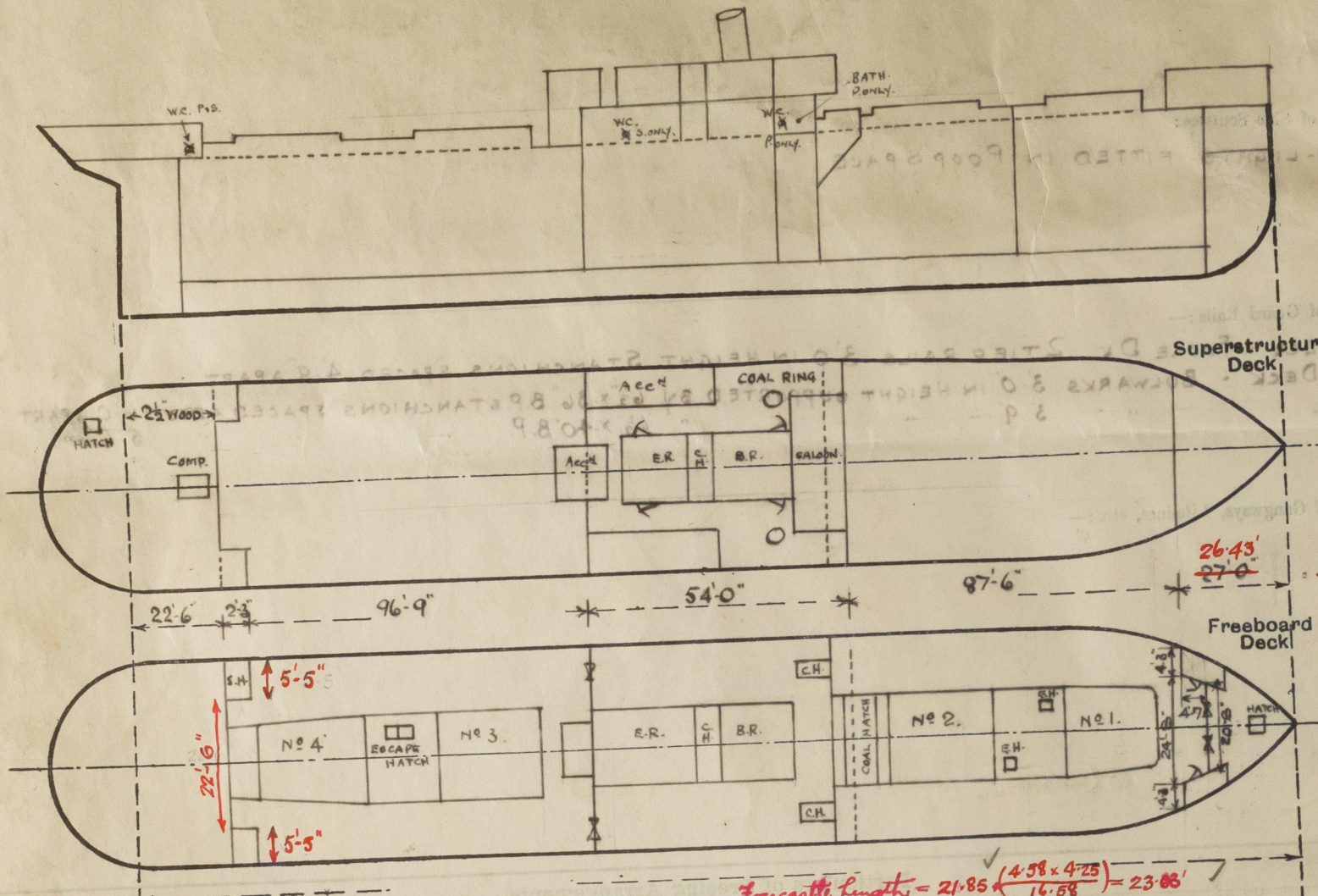
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ...	-	35"	4 1/2" x 3" x 44" L.	30"	NONE	NONE	-	-
Raised Quarter Deck Bulkhead ...	-	-	-	-	-	-	-	-
Bridge, After Bulkhead ...	-	32"	5 1/2" x 3" x 46" L.	33"	NONE	4'0" x 3'0"	18"	-
Bridge, Forward Bulkhead ...	-	40"	8 1/2" x 3 1/2" x 48 3/4" L.	30"	BRACKETS TOP.	NONE	-	-
Forecastle Bulkhead ...	-	30"	3 1/2" x 3" x 80"	86" 30	NONE	4'0" x 3'0"	18"	-
Trunk, Aft ...	-	-	-	-	-	5'0" x 1'11"	-	-
Trunk, Forward ...	-	-	-	-	-	-	-	-
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	-	-	-	-	-	-	-	-
Exposed Machinery Casings on Superstructure Decks ...	-	28"	3" x 2 1/2" x 32" 7 1/2" FLANGE ALT.	27"	3 KTS. AT TOP.	FOUR. 5'0" x 2'4"	19"	7'3"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	-	28"	3" x 2 1/2" x 32" 7 1/2" FLANGE ALT.	27"	-	NONE	-	7'6"
Deckhouses on Flush Deck Ships ...	-	-	-	-	-	-	-	-

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead ...	✓ No openings
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead ...	FULL HEIGHT RIVETED CHANNELS & WEATHER BOARDS 3" THK. ✓ Cl. 2.
Bridge, Forward Bulkhead ...	✓ No openings
Forecastle Bulkhead ...	2) FULL HEIGHT RIVETED CHANNELS & 3" WEATHER BOARDS. 2) HINGED STEEL DOORS. OPERATED BOTH SIDES. ✓ Cl. 2.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	✓
Exposed Machinery Casings on Superstructure Decks ...	4) HINGED STEEL DOORS OPERATED BOTH SIDES. ✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	✓
Deckhouses on Flush Deck Ships ...	✓



pt. 11b  
 sketch  
 30

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shown on the following sketches:—



Extreme Displacement at 19'-4" Extreme Draught  
 = 5278 \* (4 \* 24.71) = 5377 tons.

Forecastle Length =  $21.85 \times \frac{(4.58 \times 4.25)}{16.58} = 23.03'$   
 " Beam =  $26.43 - 23.03 = 3.40'$   
 Poop Length =  $22.5 + \frac{(2.25 \times 5.42)}{16.67} = 23.23'$

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

NO TIMBER ASSIGNMENT REQUIRED.

Particulars of Superstructure, Trunks, Casings, Deckhouses	Quantity	Remarks	Particulars of Superstructure, Trunks, Casings, Deckhouses	Quantity	Remarks
NONE	80		NONE	32	
NONE	32		NONE	32	
NONE	30		NONE	40	
NONE	32		NONE	30	

Builder's name and yard number SMITH'S DOCK CO. LD. MIDDLESBRO

Names of sister ships

Owners WITHERINGTON & EVERETT.

Fee £ 10 : 14 : Received by me