

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

No 31996

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

Having Complete Superstructure

(Type of Superstructures.)

Ship's Name "HYLTON"	Nationality and Port of Registry British Newcastle-on-Tyne	Official Number 161601	Gross Tonnage 5197	Date of Build 1937
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Port of Survey Sunderland

Date of Survey While building

Name of Surveyor Colin Bartlett

Particulars of Classification +100A1
with freeboard.

Moulded Dimensions: Length 423'-11 1/2" Breadth 55'-10 1/2" Depth 28'-4 1/2"

Moulded displacement at moulded draught = 85 per cent. of moulded depth 12,065 tons

Coefficient of fineness for use with Tables .740

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>28.37</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(28.41 - 28.27) x 3 = +.42</u>	Moulded Breadth (B) <u>55'-10 1/2"</u>
Stringer plate <u>.04</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>✓</u>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{13.41}{50} = 13.41$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = \text{None.}$	If restricted by superstructures <u>✓</u>	Ship's Round of Beam = <u>13 1/2</u>
Depth for Freeboard (D) = <u>28.41</u>		Difference <u>.09</u>
		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.09^2}{4} \times \frac{.0071}{1} = \text{Nil.}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	32.21	32.21	8' 9"	-	32.21
" overhang	1.13	.56			.56
R.Q.D. enclosed	✓				
" overhang	✓				
Bridge enclosed	385.00	385.00	8' 9"	-	385.00
" overhang aft	1.12	.84			.84
" overhang forward					
Fore enclosed					
" overhang					
Trunk aft					
" forward					
Tonnage opening aft	4.50	2.31	8' 9"	43.2	2.31
" " forward					
Total	423.96	420.92			420.92

Standard Height of Superstructure 7.5'" " R.Q.D. ✓Deduction for complete superstructure 42Percentage covered $\frac{S}{L} = \frac{100.00}{100.00} = 100.00$ " " $\frac{S_1}{L} = \frac{99.29}{100.00} = 99.29$ " " $\frac{E}{L} = \frac{99.29}{100.00} = 99.29$ Percentage from Table, Line A. 99.13
(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 = 42 x .9913 = -41.6367

SHEER CORRECTION.

Actual height of superstructure = 8' 9"

Standard = 7' 6"

Difference = 1' 3"

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	52.40	1		52.40	48.00	63.00	1		63.00
1/2 L from A.P.	23.32	4		93.28	21.50	28.04	4		112.16
2/3 L "	5.765	2		11.53	5.50	6.93	2		13.86
Amidships	✓	4		✓	✓	✓	4		✓
2/3 L from F.P.	11.53	2		23.06	10.75	12.21	2		24.42
1/2 L "	46.64	4		186.56	43.00	49.39	4		197.56
F.P.	104.79	1		104.79	96.00	111.00	1		111.00
Total				471.62	+15				522.00

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{50.38}{18} \times .25 = -2.77$

If limited on account of midship superstructure. ✓

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 = 28.41Summer freeboard = 3.37Moulded draught (d) = 25.04

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 6.26 = 6 1/4Addition for Winter North Atlantic Freeboard (if required) = ✓

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 12660$

Tons per inch immersion at summer load water line

 $T = 47.25$ Deduction = $\frac{\Delta}{40T}$ inches $= \frac{12660}{40 \times 47.25} = 6.70$ $= 6 3/4$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{74+68}{1.36} = \frac{1.42}{1.36}$ Depth Correction 42Deduction for superstructures 41.63Sheer correction70Round of Beam correction ✓Correction for Thickness of Deck amidships ✓Other corrections, scantlings, etc. ✓Summer Freeboard = 40.60SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Water~~, Steel, Deck:—Tropical Fresh Water Line above Centre of Disc 13Fresh Water Line " " 6 3/4Tropical Line " " 6 1/4Winter Line below " " 6 1/4Winter North Atlantic Line " " ✓Tropical Fresh Water Freeboard 3'-4 1/2"Fresh Water " " 2'-3 1/2"Tropical " " 2'-9 3/4"Winter " " 2'-10 1/4"Winter North Atlantic " " 3'-10 3/4"

8 JAN 1937

Hylton

Particulars of Scuppers and Sanitary Discharge Pipes :-

Four 3½" Scuppers from Tween decks each side, fitted with brass storm valves.
Six 3" Scuppers each side from Shelter Deck.

Particulars of Side Scuttles :-

6 each side 12" sidelights with hinged deadlights of substantial construction from Tween decks aft.

Particulars of Guard Rails :-

On Shelter Deck. Rails 42" high, three Rails, Stanchions 5' 6" apart.
amidships, solid bulwark 42" high for 126 ft with 6 x 3 x 32 B.A. rail
with 6 x 3 x 32 B.A. Rail and B.A. stays 6 ft apart fitted with
one Washport each side 5' 3" x 9".
On Forecastle 3 Rails 42" high stanchions 5 ft. apart.

Particulars of Gangways, Lifelines, etc. :-

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	Tonnage Opening.		23" x 19".	One.	3.04 sq. ft.	✓
Forward Well						

State position of each freeing port } After Well :-
(F. and A. position and height above deck edge) } Forward Well :-

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	30		4 x 3 x 34	30"	7/8	None		
Raised Quarter Deck Bulkhead ...	✓	✓	✓					
Bridge, After Bulkhead	30		4 x 3 x 34	30"	7/8	Swon 120" 54" x 36"	18"	
Bridge, Forward Bulkhead	✓	✓						
Forecastle Bulkhead	✓	✓						
Trunk, Aft	✓	✓						
Trunk, Forward	✓	✓						
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓	✓						
Exposed Machinery Casings on Super-structure Decks	34" x 36	30	3 x 3 x 30	27"	continuous. 2 1/2" apart.	440 55" x 22"	18"	8' 0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	34" x 36	26	3 x 3 x 30	27"	continuous.			
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	3" shifting boards in full height ricket channels.
Bridge, Forward Bulkhead	✓
Forecastle Bulkhead	✓
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓
Exposed Machinery Casings on Super-structure Decks	30 Steel doors with clips manipulated from both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓
Deckhouses on Flush Deck Ships ...	

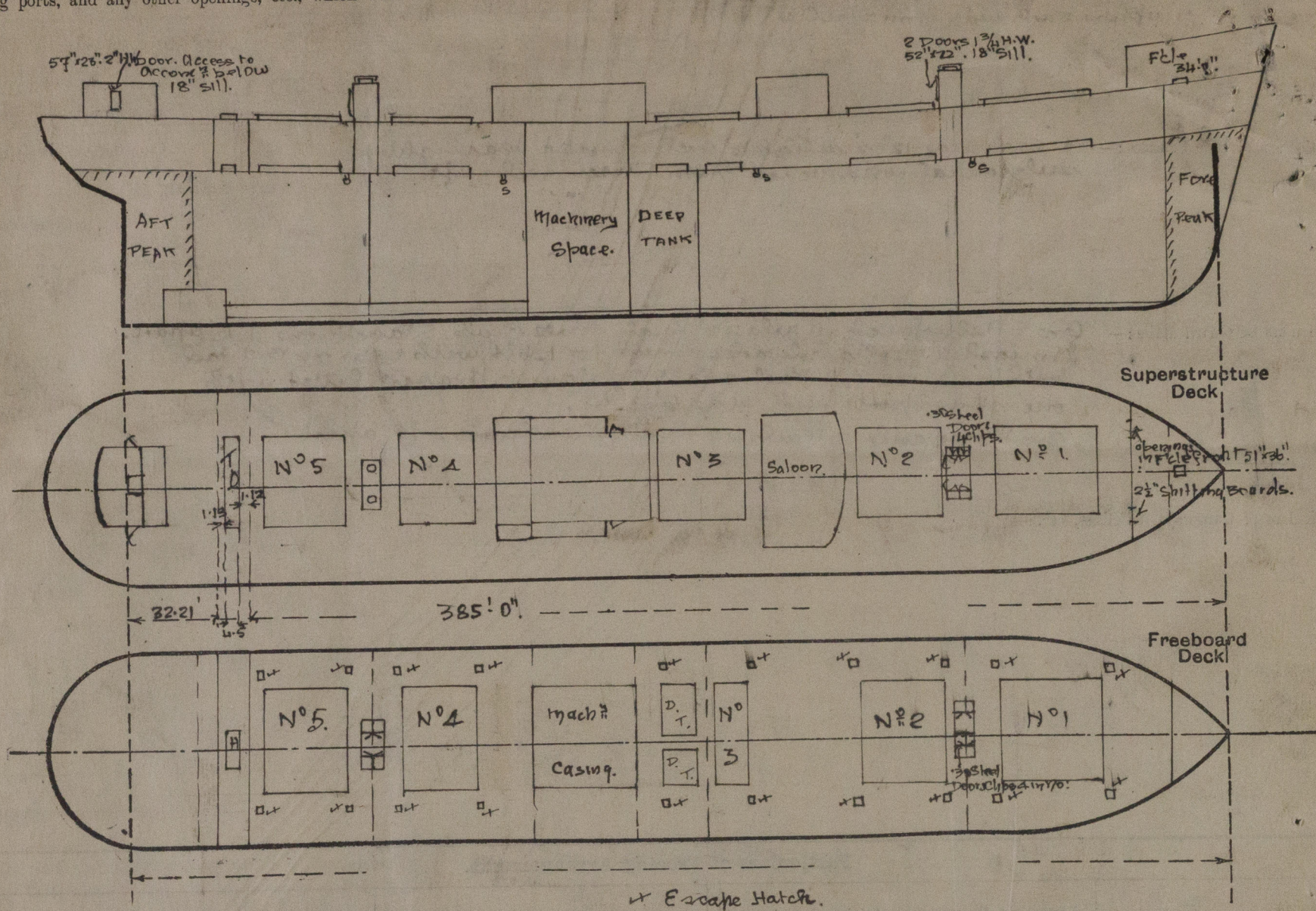
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W404-0019(2/2)

Hyllar

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:—



Actual displacement at 25'3" = 12,660 Tons
Tons per inch " " = 47.25.

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

T.O. Factor $\frac{44 - 25}{44} = \frac{19}{44} = .432$

Builder's name and yard number *Messrs W. Pickersjell. Yard no 232.*

Names of sister ships *✓*

Owners *W. A. Souter & Co Ltd*

Fee £ *16*

Received by me

Will be charged on completion



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Foundation