

no. 89158.

7/12

STORM
19375

Rpt. C.II.

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Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. **29081**
(For London Office only.)

21 SEP 1932

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~

having Raised Quarter deck, Bridge & Forecastle

Port of Survey Newcastle-on-Tyne

Date of Survey 16th September 1932

Name of Surveyor Alex. E. Stevenson

Particulars of Classification +100 A1.
S.S. Sh. No. 2-29

NN COLERAIN (Type of Superstructures.)

Ship's Name BILTON

Nationality and Port of Registry British Middlesbrough

Official Number 144936

Gross Tonnage 746

Date of Build 1920

Moulded Dimensions: Length 179.62 Breadth 29.25 Depth 13.56

Moulded displacement at moulded draught = 85 per cent. of moulded depth 1275 tons

Coefficient of fineness for use with Tables .737

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	13.56	(a) Where D is greater than Table depth. (D - Table depth) R = $(13.60 - 11.47) = 2.13$		Moulded Breadth (B)	29.25
Stringer plate	.04			Standard Round of Beam = $\frac{B \times 12}{50}$	7.02
Sheathing on exposed deck		(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 1.63		Ship's Round of Beam	7.2
T $\left(\frac{L-S}{L}\right) =$				Difference	.18
Depth for Freeboard (D) =	13.60	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L}\right)$	$\frac{.18}{4} \times \left(1 - \frac{.8014}{19.26}\right) = .02$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed						Standard Height of Superstructure <u>6.00</u>
" overhang						" " R.Q.D. <u>3.531</u>
R.Q.D. enclosed	110.5	110.50	3'-6"	3.5	109.53	Deduction for complete superstructure <u>23.962</u>
" overhang						Percentage covered $\frac{S}{L} = 80.72$
Bridge enclosed	11.0	11.00	7'-6"		11.00	" " $\frac{S_1}{L} = 80.14$
" overhang aft						" " $\frac{E}{L} = 79.60$
" overhang forward						Percentage from Table, Line A. <u>74.80</u>
F'cle enclosed	21.39	21.39	7'-6"		21.39	(corrected for absence of forecastle (if required))
" overhang	2.11	1.05			1.05	Percentage from Table, Line B.
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than .2L (if required)
Tonnage opening aft						Deduction = $23.962 \times .748 = 17.92$
" forward						
Total	145.00	143.94			142.97	

SHEER CORRECTION.

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	27.96	1		27.96	48	48.00	1		48.00
$\frac{1}{4}$ L from A.P. ...	12.44	4		49.76	20½	20.54	4		82.16
$\frac{3}{8}$ L " ...	3.08	2		6.16	5	5.14	2		10.28
Amidships ...	—	4		—	—	—	4		—
$\frac{3}{4}$ L from F.P. ...	6.15	2		12.30	8½	8.39	2		16.78
$\frac{1}{4}$ L " ...	24.88	4		99.52	33½	33.58	4		134.32
F.P. ...	55.92	1		55.92	76	76.00	1		76.00
Total ...				251.62					367.54

Mean actual sheer aft = Green
Mean standard sheer aft =

Mean actual sheer forward = Green
Mean standard sheer forward =

Length of enclosed superstructure
L forward of amidships = .18
" " aft of " = .50

Correction = $\frac{\text{Difference between sums of products}}{18} = \frac{251.62 - 367.54}{18} = \frac{-115.92}{18} = -6.44$
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 = 17.10

Summer freeboard = 3.73

Moulded draught (d) = 13.37

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 3.34

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

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 1523$

Tons per inch immersion at summer load water line

T = 10.60

Deduction = $\frac{\Delta}{40T}$ inches = 3.59

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.737 + .68}{1.36} = 1.417$

	+	-
Depth Correction	2.25	
Deduction for superstructures		17.92
Sheer correction		2.23
Round of Beam correction		.02
Correction for Thickness of Deck amidships		
Other corrections, scammings, etc.		
	44.25	20.17
Summer Freeboard =	44.65	

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

Tropical Fresh Water Line above Centre of Disc	4 1/2	Tropical Fresh Water Freeboard	3'-8 3/4"
Fresh Water Line	3 1/2	Fresh Water	3'-4 1/2"
Tropical Line	3	Tropical	3'-5 1/2"
Winter Line below	3 1/2	Winter	3'-8"
Winter North Atlantic Line	5 1/2	Winter North Atlantic	4'-0"

24 SEP 1932

MARKING FORM
-9 JAN 1937

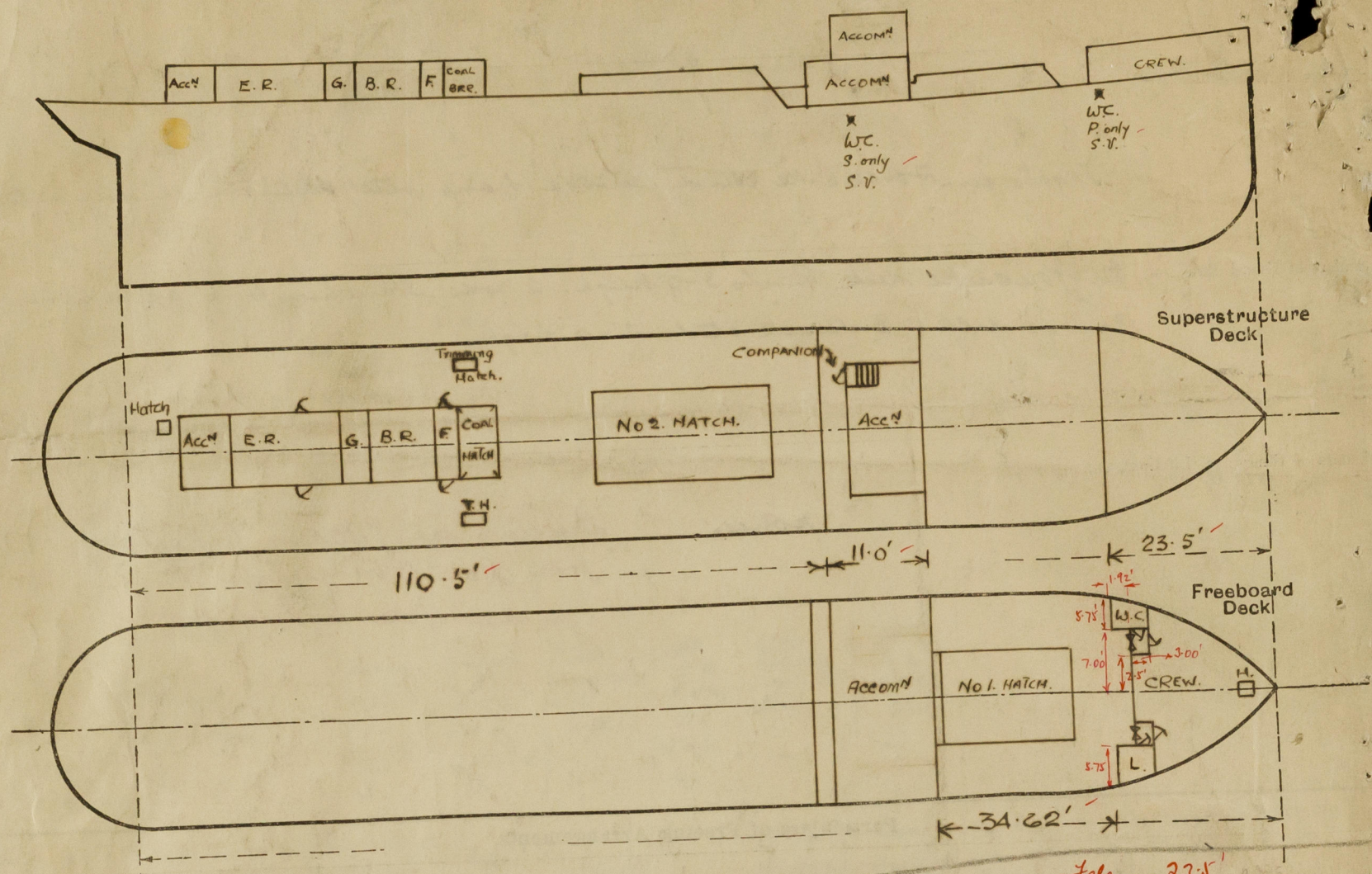
MARKING FORM
RECEIVED 1 APR 1933

MARKING FORM
RECEIVED -7 DEC 1932

Lloyd's Register
Foundation

Bilton

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:—



$$\frac{\text{len } (7.00 \times 1.92) + (3.00 \times 4.5)}{12.75} = \frac{2.11}{21.39} \text{ value}$$

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

No timber assignment required.
Vessel measured afloat.

Smith

Builder's name and yard number *J.S. White & Co Ltd Cowes.*

Names of sister ships

Owners *Syne. Steam Shipping Co Ltd*

Fee £ *6 : 16 : 0* Received by me

Request form

ENCLOSURE