

Rpt. C-11

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1 AUG 1932

WRECK SECTION No. 545

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Index No. 29198  
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker  
having *Pooh, Bridge, & Loucastle*

(Type of Superstructures.)

Ship's Name *BRITISH MERCHANT* Nationality and Port of Registry *British London* Official Number *146655* Gross Tonnage *7012* Date of Build *1922-11*

Moulded Dimensions: Length *440'* Breadth *57'-00"* Depth *33'-11"*

Moulded displacement at moulded draught = 85 per cent. of moulded depth *16050* tons

Coefficient of fineness for use with Tables *777*

Port of Survey *Falmouth*

Date of Survey *27th July 1932*

Name of Surveyor *John Rundle*

Particulars of Classification *+100A1*  
*cs. Shl No 2-31*  
*Fitted for oil fuel 10-22 etc*  
*Carrying petroleum in bulk*

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	33.92	(a) Where D is greater than Table depth (D - Table depth) R =		Moulded Breadth (B)	57
Stringer plate	.69			Standard Round of Beam = $\frac{B \times 12}{50}$	13.68
Sheathing on exposed deck		(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Ship's Round of Beam	14.0
				Difference	.32
				Restricted to	
Depth for Freeboard (D) =	33.98	If restricted by superstructures		Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L})$	$\frac{.32}{4} \times \frac{55.5}{14} = .04$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)	
Pooh enclosed	116.08	116.08	7'-6"		116.08	Standard Height of Superstructure <i>7.5</i>
" overhang						" " R.Q.D.
R.Q.D. enclosed						Deduction for complete superstructure <i>4.2</i>
" overhang						Percentage covered $\frac{S}{L} =$ <i>45.45</i>
Bridge enclosed	32.08	32.08			32.08	" " $\frac{S_1}{L} =$ <i>44.72</i>
" overhang aft						" " $\frac{E}{L} =$ <i>44.72</i>
" overhang forward	2.58	1.29	8'-0"		1.29	Percentage from Table, Line A.
" enclosed	49.25	45.39	8'-0"		45.39	(corrected for absence of forecastle (if required))
" overhang	45.39	1.93			1.93	Percentage from Table, Line B. <i>Louker 35.72</i>
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than 2L (if required) <i>don't apply</i>
Tonnage opening aft						Deduction = $4.2 \times 35.72\% = 15.00$
" forward						
Total	199.99	196.77			196.77	

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P.	54.00	1		54.00	42.43	43.00	1		43.00	Mean actual sheer aft = <i>Defic</i>
1/2 L from A.P.	24.03	4		96.12	20.18	18.68	4		74.72	Mean actual sheer forward = <i>Defic</i>
2/3 L	5.94	2		11.88	6.25	4.67	2		9.34	
Amidships		4					4			Length of enclosed superstructure forward of amidships =
2/3 L from F.P.	11.88	2		23.76	14.11	11.90	2		23.80	" aft of "
1/2 L	48.06	4		192.24	47.5	47.60	4		190.40	
F.P.	108.00	1		108.00	108.09	109.00	1		109.00	
Total				486.00		450.26				

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( 75 - \frac{S}{2L} \right) = \frac{35.74}{18} (75 - .2272) + 1.04$

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.

	Ft.	
Depth to Freeboard Deck	33.98	
Summer freeboard	6.46	
Moulded draught (d)	27.52	
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches	6.88	
Addition for Winter North Atlantic Freeboard (if required)	4.4	

## Deduction for Fresh Water.

Displacement in salt water at summer load water line	$\Delta = 15280$
Tons per inch immersion at summer load water line	T = 50.2
Deduction = $\frac{\Delta}{40 T}$ inches	7.61

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

	+	-
Correction for coefficient	68 + 777	136
Depth Correction	13.95	
Deduction for superstructures	15.00	
Sheer correction	1.04	
Round of Beam correction	.04	
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
Summer Freeboard	77.61	

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

Tropical Fresh Water Line above Centre of Disc	14 1/2	
Fresh Water Line	7 1/2	
Tropical Line	7	
Winter Line below	7	
Winter North Atlantic Line	11 1/2	
Tropical Fresh Water Freeboard	5-3	
Fresh Water	5-10	
Tropical	5-10 1/2	
Winter	7-0 1/2	
Winter North Atlantic	7-5	

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MARKING FORM  
26 OCT 1932  
RECEIVEDMARKING FORM  
25 MAR 1933  
RECEIVEDMARKING FORM  
52 AUG 1932  
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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway	Forepeak	Fore Hold	Main Tanks	Sumner Tanks	Fore Pump Room	Fore Pump Coffden	In Roof Space to Oil Tank	In Roof Space to Oil Tank	In Roof Space to Oil Tank	In Roof Space to Oil Tank
Dimensions of Hatchway	2'0" x 1'6"	12'0" x 8'0"	6'0" x 4'0"	6'0" x 4'0"	4'0" x 2'10"	1'9" x 1'3"	3'0" x 2'6"	4'0" x 4'0"	4'0" x 4'0"	2'8" x 2'6"
COAMINGS	Height above Deck	6" (above wood deck)	24"	12"	24"	24"	20"	20"	18"	18"
	Thickness	9" x 3 1/2" x 4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"
	Stiffeners	BA	7 x 3 1/2 x 40 BA	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"
	Brackets, Stays									
HATCH BEAMS	Number									
	Spacing									
FORE AND AFTERS	Number		3							
	Spacing		2 1/2 x 2 1/2 x 38							
HATCH COVERS	Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Wood	Wood
	Thickness	50"	50"	50"	50"	50"	50"	50"	3"	3"
HATCH COVERS	How fitted	Hinged bolts	Hinged bolts	Hinged bolts	Hinged bolts	Hinged bolts	Hinged bolts	Hinged bolts	3"	3"
	Bearing Surface	Curved	Curved	Curved	Curved	Curved	Curved	Curved	3"	3"
Spacing of Cleats		18"	18"	18"	18"	18"	18"	18"	18"	18"
Number of Tarpaulins		2	2	2	2	2	2	2	2	2
<p>*Are wood fore and afters steel shod at all bearing surfaces? <input checked="" type="checkbox"/> Yes</p> <p>Are battens and wedges efficient and in good condition? <input checked="" type="checkbox"/> Yes</p> <p>Are tarpaulins in good condition and in accordance with rule requirements? <input checked="" type="checkbox"/> Yes</p> <p>Are lashings provided in accordance with rule requirements? <input checked="" type="checkbox"/> Yes</p>										

Particulars of fiddle, funnel and ventilator coamings:— *Stokehold gratings covered by strong steel covers*  
*Fiddle, funnel, & ventilators in efficient condition*  
*Engine Room skylight of steel, strongly constructed*

Particulars of Flush Bunker Scuttles:—

*None*

Particulars of Companionways:—

*Companion to lower forecabin, Starboard side, now being fitted with steel doors in lieu of wood, manipulated from both sides. Sill 10"*  
*Companion to accommodation below poop, door of wood strongly constructed manipulated both sides. Sill 15"*

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

*Forecabin 16 at 9" dia x 36" high x 7/16" thick to acc., 2 at 12" x 36" x 3/8" to acc., 4 at 15" x 21" x 1/2" to acc. & fore hold*  
*Fore Well deck 5 at 9" x 36" x 5/16" led to lower fore, fore hold, & fore pump room*  
*Aft Well deck 2 at 12" x 36" x 3/8" led to Pump Room*  
*Poop 12 at 9" x 36" x 5/16" to accommodation, 7 at 12" x 36" x 3/8" to engine space, 3 at 16" x 36" x 7/16" led to engine space, 1 at 14" x 18" high x 3/8" to accommodation below poop.*  
*All ventilators fitted with wood plugs & canvas covers*

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

*Forecabin 1 to Forepeak 4 1/2" dia x 15" high, no cover. 2 to fore deck 5 1/2" dia x 15" high with gauge wire*  
*Fore Well 2 to coffden 4" dia x 23" high with gauge wire*  
*Aft Well 2 to Coffden 4" dia x 16" high with gauge wire*  
*Poop 4 at 5" dia x 19" high to oil bunkers, with gauge wire*  
*3 at 3 1/2" dia x 18" high to feed water & aft peak tanks, no covers*  
*All heights of air pipes measured to openings*  
*Air pipes closed with canvas covers or wire gangs*

Particulars of Gangway Cargo and Coaling Ports:—

*None*



Particulars of Scuppers and Sanitary Discharge Pipes:—

*Forecastle* 1 soil & 1 wash drain with storm valves 10'0" below freeboard deck.  
*For. Well* 3 scuppers each side through gunwale bar  
*Midship* 2 soil, & 3 wash drains above freeboard deck.

*Aft Well* 4 scuppers each side through gunwale bar  
*Poof* 2 soil & 1 wash drain above freeboard deck.

1 soil, 3 wash drains, 2 meat room drains, 1 donkey boiler space scupper, 2 galley scuppers, and 4 deck scuppers, all discharging 8'0" below freeboard deck.

All the above scuppers and sanitary discharges are fitted with storm valves.

Particulars of Side Scuttles:—

*Forecastle* 12 side scuttles 11" dia 2'6" below foreck dk  
 5 side scuttles 11" dia 3'0" below freeboard dk

*Midship* 7 side scuttles 11" dia and 2 side scuttles 13" dia 2'6" below bridge deck.

*Poof* 15 side scuttles 11" dia, and 6 side scuttles 13" dia 2'6" below poof deck

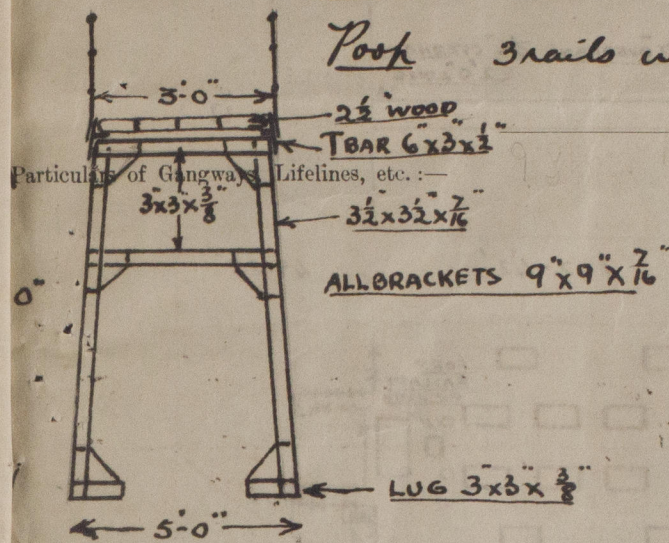
Fitted with hinged glass & deadlights of substantial construction

Fitted with hinged glasses of substantial construction no deadlights

Particulars of Guard Rails:—

*Forecastle* 3 rails with stanchions 42" high spaced 5'8"

*Poof* 3 rails with stanchions 42" high spaced 5'0"



*Fore & Aft Gangways*

*For. Well* dk 10 supports spaced about 7'6" apart

*Aft Well* dk 16 supports spaced about 8'0" apart

1 rail and two wires, with stanchions 42" high and spaced 6'0"

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 ...	140'-10"	4'-0"	3'-6" x 1'-6"	6		1110
Forward Well ...	102'-5" <i>100'99.84</i>	4'-0"	3'-6" x 1'-6"	5		100
State position of each freeing port (F. and A. position and height above deck edge) } After Well: 6'4", 132'8", 55'5", 85'0", 103'3", 122'4" State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: } Forward Well: 6'7", 28'10", 56'1", 72'1", 90'0" Additional area where sheer is less than standard. }						

Particulars of Superstructures, Trunks, Casings, Deckhouses.

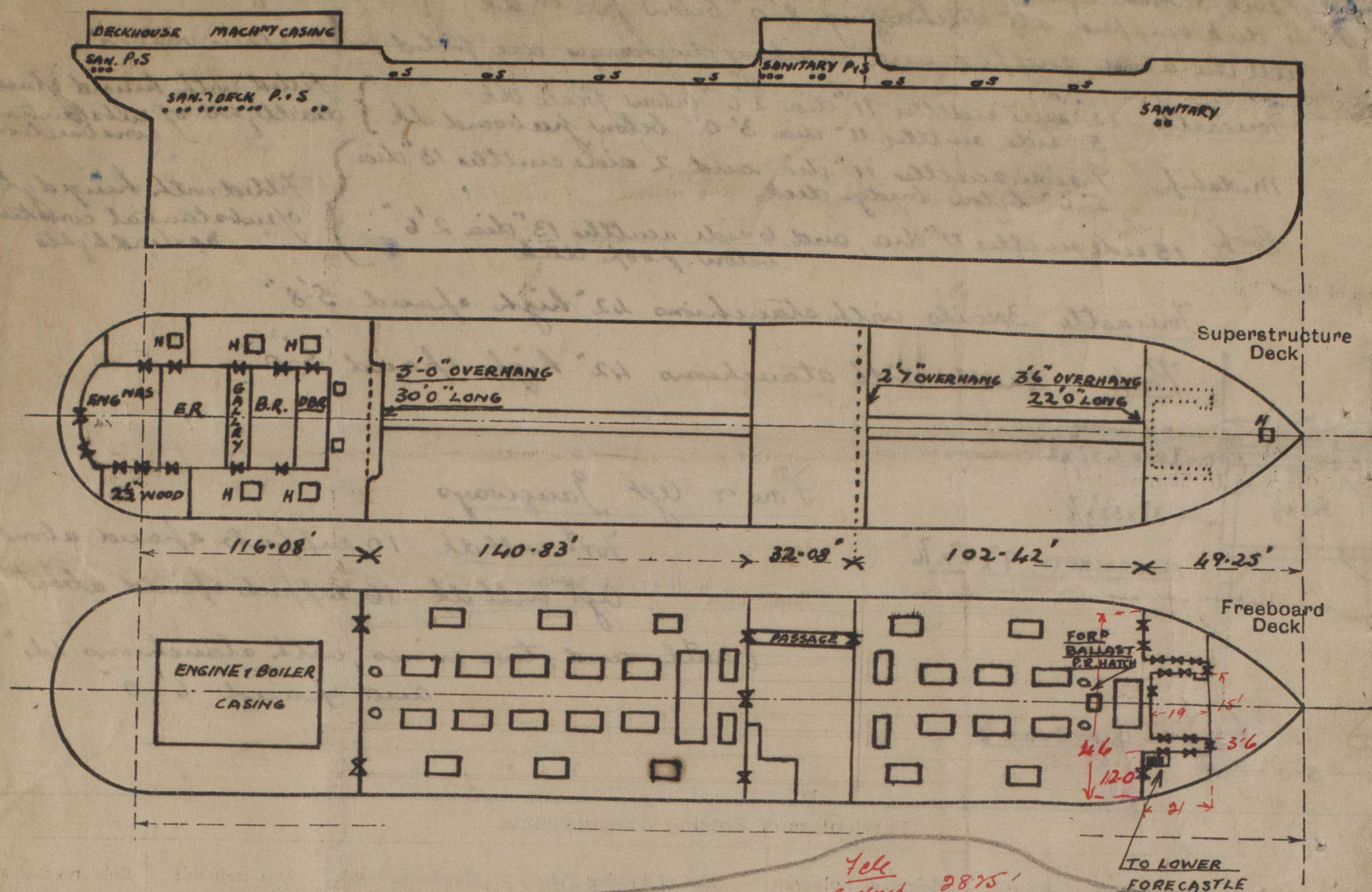
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poof Bulkhead ...	.50"	.45"	9" x 3 1/2" BA	2'-4"	Brackets Top & bottom	4'-0" x 3'-0"	18"	7'-6"
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...	.35"	.30"	3 x 3 x 5/16 OA	2'-6"	None	5'-0" x 2'-6" 4'-0" x 3'-0"	19"	8'-0"
Bridge, Forward Bulkhead ...	.45"	.40"	9" x 3 1/2" BA	2'-6"	Brackets T & B.	5'-0" x 2'-6" 5'-0" x 2'-1"	17" 18"	8'-0"
Forecastle Bulkhead ...	—	.35"	2 1/2" x 2 1/2" OA	2'-4"	None	5'-8" x 2'-1"	10"	8'-0"
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	.35"	.35"	3 1/2 x 2 1/2 x 3/8	2'-0"	Brackets Top	5'-0" x 2'-0"	13"	6'-5"
Exposed Machinery Casings on Superstructure Decks ...	—	.40"	5" x 3 1/2" x 7/16	5'-4"	None	5'-4" x 2'-0"	15"	8'-0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	.50"	.40"	5" x 3 1/2" x 7/16	5'-4"	None	None	—	7'-6"
Deckhouses on Flush Deck Ships ...								

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poof Bulkhead ...	Storm boards full height in rivetted channels
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead ...	Steel W.T. hinged doors, manipulated both sides & storm boards full height in rivetted channels
Bridge, Forward Bulkhead ...	Steel W.T. hinged door manipulated both sides
Forecastle Bulkhead ...	Wood doors, hinged, & manipulated both sides
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	Steel hinged door, manipulated both sides by two turnbuckles
Exposed Machinery Casings on Superstructure Decks ...	Steel hinged doors manipulated both sides
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	
Deckhouses on Flush Deck Ships ...	



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:—



$$\begin{array}{r} 406 \\ \text{Enclosed } 2875 \\ 19 \times 39 = 1610 \\ 46 \\ 22 \times 24 = 104 \\ 46 \\ \hline 4539 \end{array}$$

$$\begin{array}{r} \text{overhang } 49.25 \\ 45.39 \\ \hline 386 \end{array}$$

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

*Keel surveyed in dry dock for Condition Survey*  
*The following work is now in hand attributable to Convention Foreboard Assignment:—*

*Hinged steel door, manipulated from both sides, in lieu of hard wood, to companion way to lower forecabin*

*Forward cargo hatch of steel plate in lieu of wood (plan herewith)*

*Two additional turnbuckles to hinged steel door to Pump Room*

*Alterations to bulwarks (as per plan herewith)*

*Steel W.T. door manipulated both sides, to after end of Engineers Accommodation*

OMIT

Builder's name and yard number *W. Beardmore & Co. Ltd*

Names of sister ships *This report refers to S.S. "British Merchant"*

Owners *British Tanker Co. Ltd*

Fee £ *14* : *9* : *0*

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