

10 JAN 1933

Index. No. **29563**  
(For London Office only.)

Rpt. C.11.

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

14786

Computation of Freeboard for Steamer, Sailing Ship, Tanker  
having Raised Quarter deck Bridge & Forecastle.

Port of Survey Middlesbrough.

Date of Survey Jan. 4<sup>th</sup> 33

Name of Surveyor Cyrt B. Seaver.

Particulars of Classification 100. A.1.  
Survey held afloat. S.S. No 228

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<u>1/2 NOORLANDS</u>	<u>British</u> <u>Middlesbrough</u>	<u>137275</u>	<u>420</u>	<u>1921-1.</u>

Moulded Dimensions: Length 142.7 Breadth 24.0 Depth 12.0 687 tons

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

Coefficient of fineness for use with Tables .688

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	12.00	(a) Where D is greater than Table depth (D - Table depth) R = (12.03 - 9.51) × 1.098 = + 2.77		Moulded Breadth (B)	24.00
Stringer plate	35.03	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$	5.76
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$				Ship's Round of Beam	6.00
Depth for Freeboard (D) =	12.03	If restricted by superstructures		Difference	.24
				Restricted to	
				Correction = $\frac{\text{Diff}^2}{4} \times \left( 1 - \frac{S_1}{L} \right)$	$\frac{.24^2}{4} \times (1 - \frac{.8239}{1}) = .01$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed					
„ overhang					
R.Q.D. enclosed	86.25	86.25	2.50	$\frac{2.50}{3.285} =$	65.64
„ overhang	8.75	8.75	7.00		8.75
Bridge enclosed					
„ overhang aft					
„ overhang forward					
F'cle enclosed	21.65	21.65	6.75		21.65
„ overhang	2.6	.92	+ 2.3		.92
Trunk aft					
„ forward					
Tonnage opening aft					
„ forward					
Total	118.50	117.57			96.96

Standard Height of Superstructure	6.00
„ „ R.Q.D.	3.285
Deduction for complete superstructure	20.27
Percentage covered $\frac{S}{L} =$	83.05%
„ „ $\frac{S_1}{L} =$	82.39%
„ „ $\frac{E}{L} =$	67.94%
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	59.50
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction =	$20.27 \times .595 = 12.06$

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	24.27	1		24.27	15.00	15.00	1		15.00
1/8 L from A.P.	10.80	4		43.20	6.64	.60	4		2.40
3/8 L	2.67	2		5.34	1.66	(-2.75)	2		(-5.50)
Amidships		4				(.6)	4		11.90
3/8 L from F.P.	5.34	2		10.68	6.77	7.50	2		10.68
1/8 L	21.60	4		86.40	27.08	24.50	4		86.40
F.P.	48.54	1		48.54	61.80	48.54	1		48.54
Total				218.43					157.52

Correction =  $\frac{\text{Difference between sums of products}}{18} = \frac{218.43 - 157.52}{18} = \frac{60.91}{18} = 3.38$

If limited on account of midship superstructure.

Mean actual sheer aft = Deficient 13.22% of Standard.

Mean standard sheer aft

Mean actual sheer forward = Excess

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = 166

„ „ aft of „ = 50

Station	Standard	Actual
A.P.	24.27	15.00
1/8 L	10.80	6.64
3/8 L	2.67	1.66
Amidships		
3/8 L from F.P.	5.34	6.77
1/8 L	21.60	27.08
F.P.	48.54	61.80
Total	218.43	157.52

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck	=	14.53
Summer freeboard	=	3.04
Moulded draught (d)	=	11.49

## Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches =  $2.87 = 2\frac{3}{4}$ Addition for Winter North Atlantic Freeboard (if required) =  $2 + 2\frac{3}{4} = 4\frac{3}{4}$ 

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 826$

Tons per inch immersion at summer load water line

$T = 6.91$

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

$= \frac{826}{40 \times 6.91} = 2.99 = 3''$

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

Correction for coefficient

	+	-
Depth Correction	2.77	
Deduction for superstructures		12.06
Sheer correction	1.13	
Round of Beam correction		.01
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.	30.00	
Summer Freeboard	33.90	21.83

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

Tropical Fresh Water Line above Centre of Disc	5.3
Fresh Water Line	3
Tropical Line	2.7
Winter Line below	2.3
Winter North Atlantic Line	1.4

Tropical Fresh Water Freeboard	3.05
Fresh Water	2.6
Tropical	2.9
Winter	3.3
Winter North Atlantic	3.5



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway		No. 1 Upper Deck		No. 2 RQD					
Dimensions of Hatchway		21'0" x 14'6"		28'0" x 14'6"					
COAMINGS	Height above Deck	2'5"		2'0"					
	Thickness	46		46					
	Sides	46		46					
	Ends	46		46					
	Stiffeners	5 1/2 x 3 B.A.		5 1/2 x 3 B.A.					
	Brackets, Stays	3 ROUND IRON		3 ROUND IRON					
HATCH BEAMS	Number	3		5					
	Spacing	5'3"		4'8"					
	Scantling and Sketch	14'9" x 32"		14'9" x 32"					
		3' x 3' x 40"		3' x 3' x 40"					
	Bearing Surface	3"		3"					
FORE AND AFTERS	Number	✓		✓					
	Spacing	✓		✓					
	Unsupported Lengths	✓		✓					
	Scantling* and Sketch	✓		✓					
	Bearing Surface	✓		✓					
HATCH COVERS	Material	W.P.		W.P.					
	Thickness	2 1/2"		2 1/2"					
	How fitted	50 L10		50 L10					
	Bearing Surface	2 1/2"		2 1/2"					
Spacing of Cleats		2'0"		2'0"					
Number of Tarpaulins		2		3					

\*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 fiddle, funnel and ventilator coamings:—

*Stokehold gratings covered by strong steel hinged covers.  
 Fiddle and funnel ventilators in efficient condition.  
 Engine skylight of steel strongly constructed.*

Particulars of Flush Bunker Scuttles:—

*None fitted.*

Particulars of Companionways:—

*None fitted.*

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

*1. Ventilator on upper deck in fore well 14" dia Coaming 30 x 25 to hold.  
 1. " " Raised Quarter deck 12 " " 30 x 25 " "*

*All ventilators constructed in accordance with Rules and coamings closed with wood plugs and canvas covers.*

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

*1. C.1. Air pipe on Forecastle deck 5" high x 3 1/2" dia to fore peak tank.  
 1. C.1. " " Raised Quarter deck 9 1/2 " 3 " " after peak.*

*Goose neck ventilators to Bunkers 4" dia 10 1/2" high. 2 off on Raised Quarter deck.  
 Sounding pipes flush with deck with brass screw caps, covers.*

Particulars of Gangway Cargo and Coaling Ports:—

*None fitted.*



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Particulars of Scuppers and Sanitary Discharge Pipes:—

Open pipe scuppers from upper & Raised Quarter deck.

Sanitary discharge pipes fitted with storm valves on ships side and efficient traps on inner end.

Particulars of Side Scuttles:—

Side Scuttles in Forecastle and bridge crew spaces fitted with hinged deadlights. All Scuttles of substantial construction.

Particulars of Guard Rails:—

Guard rails in Forecastle deck & Bridge Deck 3'0" high with 2 Rods and stanchions spaced 5'0" apart. Stbd bulwarks on upper deck fore well 4'0" high efficiently constructed & supported. Raised Quarter deck 2'11"

Particulars of Gangways, Lifelines, etc.:—

Efficient life lines fitted in fore 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
Fore Well ... ..	86'3"	2'11"	2'6" x 1'5"	3.5	<del>10.50</del>	17.25
Forward Well ... ..	24'5"	4'0"	1'8 1/2" x 2'6"	2.	8.40	9.00

State position of each freeing port ... .. } After Well:— B.E. 12'4", 23'7", 29'2" 7 1/2' above deck  
(F. and A. position and height above deck edge) } Forward Well:— B.F. 4'9", 7'8", 7'0" 6' above deck  
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— 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 ... ..								
Raised Quarter Deck Bulkhead ... ..								
Bridge, After Bulkhead ... ..	11 1/2' x 30'	25'	3 1/2" x 5' x 3' - 7' 1/2" x 3' x 3'	2'0"	B. Top & Btm	4'6" x 1'9"	16"	✓
Bridge, Forward Bulkhead ... ..	16' x 30'	30'	5 1/2" x 3' x 35' 7'	2'4"	B. Top & Btm	NONE	✓	✓
Forecastle Bulkhead ... ..	20' x 25'	25'	3' x 3' x 35'	2'0"	NONE	4'4" x 1'6 1/2"	20"	✓
Trunk, Aft ... ..								
Trunk, Forward ... ..								
Exposed Machinery Casings on Fore- board on Raised Quarter Decks ... ..	19 1/2' x 30'	25'	3' x 3' x 30'	2'7"	BK Top only	4'6" x 2'0"	19 1/2"	
Exposed Machinery Casings on Super- structure Decks ... ..								
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).

Poop Bulkhead ... ..	✓
Raised Quarter Deck Bulkhead ... ..	✓ No openings.
Bridge, After Bulkhead ... ..	Hinged wood door operated from both side (Port side only).
Bridge, Forward Bulkhead ... ..	No openings.
Forecastle Bulkhead ... ..	Hinged wood doors operated from both side Port & Starboard sides.
Exposed Machinery Casings on Fore- board on Raised Quarter Decks ... ..	Hinged stbd doors 1 to Engine & 1 to Stbd hold Port & Starboard sides.
Exposed Machinery Casings on Super- structure Decks ... ..	✓
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances ... ..	✓
Deckhouses on Flush Deck Ships ...	



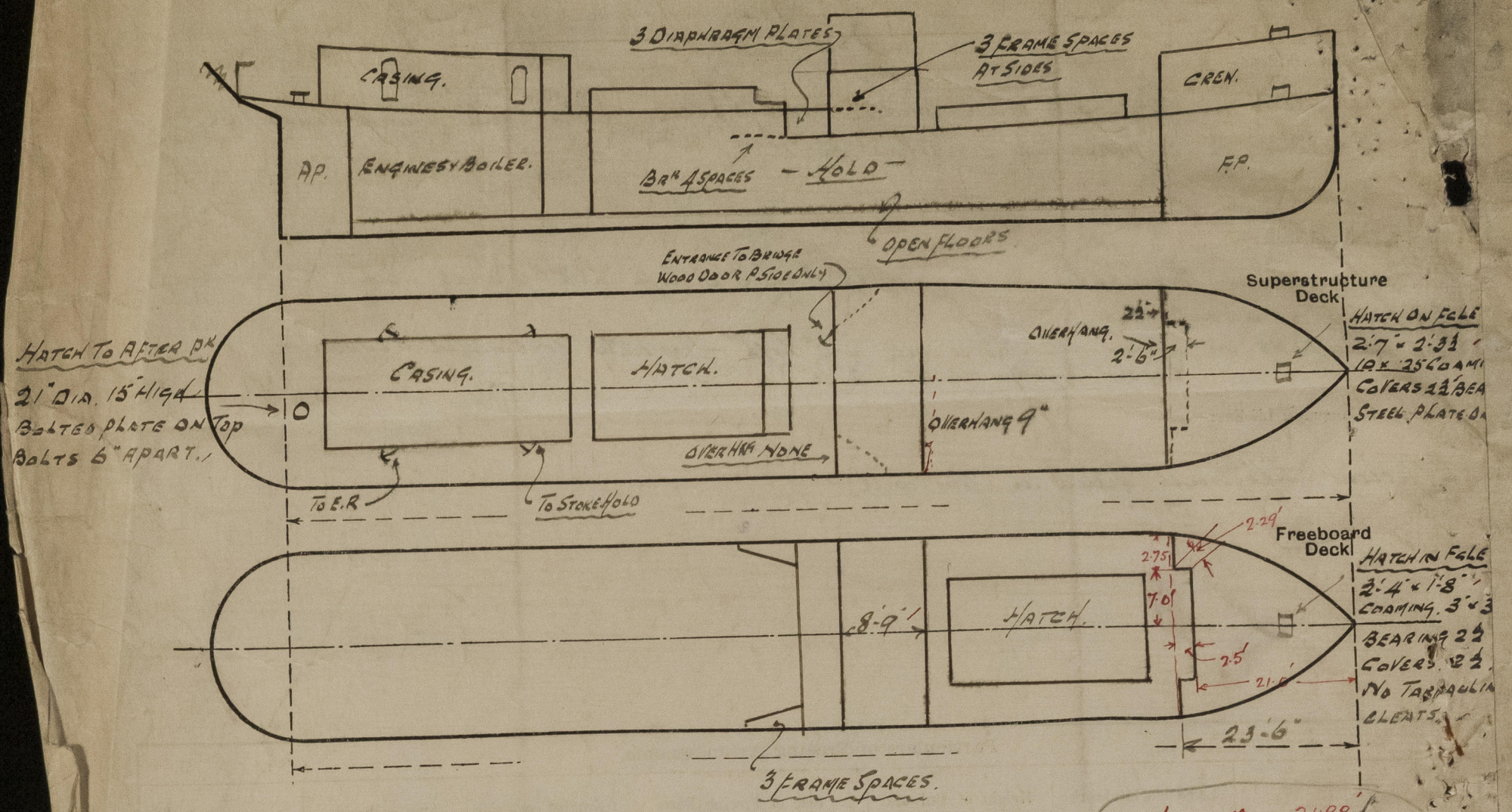
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Woollands.

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:—



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

Survey held afloat Decks hatchcoaming Hatches Ventilators & hold examined, repairs to Hatch webs will be carried out before the freeboard is verified.  
The S.S. No 3 has been partly held & will be advanced when the vessel returns.

Builder's name and yard number J. Crickton & Co. No 289  
Names of sister ships \_\_\_\_\_  
Owners A. Chester  
Fee £ 5 : 2 : - Received by me \_\_\_\_\_