

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.Index. No. 32433
(For London Office only.)
No. 12494

Computation of Freeboard for <u>Steamer, Sailing Ship, Tanker</u>						Port of Survey <u>Amsterdam</u>
having <u>Pop Bridge and Forecastle</u>						Date of Survey <u>28 December 31</u>
(Type of Superstructures.)						Name of Surveyor <u>H. P. Jonker</u>
Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build	Particulars of Classification	
<u>M.V. SPONDILUS</u>	<u>British London</u>	<u>149880</u>	<u>7402</u>	<u>1924</u> <u>9 Sept.</u>	<u>+100 A1</u> <u>Carrying petroleum in bulk</u>	
Moulded Dimensions: Length <u>440</u> Breadth <u>59</u> Depth <u>32.75</u>						
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>16800</u> tons						
Coefficient of fineness for use with Tables <u>.814</u> (<u>16,650 m³</u>)						

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>32.75</u>	(a) Where D is greater than Table depth (D-Table depth) R = <u>✓</u>	Moulded Breadth (B) <u>59-0</u>
Stringer plate <u>.006</u>	(32.81 - 29.33) x 3. = <u>+ 10.44</u>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{14.16}{50} = \underline{14.16}$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ <u>✓</u>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Ship's Round of Beam = <u>14.75</u>
Depth for Freeboard (D) = <u>32.81</u>	If restricted by superstructures	Difference <u>.59</u>
		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.59^2}{4} \times .5534 = \underline{.08}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Pop enclosed	<u>98-6"</u>	<u>98.50</u>	<u>4-6"</u>	<u>✓</u>	<u>98.50</u>	Standard Height of Superstructure <u>7.50</u>
" overhang						" " R.Q.D. <u>✓</u>
R.Q.D. enclosed						Deduction for complete superstructure <u>42.00</u>
" overhang						Percentage covered $\frac{S}{L} = \frac{45.63}{44.66} = \underline{44.66}$
Bridge enclosed	<u>34-0"</u>	<u>34.00</u>	<u>7-9"</u>	<u>✓</u>	<u>34.00</u>	" " $\frac{S_1}{L} = \frac{44.66}{44.66} = \underline{44.66}$
" overhang aft	<u>3-0"</u>	<u>2.25</u>			<u>2.25</u>	" " $\frac{E}{L} = \frac{44.66}{44.66} = \underline{44.66}$
" overhang forward	<u>3-0"</u>	<u>1.50</u>			<u>1.50</u>	Percentage from Table, Line A.
" cle enclosed	<u>58-3"</u>	<u>58.25</u>	<u>7-9"</u>	<u>✓</u>	<u>58.25</u>	(corrected for absence of forecastle (if required))
" overhang	<u>4-0"</u>	<u>2.00</u>			<u>2.00</u>	Percentage from Table, Line B. <u>Tanker</u> <u>35.66</u>
" trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than 2L (if required)
" tonnage opening aft						Deduction = <u>42.00</u> x <u>.3566</u> = <u>- 14</u>
" " forward						
Total	<u>200.75</u>	<u>196.50</u>			<u>196.50</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product	
A.P.	<u>54.00</u>	<u>1</u>	<u>54.00</u>	<u>54"</u>	<u>54.00</u>	<u>1</u>	<u>54.00</u>	Mean actual sheer aft = <u>Excess.</u>
1/4 L from A.P.	<u>24.03</u>	<u>4</u>	<u>96.12</u>	<u>24"</u>	<u>24.03</u>	<u>4</u>	<u>96.12</u>	Mean actual sheer forward = <u>Deficient.</u>
1/2 L "	<u>5.94</u>	<u>2</u>	<u>11.88</u>	<u>6.5"</u>	<u>5.94</u>	<u>2</u>	<u>11.88</u>	Mean standard sheer forward
Amidships	<u>-</u>	<u>4</u>	<u>-</u>	<u>0"</u>	<u>-</u>	<u>4</u>	<u>-</u>	Length of enclosed superstructure forward of amidships = <u>Tanker</u>
3/4 L from F.P.	<u>11.88</u>	<u>2</u>	<u>23.76</u>	<u>12"</u>	<u>12.00</u>	<u>2</u>	<u>24.00</u>	" " aft of " = <u>Does not apply.</u>
1/4 L "	<u>48.06</u>	<u>4</u>	<u>192.24</u>	<u>44.8"</u>	<u>44.80</u>	<u>4</u>	<u>199.20</u>	
F.P.	<u>108.00</u>	<u>1</u>	<u>108.00</u>	<u>102"</u>	<u>102.00</u>	<u>1</u>	<u>102.00</u>	
Total			<u>486.00</u>				<u>467.20</u>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{18.80}{18} \times (.75 - .228) = \underline{+ .55}$

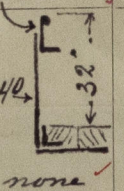
If limited on account of midship superstructure. ✓

If limited to maximum allowance of 1 1/2 ins. per 100 ft. ✓

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient
Depth to Freeboard Deck = <u>32.81</u>	$\Delta = \underline{15,940}$	Depth Correction <u>10.44</u>
Summer freeboard = <u>6.30</u>	Tons per inch immersion at summer load water line	Deduction for superstructures <u>14.98</u>
Moulded draught (d) = <u>26.51</u>	T = <u>54.4</u>	Sheer correction <u>.55</u>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{\Delta}{40T}$ inches = <u>6.63</u>	Deduction = $\frac{\Delta}{40T}$ inches = <u>7.33</u>	Round of Beam correction <u>.08</u>
Addition for Winter North Atlantic Freeboard (if required) = <u>4.40</u>		Correction for Thickness of Deck amidships <u>-</u>
		Other corrections, scantlings, etc. <u>-</u>
		10.99 15.06 - 4.04
		Summer Freeboard = <u>45.54</u>

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—			
Tropical Fresh Water Line above Centre of Disc	<u>14</u> ... <u>14</u>	Tropical Fresh Water Freeboard	<u>5-1 1/2"</u>
Fresh Water Line " "	<u>7 1/4</u> ... <u>7 1/4</u>	Fresh Water " "	<u>5-8 1/4"</u>
Tropical Line " "	<u>6 3/4</u> ... <u>6 3/4</u>	Tropical " "	<u>5-8 1/4"</u>
Winter Line below " "	<u>6 3/4</u> ... <u>6 3/4</u>	Winter " "	<u>6-10 1/4"</u>
Winter North Atlantic Line " "	<u>11 1/4</u> ... <u>11 1/4</u>	Winter North Atlantic " "	<u>7-2 1/4"</u>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway		To Cargo and wing tanks	FORWARD and COFFERDAM	AFTER and COFFERDAM	To Settling tanks	Cross bunker	To forward deep tank	To fore space	To fore space	To Poop space
Dimensions of Hatchway		6-0 x 4-0	30 x 24	30 x 24	24 x 18	45 x 20	10-0 x 9-0	24 x 24	5-0 x 3-0	3-0 x 3-0
COAMINGS	Height above Deck	5	Z	Z	5		32	9	5	5
	Thickness	9 x 3 1/2 x .50	8 x 3 1/4 x .40 x .52		9 x 3 1/2 x .50		above wood deck .40	12 x 3 1/2 x .50	9 x 3 1/2 x .50	9 x 3 1/2 x .50
	Stiffeners	none	none	none	none	none	9 x 3 1/2 x .50	none	none	none
	Brackets, Stays									
HATCH BEAMS	Number									
	Spacing									
	Scantling and Sketch	none	none	none	none	none		none	none	none
Bearing Surface										
FORE AND AFTERS	Number									
	Spacing									
	Unsupported Lengths									
	Scantling* and Sketch	none	none	none	none	none	none	none	none	none
Bearing Surface										
HATCH COVERS	Material	steel	steel	steel	steel	steel	steel	steel	steel	steel
	Thickness	.50	.40	.40	.40	.40	.50	.50	.50	.50
	How fitted	W.T. hinged cover	W.T. hinged cover	W.T. hinged cover	W.T. hinged cover	W.T. hinged cover	W.T. hinged cover	W.T. hinged cover	W.T. hinged cover	W.T. hinged cover
	Bearing Surface									
Spacing of Cleats			all steel W.T. covers stiffened as required							
Number of Tarpaulins		none	none	none	none	none	none	none	none	none
*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 fiddle, funnel and ventilator coamings:—

Fiddle on casing top 4'-2" x 3'-0" angle coaming L 3 x 3 x .28 steel cover .24 permanently attached in their proper position
 On casing top 4 ventilators 4'-6" x 3'-0" diam x .44, and 4 ventilators 3'-8" x 2'-0" diam x .40 to boiler motors
 On Poop deck 3 ventilators 3'-6" x 2'-0" diam x .40 and 4 ventilators 1'-0" x 1'-2" diam x .32 to Poop space
 On deck 15 ventilators 1'-4" x 8" diam x .32 to accommodation engineers on top of Poop deck

COMPANIONWAYS

Particulars of Flush Bunker Scuttles:—

On Foreboard deck: to pump room W.T. steel door 4'-6" x 1'-9" (in fore castle bulkhead) coaming 23 1/2" high
 " " " " to forward hold W.T. steel door 4'-6" x 1'-9" (" " " ") coaming 23 1/2" high
 " " " " to midships pump room W.T. steel door 4'-6" x 2'-3" (in steel deck house) coaming 18" high
 On Poop deck: to poop space steel door 5'-0" x 2'-0" coaming 19" one on SB & PS in deck house on Poop deck
 " " " " to boiler room in exposed position on SB one W.T. steel door 5'-0" x 2'-0" coaming 15" above wood deck (wood only fitted on SB side above a engineers cabin in Poop space)
 " " " " to boiler room in exposed casing on PS. one steel door 5'-0" x 2'-0" coaming 18" high
 Particulars of Companionways: to poop space steel door 5'-0" x 2'-0" coaming 16" above wood deck on SB side

PARTICULARS OF VENTILATORS IN EXPOSED POSITION ON FREEBOARD AND SUPERSTRUCTURE DECK

ON FORECASTLE DECK: above wood deck: 16 ventilators 16" x 8" diam x .30 to fore castle space
 2 ventilators 35" x 15" diam x .36 to forward hold One ventilator 23" x 12" diam x .32 to pump room and one ventilator 22" x 12" diam x .32 to space above fore peak tank
 3 goosenecks 9" x 4" diam 9" to W.C. and wash place. Run in fore castle space

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

On Bridge deck: above wood deck: 6 ventilators 15" x 8" diam x .36 to store rooms in bridge space
 Poop deck: 10 ventilators 20" x 8" diam x .30 to steering house, W.C.'s, store room etc in Poop space
 " " " " 2 ventilators 38" x 22" diam x .40 to motor room and one ventilator 25" x 11 1/2" diam x .32 to workplace in poop space
 On FREEBOARD DECK: two ventilators 5'-0" x 3'-0" diam 144 to midships pump room
 All ventilators closed by steel mushrooms screwed down and canvas covers

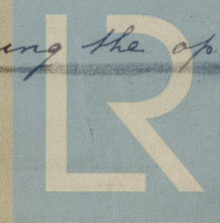
Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—

On Fore castle deck: one air pipe 16" x 5" diam to fore peak tank
 On Freeboard deck: to forward cofferdam one air pipe 3'-0" x 3 1/2" and 3 of 2'-2" x 3 1/2" diam
 : to forward deep tank two air pipes 3'-0" x 4 1/2" diam, to after cofferdam
 : three 3'-3" x 3 1/2" diam, to double bottom tanks, cross bunker and settling tanks
 6 of 6'-6" x 3" diam, to double bottom tanks 7 of 2'-7" x 3" diam
 On Poop deck: two to cross bunker 2'-6" x 4 1/2" diam, to double bottom tanks 7 of 2'-7" x 3" diam

Particulars of Gangway Cargo and Coaling Ports:—

On FREEBOARD DECK: to each cargo and wing tank one ullage pipe and one sounding pipe 12 x 3 1/2 diam closed with steel plug

The air pipes have no means for closing the opening



© 2020

Lloyd's Register Foundation

Particulars of Scuppers and Sanitary Discharge Pipes

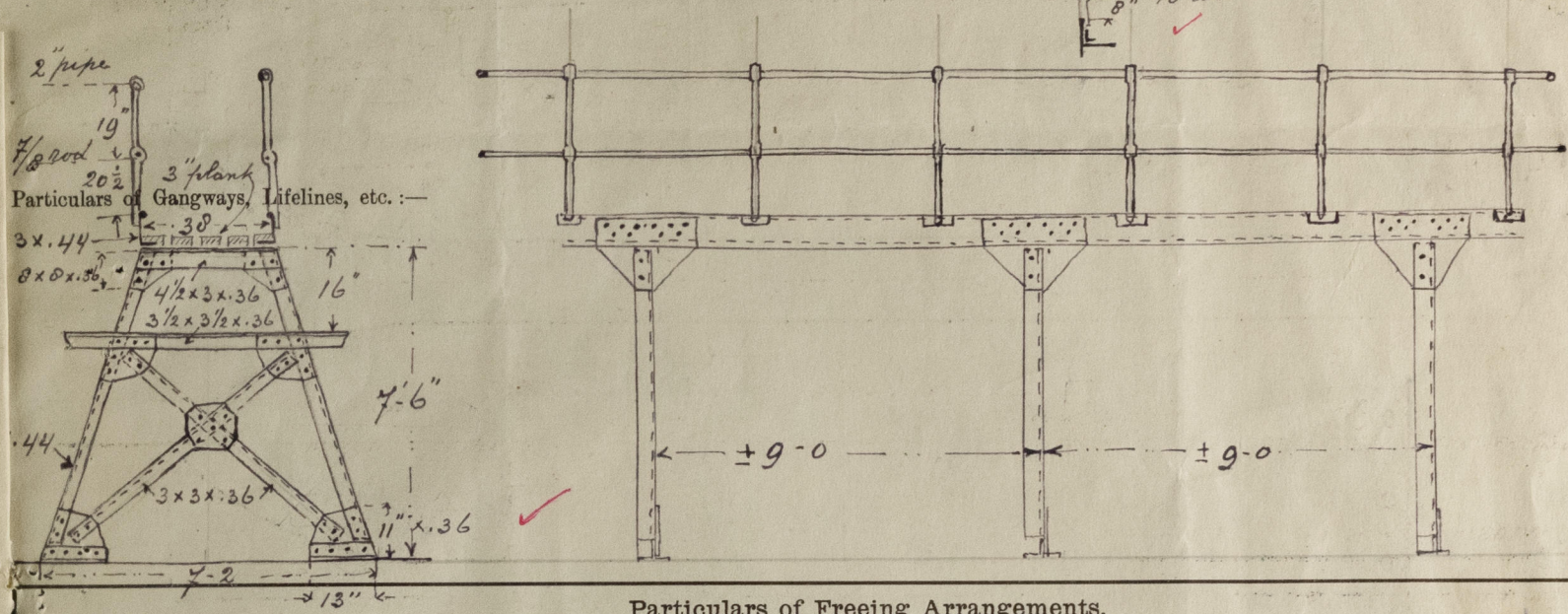
Upper deck scuppers all discharge below deck
W.C.'s Crew in Fore castle space: discharged through shipside below freeboard deck, one storm valve fitted
W.C. Placers Crew in Fore castle space: discharged through shipside below freeboard deck without storm valve
~~W.C. Officers on bridge deck: discharged through shipside in bridge space above freeboard deck.~~
~~one storm valve fitted, wash places discharged through shipside in bridge space above freeboard deck without storm valves.~~

Particulars of Side Scuttles

W.C.'s engineers in Poop space ~~and on Poop deck~~ discharged through shipside below freeboard deck, one storm valve fitted
Wash places discharges through shipside below freeboard deck, without storm valve

SIDE SCUTTLES to spaces below the superstructure deck are fitted with efficient inside dead lights, permanently attached in their proper position so that they can be effectively closed and secured watertight. Storm valves fitted to all scuppers for Poop (Bom. 7/1/42)

Particulars of Guard Rails:— on superstructure deck open rail



Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
<u>Length of</u>			<u>see sketch</u>			
After Well ... 151'-0"	151'-0" 148'-0"	3-6	3.25 x 1.92 3.66 x 1.92	✓ 5	131.93 41.38	50 % open rail
Forward Well 98'-3"	98'-3" 91'-3"	3-6	3.25 x 1.92 3.66 x 1.92	✓ 4	82.57 34.34	50 % open rail

State position of each freeing port ... After Well:— see sketch Height of freeing ports 12 1/2' above deck
(F. and A. position and height above deck edge) Forward Well:— see sketch Height of freeing ports 12 1/2' above deck
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— bars, spaced 10" centre to centre (vertical)
Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

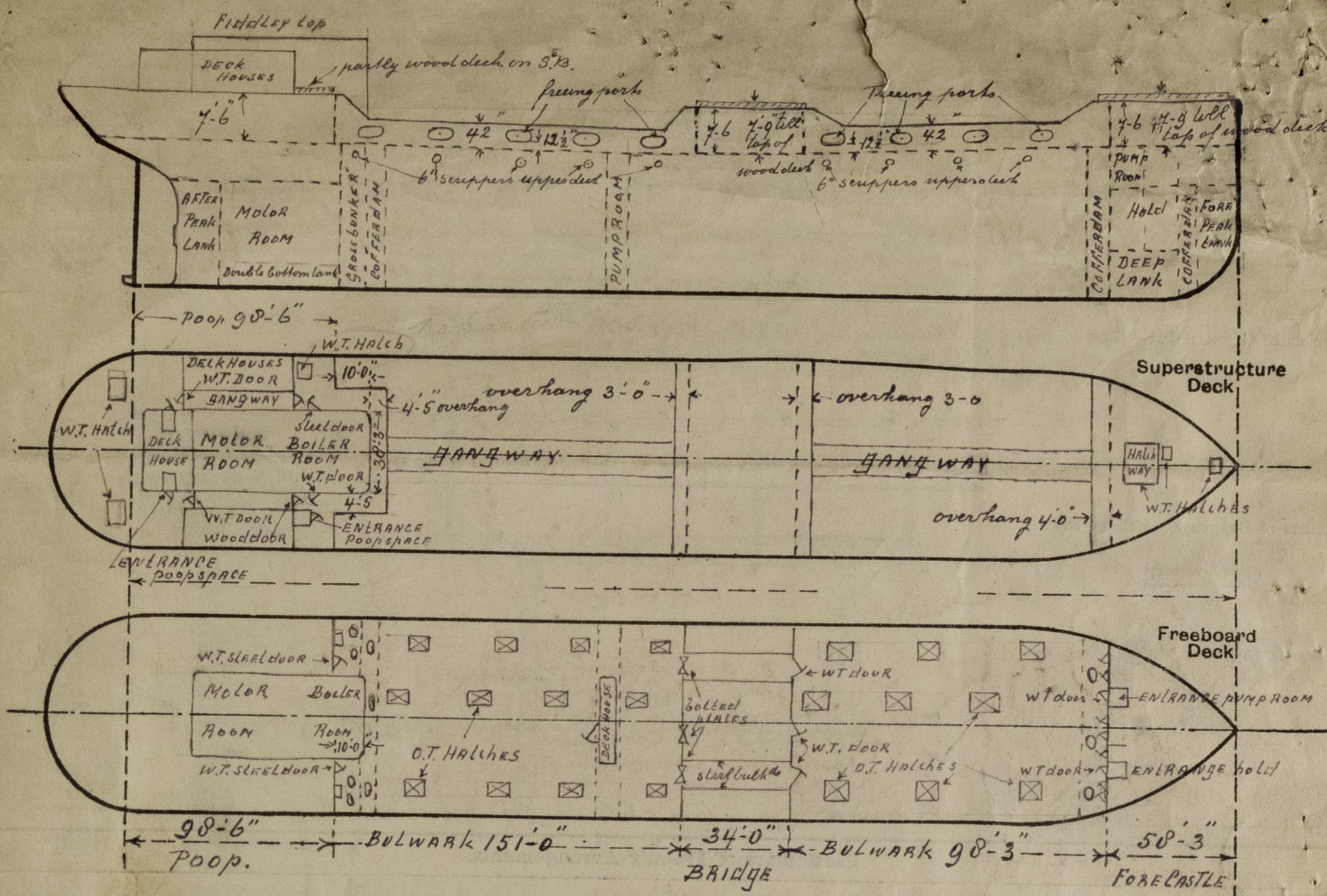
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead 5/3 and P.S.	23 1/2 x .44 30 x .44	.44 ✓ .40	10 1/2 x 3 1/2 x .36 9 1/2 x 3 1/2 x .50	29" 30"	brackets ✓ ✓	4'-6" x 2'-6" none	23 1/2" none	4'-6"
Raised Quarter Deck Bulkhead	✓	✓	✓	✓	✓	✓	✓	✓
Bridge, After Bulkhead	24 x .44	.32 ✓	4 steel bulkhead and 6 x 3 x .40	30" ✓	brackets ✓	4'-6" x 3'-0"	24" ✓	4'-6"
Bridge, Forward Bulkhead	23 1/2 x .44	.40 ✓	4 steel bulkhead and 8 1/2 x 3 1/2 x .64	30" ✓	brackets ✓	4'-6" x 2'-3"	23 1/2" ✓	4'-6"
Forecastle Bulkhead	23 1/2 x .40	.26	9 steel bulkheads and 4 x 3 x .40	30" ✓	✓	To fore castle space 4'-6" x 2'-0" To pump room 4'-6" x 1'-9"	23 1/2" ✓	4'-6"
Trunk, Aft	✓	✓	✓	✓	✓	✓	✓	✓
Deck House to Midships	✓	✓	✓	✓	brackets on top only	4'-6" x 2'-3"	18"	4'-6"
Trunk, Forward pump room	18 x .38	.32	4 x 2 1/2 x .32	27"	✓	4'-6" x 2'-3"	18"	4'-6"
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	30 x .44	.40	9 1/2 x 3 1/2 x .50	30"	brackets	none	✓	4'-6"
Exposed Machinery Casings on Superstructure Decks	.40 ✓	.40 ✓	9 1/2 x 3 1/2 x .50	30"	brackets	SB 5'-0" x 2'-0" above wood deck 15" PS 5'-0" x 2'-0" steel deck 18"	✓	12'-0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	Machinery casing in Poop space fitted with Class I Closing Appliances							
Deckhouses on Flush Deck Ships	Machinery casing on Poop deck protected by steel deck houses fitted with wood door 5'-0" x 2'-0" x 1 3/4" coaming 15" above wood deck in front bulkhead closed from both sides and a W.T. steel door on 4'-0" x 2'-3" coaming 2'-0" above deck manipulated from both sides in after bulkhead.							

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

Poop Bulkhead	W.T. steel hinged doors, manipulated from one side
Raised Quarter Deck Bulkhead	✓
Bridge, After Bulkhead	Portable plates fastened with hook bolts manipulated from one side (7/8" bolts spaced 13 3/4" pass not through the bulk head)
Bridge, Forward Bulkhead	W.T. steel hinged doors, manipulated from one side
Forecastle Bulkhead	W.T. steel hinged doors to pump room and forward hold manipulated from both sides
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	steel hinged doors to fore castle space closed from both side ✓
Exposed Machinery Casings on Superstructure Decks	no openings
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	one W.T. steel hinged door, manipulated from one side (on SB) one steel door closed from both sides (on PS) ✓
Deckhouses on Flush Deck Ships	Poop space fitted with Class I Closing Appliances Wood door at front bulk head closed from both sides W.T. door in after bulk head manipulated from one side

01242 1/2

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.



Wood deck on Fore Castle and Bridge deck 3" pitch pine ✓
 Wood deck on Poop deck only on S.B. above cabin engineers ✓

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

Recommended

Openrail to be fitted for at least 50% length of the exposed portion of the weather deck ✓
 All entrances to the structures from the freeboard ^{deck} and exposed machinery casings on the superstructure deck to be made capable of being closed and secured from both sides ✓
 Air pipes on freeboard deck to be made 36" high, and satisfactory means for closing the air pipes on freeboard and superstructure deck ✓
 Storm valves to be fitted in all sanitary pipes led through the ship's side from space below the freeboard deck ✓
 Ventilators on poop decks to be made 30" high ✓

With a view to the above recommendation for closing the openings in the air pipes owners stated that canvas covers will be fitted for closing the openings in the air pipes ✓

Builder's name and yard number Maats Fyenoord. No. 303. Rotterdam.

Names of sister ships "GOLDMOUTH"

Owners Anglo Saxon Petroleum Co Ltd.

Fee £ 15 : 6 : 0

anp. = fl. 183.60 = £20.15.0 @ 8.85

Received by me

27/7/32 from London

Paid 23/8/32



© 2020

Lloyd's Register Foundation