

Rpt. C.11.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

APR 1932

Index. No. 30545
(For London Office only.)

14 APR 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Poop, Bridge, & Forecastle.

Port of Survey GRANGEMOUTH

Date of Survey 11th APRIL 1932

Name of Surveyor J. Thurnan

Particulars of Classification + 100 AI
CARRYING PETROLEUM IN BULK.

Ship's Name BRITISH ADVOCATE.
Nationality and Port of Registry BRITISH LONDON
Official Number 146629
Gross Tonnage 6994
Date of Build 1922-9

Dimensions: Length 439.4 Breadth 56.75 Depth 33.11
displacement at moulded draught = 85 per cent. of moulded depth 16180 tons
ient of fineness for use with Tables 788

Depth for Freeboard (D)

Depth correction

Round of Beam correction

Moupth ... 33.92
Strinate ... 5/805
Sheatn exposed deck
(S) =

(a) Where D is greater than Table depth
(D - Table depth) R =
(33.97 - 29.29) x 3.0 = +14.04
(b) Where D is less than Table depth (if allowed)
(Table depth - D) R =

Moulded Breadth (B) 56.75
Standard Round of Beam = $\frac{B \times 12}{50} = 13.82$
Ship's Round of Beam = 14
Difference .38
Restricted to
Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{.38}{4} (1 - .4418) = .0552$

Depth for Freeboard (D) = 33.97

If restricted by superstructures

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	113.0	113.00	8.0	✓	113.00
overhang ...	5.4 AT CENTRE 5.4 AT SIDES	.12			.12
R.Q.D. enclosed ...					
overhang ...					
Bridge enclosed ...	32.3	32.25	8.0	✓	32.25
overhang aft ...	12	.75			.75
overhang forward ...	12	.50			.50
Pole enclosed ...	45.7	45.71	8.0	✓	45.71
overhang ...	4.4 AT CENTRE 4.4 AT SIDES	1.77			1.77
Trunk aft ...	3.54				
forward ...	✓				
Tonnage opening aft ...	✓				
forward ...	✓				
Total ...	196.75	194.10			194.10

Standard Height of Superstructure 7'-6"
R.Q.D. ✓
Deduction for complete superstructure 42.00
Percentage covered $\frac{S}{L} = 44.78$
 $\frac{S_1}{L} = 44.18$
 $\frac{E}{L} = 44.18$
Percentage from Table, Line A.
(corrected for absence of forecastle (if required))
Percentage from Table, Line B. 35.18
(corrected for absence of forecastle (if required))
Interpolation for bridge less than 2L (if required) TANKER.
Deduction = $42.00 \times 35.18 = 14.78$

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	53.94	1	53.94	60	60	1	60.00
1/4 L from A.P. ...	24.00	4	96.00	27	26.66	4	106.64
1/2 L " ...	5.93	2	11.86	6 1/2	6.66	2	13.32
Amidships ...	-	4	-	-	-	4	-
3/4 L from F.P. ...	11.87	2	23.74	12	12.19	2	24.38
3/4 L " ...	48.00	4	192.00	48 1/2	48.78	4	195.12
F.P. ...	107.88	1	107.88	108	108.0	1	108.00
Total ...			485.42				507.46

Mean actual sheer aft = excess
Mean standard sheer aft

Mean actual sheer forward = excess.
Mean standard sheer forward

Length of enclosed superstructure forward of amidships =
L
aft of " = } TANKER.

Correction = $\frac{\text{Difference between sums of products}}{18} (75 - \frac{S}{2L}) = \frac{22.04}{18} (75 - \frac{2239}{5261}) = -.64$
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.

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Depth to Freeboard Deck = 33.97
Summer freeboard = 6.40
Moulded draught (d) = 27.57

Tons per inch immersion at summer load water line

T = 50.05

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 6.89

Addition for Winter North Atlantic Freeboard (if required) = 4.39 = 4 1/2

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

= 7.73 = 7 3/4

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{788 + 68}{1.36} = 1.468$

Depth Correction ... 14.04
Deduction for superstructures ... 14.78
Sheer correction64
Round of Beam correction05
Correction for Thickness of Deck amidships ...
Other corrections, scantlings, etc. ...

Summer Freeboard = 76.66

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'-2"
Fresh Water " " ... 5'-9"
Tropical " " ... 5'-9 3/4"
Winter " " ... 6'-11 1/2"
Winter North Atlantic " " ... 7'-4 1/2"

116 APR 1932

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
UPPER DK. FO'LE DK.									
Description of Hatchway	No. 1	FORD PUMP	HATCH TO						
Dimensions of Hatchway	UPPER DK	ROOM HATCH	FO'LE STORE						
COAMINGS	Two @ 7'-0" x 4'-6"	4'-0" x 2'-8"	2'-5" x 2'-2"						
Height above Deck	30"	30"	15"						
Thickness	44"	44"	34"						
Stiffeners	✓	✓	✓						
Brackets, Stays	✓	✓	✓						
HATCH BEAMS									
Number	✓	✓	✓						
Spacing									
Scantling and Sketch									
Bearing Surface									
FORE AND AFTERS									
Number	✓	✓	✓						
Spacing									
Unsupported Lengths									
Scantling* and Sketch									
Bearing Surface									
HATCH COVERS									
Material	W.T. STEEL	W.T. STEEL	W.T. STEEL						
Thickness	COVER	COVER	COVER						
How fitted	50 THK.	60 THK.	50 THK.						
Bearing Surface	STIFFENED								
Spacing of Cleats	SECURED BY TOOGLES	16" APART.							
Number of Tarpaulins	✓	✓	✓						

OILTIGHT HATCHES TO CARGO OIL TANKS ✓

20 @ 6'-0" x 4'-0". COAMINGS 50 THK. ✓

COVERS 60" THK. ✓

OILTIGHT HATCHES TO SUMMER TANKS ✓

10 @ 6'-0" x 4'-0". COAMING 50 THK. ✓

COVER 60 THK. ✓

OILTIGHT HATCHES IN POOP SPACE

TWO @ 3'-0" x 3'-0" } COAMING 50 THK. ✓

TWO @ 3'-6" x 3'-0" } COVER 60 THK. ✓

W.T. STEEL

COVER

50 THK.

STIFFENED

W.T. STEEL

COVER

60 THK.

W.T. STEEL

COVER

50 THK.

SECURED BY TOOGLES

16" APART.

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

Are battens and wedges efficient and in good condition ?

Are tarpaulins in good condition and in accordance with rule requirements ?

Are lashings provided in accordance with rule requirements ?

Particulars of fiddley, funnel and ventilator coamings:—

STAKEHOLD GRATINGS COVERED BY STRONG STEEL HINGED COVERS ✓

FIDLEY, FUNNEL, & VENTILATORS IN EFFICIENT CONDITION. ✓

ENGINE SKYLIGHT OF STEEL, STRONGLY CONSTRUCTED. ✓

MINOR HATCHES

Particulars of ~~Flash~~ Bunker Scuttles:—

ON POOP DECK.

FOUR @ 4'-0" x 4'-0", TWO @ 3'-0" x 2'-10", COAMINGS 30" x 34", COVERS 3", BEARING SURFACE 3" ✓
ONE @ 2'-6" x 2'-6", COAMING 15" x 34", COVERS 3", BEARING SURFACE 3". ✓
ALL WITH CLEATS 2'-0" APART & TWO TARPULINS. ✓

ALL WITH CLEATS 2'-0" APART & TWO TARPAULINS.

Particulars of Companionways :—

ONE STEEL PUMP ROOM ENTRANCE 19'-6" x 10'-0" x 7'-0" HIGH ON UPPER DECK. MECHAN TYPE W.T. STEEL DOOR WITH 18" SILL. DOOR OPERATED FROM BOTH SIDES. ✓

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

TWO VENTS ON FORECASTLE ~~DOCK~~ 15" DIA. COAMING 36" x 34" LED TO CREW SPACE -

[illegible]

FOURTEEN " " " " 8 " " " " 36' x 32' " " GREW SPACE. ✓
TWO " " " " 6 " " " " 36' x 32' " " " "

[illegible]

12' 36" 32" FORD. Pump Room

ALL CONSTRUCTED IN ACCORDANCE WITH THE RULES & COAMINGS CLOSED WITH

Particulars of Air Pipes in exposed positions on fore and main masts.

VENTS ON POOP DECK.

TWO 12" DIA. COAMING 36" x 32" LED TO POOP SPACE. -

Four 18" " " 30' x 34' " - MACHINERY SPACE -
Two 9" " " 30' " "

THREE 9 " " 30" x 32" " " TWEEN DECK. ✓
EIGHT 6 " " 30" x 32" " " TWEEN DECK. ✓

30 x 30" " " CREW SPACE. ✓

8. PILES & CANVAS CLOTH ✓

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

ONE W.I. AIR PIPE ON FORECASTLE HEAD 11" HIGH X 3 1/2" DIA. FROM FORE PEAK.
TWO W.I. " " " UPPER DECK 24" " " "

TWO W.I. " " " " " 25" " 1 3/4" " " DEEP TANK.

ONE W.I. " " " " " 36 15" 3 1/2" 1" COFFERDAM
T.I. " " " " " " 11 1/2" " " " "

25" x 3" COFFERDAM

POOP DECK AIR PIPES.

TWO AIR PIPES 13" HIGH x 3½" DIA. TO D.B. OIL FUEL TANK

Two " " 25" " x 3 1/2" " " FEED TANK.

ONE " " 18" " x 4" " " AFT PEAK TANK.

~~NO PLUGS OR CANVAS COVERS. FITTED.~~

All air pipes can be
efficiently closed.

Particulars of Gangway Cargo and Coaling Ports:—

NONE.

Particulars of Scuppers and Sanitary Discharge Pipes —
SOIL PIPE FROM FORECASTLE SPACE FITTED WITH S.V. ON SHELL & TRAP AT TOP. ✓

SIDE SCUTTLES IN FORE PEAK ROOM, UNDERSIDE OF LIGHT 20" BELOW UPPER DECK, FITTED WITH HINGED DEADLIGHTS. ✓
SIDE SCUTTLES IN FORECASTLE SIDES & AFT END, & IN SIDES & ENDS OF BRIDGE SPACE FITTED WITH DEADLIGHTS. ✓
SIDE SCUTTLES IN POOP, FITTED WITH DEADLIGHTS. ✓

ALL SCUTTLES OF SUBSTANTIAL CONSTRUCTION. ✓

particulars of Guard Rails:—

Location	Height	Roos & Stanchions	Spaced
FORECASTLE DECK	3'-6" HIGH	3 ROOS & STANCHIONS	5'-3" APART.
" POOP	3'-6" "	3 " " "	4'-6" "

GUARD RAILS & BULWARKS ON UPPER DECK 4'-0" HIGH. (SEE SKETCH).

Particulars of Gangways, Lifelines, etc. :- GANGWAY FITTED FROM POOP TO BRIDGE & FROM BRIDGE TO FORECASTLE, EFFICIENTLY SUPPORTED, HAVING STANCHIONS & TWO STEEL WIRES EACH SIDE. ✓
(SKETCH OVERLEAF.)

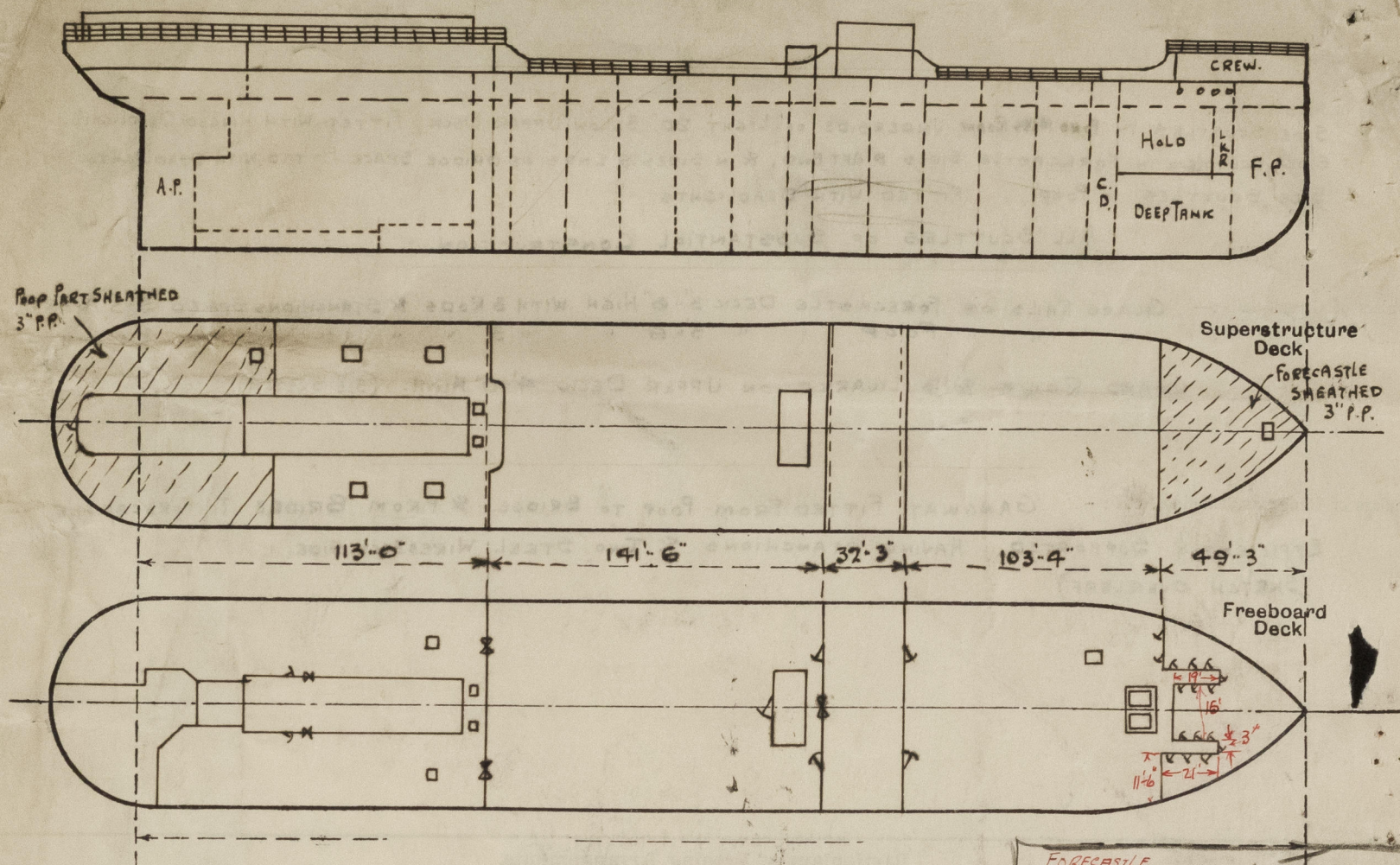
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	149'-3" 141'-6"	4'-0" ✓				50% ✓
Forward Well	102'-4" 103'-4"	4'-0" ✓				50% ✓
State position of each freeing port (F. and A. position and height above deck edge)			After Well :— FROM P.O.P. BULKHEAD TO FORE END OF FREEING PORT 11'-5", 28'-0", & 116'-3". Forward Well :— " BRIDGE FRONT " " " " " " 88'-10".			
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :—			13" ABOVE DECK FITTED WITH TWO BARS. ✓			
Additional area where sheer is less than standard.						

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	·44" -	·40" -	9" 3 1/2" x 60 B.A.	3'-0" -	BRACKETS	2 @ 5'-0" x 3'-1"	18" -	8'-0"
Raised Quarter Deck Bulkhead ...	·44" -	·40" -	9" 3 1/2" x 60 B.A.	3'-0" -	BRACKETS	2 @ 5'-0" x 3'-1"	18" -	8'-0"
Bridge, After Bulkhead	✓	·28" -	4 1/2" FLANGE	4'-2" -	✓	2 @ 5'-0" x 2'-9" 1 @ 6'-0" x 3'-0"	18" - 9" -	8'-0"
Bridge, Forward Bulkhead	·44" -	·40" -	9" 3 1/2" x 60 B.A.	2'-6" -	BRACKETS.	1 @ 5'-0" x 2'-9"	18" -	8'-0"
Forecastle Bulkhead	✓	·26" -	3 1/2" FLANGE	3'-3" -	✓	5'-0" x 2'-0"	18" -	8'-0"
Trunk, Aft	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Forward	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Superstructure Decks ... ON POOP ...	✓	·32" -	3 1/2" x 3" x 30"	2'-8" -	✓	5'-0" x 2'-0"	18" -	8'-0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	·32" -	3 1/2" x 3" x 30"	2'-8" -	✓	4'-6" x 2'-0" 8' 2'-0" x 1'-6"	18" - 3'-6" -	8'-0"
PUMP ROOM ENTRANCE	✓	·34" -	4" x 3" x 32"	2'-2" -	✓	5'-0" x 2'-6"	18" -	7'-0"
Deckhouses on Flush Deck Ships ...	✓	✓	✓	✓	✓	✓	✓	✓

Poop Bulkhead	TWO PORTABLE STEEL PLATES WITH HOOKED BOLTS 20' APART NOT PASSING THROUGH BULKHEAD. ✓
Raised Quarter Deck Bulkhead ... ✓	TWO MECHAN TYPE W.T. DOORS (HINGED). MANIPULATED BOTH SIDES ✓
Bridge, After Bulkhead	ONE WITH SHIFTING BOARDS IN CHANNELS RIVETED TO BULKHEAD. FULL HEIGHT OF OPENING. ✓
Bridge, Forward Bulkhead	ONE MECHAN TYPE HINGED W.T. DOOR. MANIPULATED BOTH SIDES. ✓
Forecastle Bulkhead	HINGED STEEL DOORS Do. WOOD Do. TEAK 1 1/2" Do. Do. Do. ✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	HINGED STEEL DOORS. MANIPULATED BOTH SIDES. ✓
Exposed Machinery Casings on Superstructure Decks	HINGED STEEL DOORS. MANIPULATED BOTH SIDES. ✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	TWO OPENINGS 2'-0" x 1'-6" COVERED WITH WIRE MESH. ✓
PUMP ROOM ENTRANCE ...	MECHAN TYPE HINGED W.T. DOOR MANIPULATED BOTH SIDES. ✓
Deckhouses on Flush Deck Ships ...	

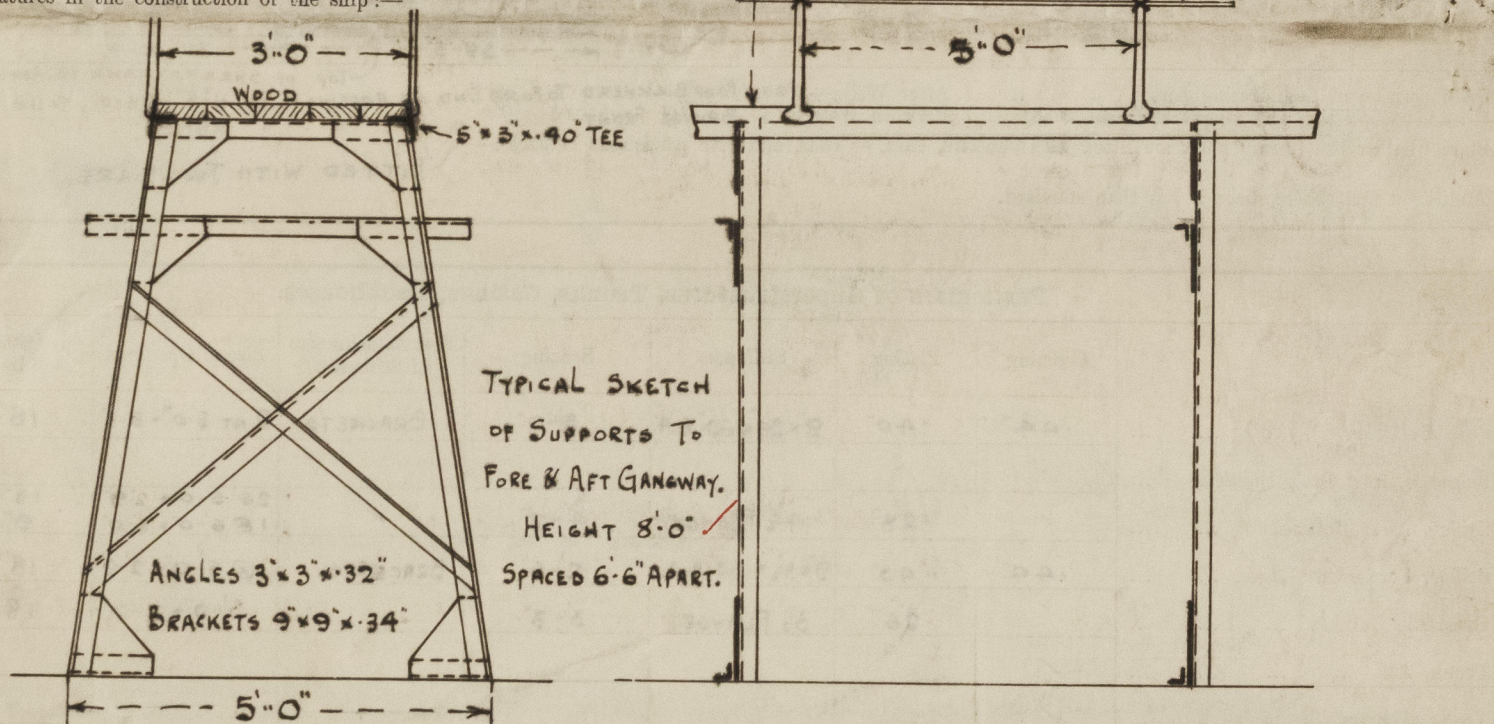
British Adroca

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 shewn on the following sketches:—



FORECASTLE.
ENCLOSED.
21x11.5
22 19x11.5
44
38.25
10.98
6.48
45.71 = 3.54 OVERHANG

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



Builder's name and yard number SIR J. LAING & SONS, LTD., SUNDERLAND. YARD N^o 683.
Names of sister ships NONE
Owners BRITISH TANKER CO., LTD. LONDON.
Fee £ 14 : 9 : 0 Received by me OMT
EXPENSES 14 - 6



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