

21 NOV 1936

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

GLASGOW REPORT No. 57698

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

having Poep, Bridge & Forecastle
(Type of Superstructures.)

Port of Survey Glasgow

Date of Survey November 1936

Name of Surveyor Roman Dobson

Particulars of Classification +100A1 Contemplated Carrying Petroleum in Bulk Longitudinal framing at bottom and at deck

Ship's Name BRITISH POWER	Nationality and Port of Registry <i>British</i> <i>London</i>	Official Number 165354	Gross Tonnage 8333.99	Date of Build 1936
-------------------------------------	---	----------------------------------	---------------------------------	------------------------------

Moulded Dimensions: Length 465.08 Breadth 61.5 Depth 34.03

Moulded displacement at moulded draught = 85 per cent. of moulded depth 18372 tons

Coefficient of fineness for use with Tables .777

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth 34.03	(a) Where D is greater than Table depth (D - Table depth) R = $3(34.03 - 31.01) = 9.27 +$	Moulded Breadth (B)
Stringer plate <u>.82</u> <u>.07</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{61.5 \times 12}{50} = 14.76$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam $14.76 - 5/16 = 14.44$
Depth for Freeboard (D) = 34.10		Difference <u>.32</u>
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L}\right) = .08 \times .5764 = +.05$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poep enclosed	101.84	101.84	8.0		101.84	
" overhang	3.50	1.75			1.75	
R.Q.D. enclosed						
" overhang						
Bridge enclosed	36.0	36.0	8.0		36.0	
" overhang aft	3.0	2.25			2.25	
" overhang forward	3.5	1.75			1.75	
F'cle enclosed	49.12	49.12	8.0		49.12	
" overhang	4.56	2.28			2.28	
Trunk aft						
" forward						
Tonnage opening aft						
" " forward						
Total	196.96	192.71			192.71	

Standard Height of Superstructure 7.5

" " R.Q.D. 42.0

Deduction for complete superstructure 42.0

Percentage covered $\frac{S}{L} = \frac{196.96}{465.08} = 42.35\%$ 43.33

" " $\frac{S_1}{L} = \frac{192.71}{465.08} = 41.44\%$ 41.93

" " $\frac{E}{L} = \frac{192.71}{465.08} = 41.44\%$ 41.93

Percentage from Table, Line A.
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. Tanker 32.44 32.93
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = $42 \times .3244 = -13.62$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P.	56.51	1		56.51	51.00	51.00	1		51.00	
$\frac{1}{4}$ L from A.P.	25.15	4		100.60	23.38	23.38	4		93.52	
$\frac{3}{8}$ L "	6.22	2		12.44	5.88	5.88	2		11.76	
Amidships	-	4		-	-	-	4		-	
$\frac{3}{8}$ L from F.P.	12.43	2		24.86	11.13	11.13	2		22.26	
$\frac{1}{4}$ L "	50.29	4		201.16	44.88	44.88	4		179.52	
F.P.	113.02	1		113.02	102.00	102.00	1		102.00	
Total				508.59					460.06	

Mean actual sheer aft = Deficient

Mean standard sheer aft = 33.75

Mean actual sheer forward = 37.65

Mean standard sheer forward = 37.65

Length of enclosed superstructure forward of amidships = L

" " aft of " = Tanker

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{48.53}{18} \left(.75 - \frac{21.17}{538.3} \right) = 2.70 \times .5334 = +1.44$$

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.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	78.97
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient	84.60
Depth to Freeboard Deck = <u>34.10</u>	$\Delta = 17361$	Depth Correction	9.27
Summer freeboard = <u>6.81</u>	Tons per inch immersion at summer load water line	Deduction for superstructures	13.62
Moulded draught (d) = <u>27.29</u>	T = <u>58.67</u>	Sheer correction	1.44
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>6.84</u>	Deduction = $\frac{\Delta}{40T}$ inches = <u>17361</u>	Round of Beam correction05
Addition for Winter North Atlantic Freeboard (if required) = <u>6.82 + 4.66 = 11.48</u>	<u>40 \times 58.67 = 2346.8</u>	Correction for Thickness of Deck amidships	10.76
	<u>= 7.4 = 7.2</u>	Other corrections, scantlings, etc.	7.13
		Summer Freeboard = <u>81.745</u>	

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

Tropical Fresh Water Line above Centre of Disc	14.4	Tropical Fresh Water Freeboard	6.93
Fresh Water Line " "	7.2	Fresh Water " "	3.71
Tropical Line " "	6.34	Tropical " "	6.3
Winter Line below " "	6.34	Winter " "	7.4
Winter North Atlantic Line " "	11.2	Winter North Atlantic " "	7.94

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway			2nd hatch on upper DK.	0.7. Hatch on upper DK	Small hatches on Poop DK.				on Poop DK	
Dimensions of Hatchway			6'-9" x 10'-0"	27' 6'-0" x 4'-0"	2 @ 3'-0" x 3'-0"	1 @ 2'-9" x 2'-9"	4 @ 3'-0" x 3'-0"	1 @ 2'-6" x 2'-9"	1 @ 2'-6" x 2'-0"	
COAMINGS	{	Height above Deck	30 1/2"	12 x 3 1/2 x 45 B.A.	18"	18"	18"	18"	20"	
		Thickness {	Sides	1/4"	1/40	1/40	1/40	1/40	1/40	
			Ends	1/4"	1/40	1/40	1/60	1/40	1/40	
		Stiffeners	7 x 3 x 38"	"	"	"	"	"	"	
		Brackets, Stays	B.A. round top		✓	✓	✓	✓	✓	
HATCH BEAMS	{	Number								
		Spacing								
		Scantling and Sketch	None	✓	✓	✓	✓	✓	✓	
		Bearing Surface								
FORE AND AFTERS	{	Number								
		Spacing								
		Unsupported Lengths								
		Scantling* and Sketch	None	✓	✓	✓	✓	✓	✓	
		Bearing Surface	Cover stiffened by deck 5 x 3 x 38 spaced 30" apart.	✓						
HATCH COVERS	{	Material	Steel	Steel	Steel	Steel	Wood	Wood	Steel	
		Thickness	3/32"	1/64"	1/64"	1/64"	3"	3"	1/64"	
		How fitted	Oil tight	Oil tight	Oil tight	Oil tight	One piece	One piece	Oil tight	
		Bearing Surface					3"	3"		
Spacing of Cleats			Battens cleats (Screw),	2" x 1 1/2" x 1/2"	18"	16"	24"	18"-21"	2" x 1 1/2" x 1/2"	
Number of Tarpaulins			3'-0" apart	✓	✓	✓	Two	Two	✓	
			Stakes similar to side vessels.	✓						

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

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? ✓

Particulars of fiddley, funnel and ventilator coamings :—

Ventilators and Engine Skylight on Casing Top of Steel of Substantial Construction

Particulars of Flush Bunker Scuttles:—

None.

3 Watertight manholes to each Cofferdam Coaming 10' Channels with steel bolted covers.

Particulars of Companionways :—

Doop Deck Haul platy 26 Coaming 15" with 6" weather board secured, fastened to coaming.
with wood door on Starboard side 5'-2" x 2'-2" & 1 Steel h.t. door at after end 5'-0" x 2'-3"
both Capable of manipulation from both sides

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

Particulars of Ventilators in exposed positions on freeboard and superstructure decks :-			
On Upper Dk. aft.	2 @ 20" dia	Coaming 36" x 40"	To Pump Room
Do	2 @ 20" dia	Coaming 36" x 40"	To Pump Room
On Poop Dk.	5 @ 6"	"	To Store etc
"	3 @ 8"	"	Washplace
"	4 @ 12"	"	Between Dks
"	* 2 @ 13"	"	"
"	4 @ 16"	"	"
On Bridge Dk.	1 @ 6" dia	Coaming 36" x 30"	To Hospital bath & WC.
"	1 @ 6" x 8" x 7" dia	"	Store, etc etc
"	1 @ 9" x 2 @ 10"	"	Drying room & Store
"	1 @ 12"	"	Pump Room
"	2 @ 18"	"	Store
"	* 1 @ 19"	"	Thermobaric inlet
* Fitted with mushroom top remainder of ventilators fitted with wood plug. and canvas covers			

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

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks :-													
On Upper Deck	2 @	4"	dia	3'-0"	in height to	After Bitterdam	On Deck	2 @	6"	dia	3'-0"	in height to	Fore peak tank
	2 @	4"				Board		2 @	4"				Deep Tank.
Roofs	1 @	2 1/2"				Stem Comp.							
	2 @	6"				After peak tank							
	6 @	3"				to other tanks & c/dam							
	2 @	6"				" O.F. tanks							
	2 @	6"				" O.F. bunkers							

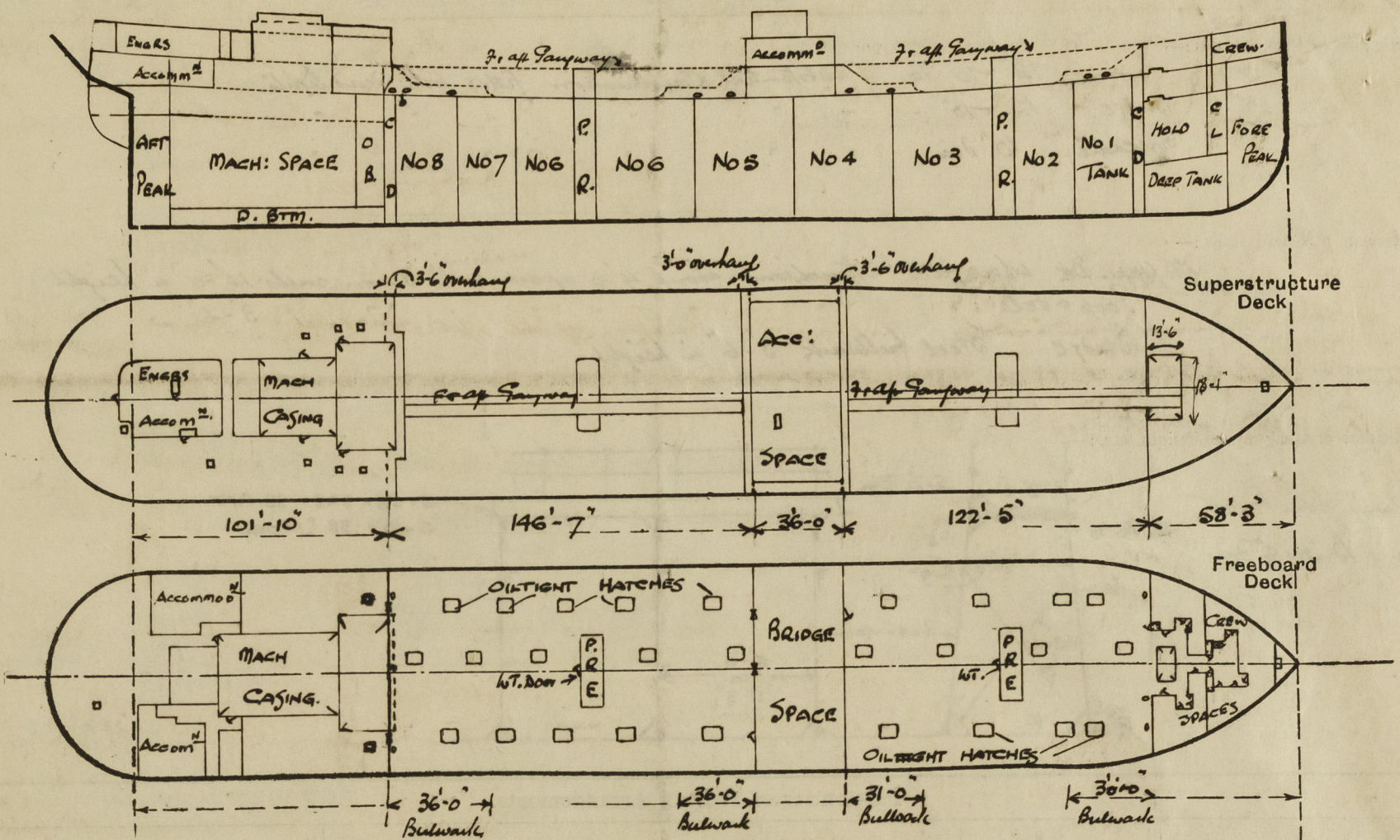
a 4" dia air pipe from each oil cargo hatch led to 6" main which is carried up fore end in mast to 10'-0" above mast head lights
 All air pipes fitted with gauge or wood plugs and canvas covers. ✓

Particulars of Gangway Cargo and Coaling Ports:—

None

British Power

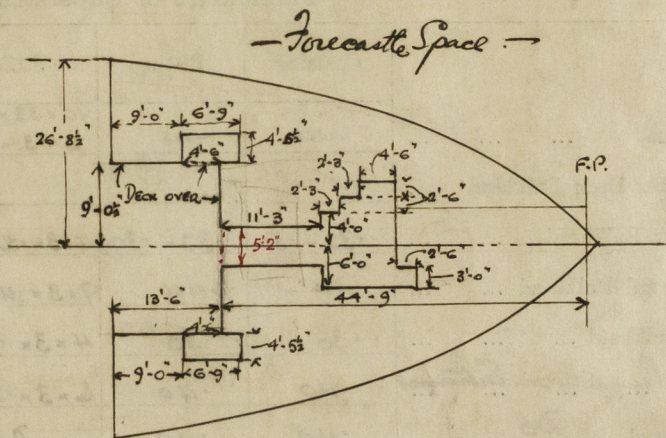
Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shown on the following sketches:—



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

External displacement at 27'0" draft = 17009 tons. Tons per inch = 58.50
 Do Do 28'0" = 17713 " " " = 58.84

Fee			
Recess	13.5 x 18.08	=	244.1
	2 x 6.75 x 4.46	=	60.2
	11.25 x 5.17	=	58.1
	9.0 x 6.0	=	54.0
	2.5 x 3.0	=	7.5
	9.0 x 4.0	=	36.0
	6.75 x 2.5	=	16.9
	4.5 x 2.5	=	11.2
			488.0
			÷ 53.42 = 9.13



Builder's name and yard number

Harland & Wolff Ltd No 968 G.

Names of sister ships

by Swan, Hunter & Lithgow (British) Ltd, British Overseas & British India

Owners

British Tanker Co Ltd

Fee £ 19 0 0

Received by me



© 2020

Lloyd's Register Foundation