

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

No. 100757.

Computation of Freeboard for Steamer, Sailing Ship, Tanker				Port of Survey <u>Birkenhead</u>	
having <u>POOP and Forecastle</u>				Date of Survey <u>14th July 1932</u> subsequently.	
(Type of Superstructures.)				Name of Surveyor <u>C. A. Dean</u>	
Ship's Name <u>SHELL MEX 2</u>		Nationality and Port of Registry <u>British</u> <u>London</u>	Official Number <u>148725</u>	Gross Tonnage <u>548</u>	Date of Build <u>1915</u> <u>12 Mo.</u>
Moulded Dimensions: Length <u>163'0"</u>		Breadth <u>28'8 1/2"</u>	Depth <u>12'0"</u>	Particulars of Classification <u>100A1</u> <u>Carrying letters on back</u> <u>S.S. off No. 3-5, 28</u>	
Moulded displacement at moulded draught = 85 per cent. of moulded depth		<u>925</u> tons			
Coefficient of fineness for use with Tables <u>.684</u>					
Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth <u>12'0"</u>		(a) Where D is greater than Table depth (D - Table depth) R = <u>1.45</u>		Moulded Breadth (B) <u>28'8 1/2"</u>	
Stringer plate <u>.03</u>		(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$ = <u>6.83</u>	
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		If restricted by superstructures		Ship's Round of Beam = <u>7 1/2</u>	
Depth for Freeboard (D) = <u>12.03</u>				Difference = <u>.67</u>	
				Restricted to	
				Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right)$ = <u>.05</u>	

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
POOP enclosed ...	60.5	60.50	4'0"		60.50	Standard Height of Superstructure <u>6'</u>
" overhang ...	-	-	-		-	" " R.Q.D. <u>3.42</u>
R.Q.D. enclosed ...	-	-	-		-	" " <u>22.3</u>
" overhang ...	-	-	-		-	Deduction for complete superstructure
Bridge enclosed ...	-	-	-		-	Percentage covered $\frac{S}{L} = 51.6\%$
" overhang aft ...	-	-	-		-	" " $\frac{S_1}{L} = 71.69\%$
" overhang forward	-	-	-		-	" " $\frac{E}{L} = 64.90\%$
Forecastle enclosed ...	22.78	22.78	7'0"		22.78	Percentage from Table, Line A.
" overhang ...	82	41	-		41	(corrected for absence of forecastle (if required))
Trunk aft ...	-	-	-		-	Percentage from Table, Line B.
" forward ...	60.75	33.16	4'0"	$\frac{4'0"}{6'0"} \times 100\%$	22.11	(corrected for absence of forecastle (if required))
Tonnage opening aft ...	-	-	-		-	Interpolation for bridge less than 2L (if required)
" " forward	-	-	-		-	Deduction = $22.3 \times .5739 = -12.80$
Total ...	84.10	116.85			105.80	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	26.30	1		26.30	25.0	24.00	1		24.00	Mean actual sheer aft = <u>Deficient</u>
1/4 L from A.P. ...	11.70	4		46.80	11.0	10.47	4		41.88	Mean actual sheer forward = <u>Deficient</u>
3/4 L " ...	2.89	2		5.78	1.5	2.62	2		5.24	Length of enclosed superstructure forward of amidships = <u>no midship</u>
Amidships ...	-	4		-	-	-	4		-	" " aft of " = <u>house - Tanker</u>
3/4 L from F.P. ...	5.79	2		11.58	6.5	5.23	2		10.46	
1/4 L " ...	23.41	4		93.64	20.0	20.94	4		83.76	
F.P. ...	52.60	1		52.60	48.0	48.00	1		48.00	
Total ...				236.70					213.34	
Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{23.36}{18} \left(\frac{75-258}{2} \right) = +.64$										
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.

Depth to Freeboard Deck = 12.03 Ft.
Summer freeboard = .44
Moulded draught (d) = 11.59

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 2.90 = 3

Addition for Winter North Atlantic Freeboard (if required) = +2 = 5

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 1062$
Tons per inch immersion at summer load water line

$T = 7.50$
Deduction = $\frac{\Delta}{40 T}$ inches

= 3.53
= 3 1/2

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$\frac{.684 + .680}{1.36} = \frac{1.364}{1.36}$

+

-

Depth Correction 1.45

Deduction for superstructures 12.80

Sheer correction64

Round of Beam correction05

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc.

1.45 13.49 - 12.04

Summer Freeboard = 5.33

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

Tropical Fresh Water Line above Centre of Disc 6 1/2
Fresh Water Line " " 3 1/2
Tropical Line " " 3
Winter Line below " " 3
Winter North Atlantic Line " " 5

Tropical Fresh Water Freeboard 5 1/4
Fresh Water " " MINUS - 1 1/2
Tropical " " 14 1/2
Winter " " 2 1/4
Winter North Atlantic " " 8 1/4
" " 10 1/4


Shell Men 2

Particulars of fiddle, funnel and ventilator coverings:—
THE FIDLEY GRATINGS ARE COVERED BY STEEL HINGED COVERS. — THE FIDLEY VENTS AND ENGINE ROOM VENTS ARE GOOD. — THE FUNNEL IS GOOD. — THE ENGINE ROOM SKYLIGHT IS OF STEEL AND IS IN GOOD CONDITION.

- NONE -

— NONE —

2- VENTS ON FO'LE DECK - 30" HIGH - 8" DIA. - To FO'LE.
2- " " " " - 30" " - 12" " " " " "
1- " " FREEBOARD " - 8'0" " - 12" " " " HOLD FORWARD - SUITABLY STAYED . CLOSED WOOD PLUGS & CANVAS ✓
2- " " TRUNK TOP - 7'6" " - 12" " " " PUMP ROOM " " COVERS
1- " " POOP DECK - 27" " - 7" " " " AFT STORE ROOM.

AIR PIPE ON FREEBOARD DECK WITHIN FOUL TO FORE PEAK TANK - FLUSH WITH BRASS SCREWED PLUG.
 2-C-1. AIR PIPES ON " " TO FORE Cofferdam 4'0" HIGH. 3" DIA. OPEN WITH BRASS SCREW PLUG IN TOP - SUITABLY STAYED.
 2- " " " " " 9'-0" " 2" " SUITABLY STAYED - CLOSED SCREW PLUG.
 2- " " " " " POOP " " AFT. PEAK TANK. THUS:- 
 2- " " " " " BRIDGE DECK TO FUEL BKRS. 3 1/2" DIA.
 35" HIGH - 3" DIA. CLOSED SCREW PLUG.

- NONE -

ways, Lifelines, etc. :-

RAILS 1 STAN.
3'-0" HIGH 3" Q.
APART 2 RAILS

2 1/2" WOOD PLANKS

BOUNDARY ANGLES 4"x3 1/2"x35"

2"x2"x25" AT EVERY SUPPORT.

2 1/2"x2 1/2"x25"

3"x3"x30"
Q.A.

3"x3"x30"

TRUNK TOP

SUPPORTS SPACED 7'-6" APART

9"x9"x30" BKT.

2 1/2"x2 1/2"x25"

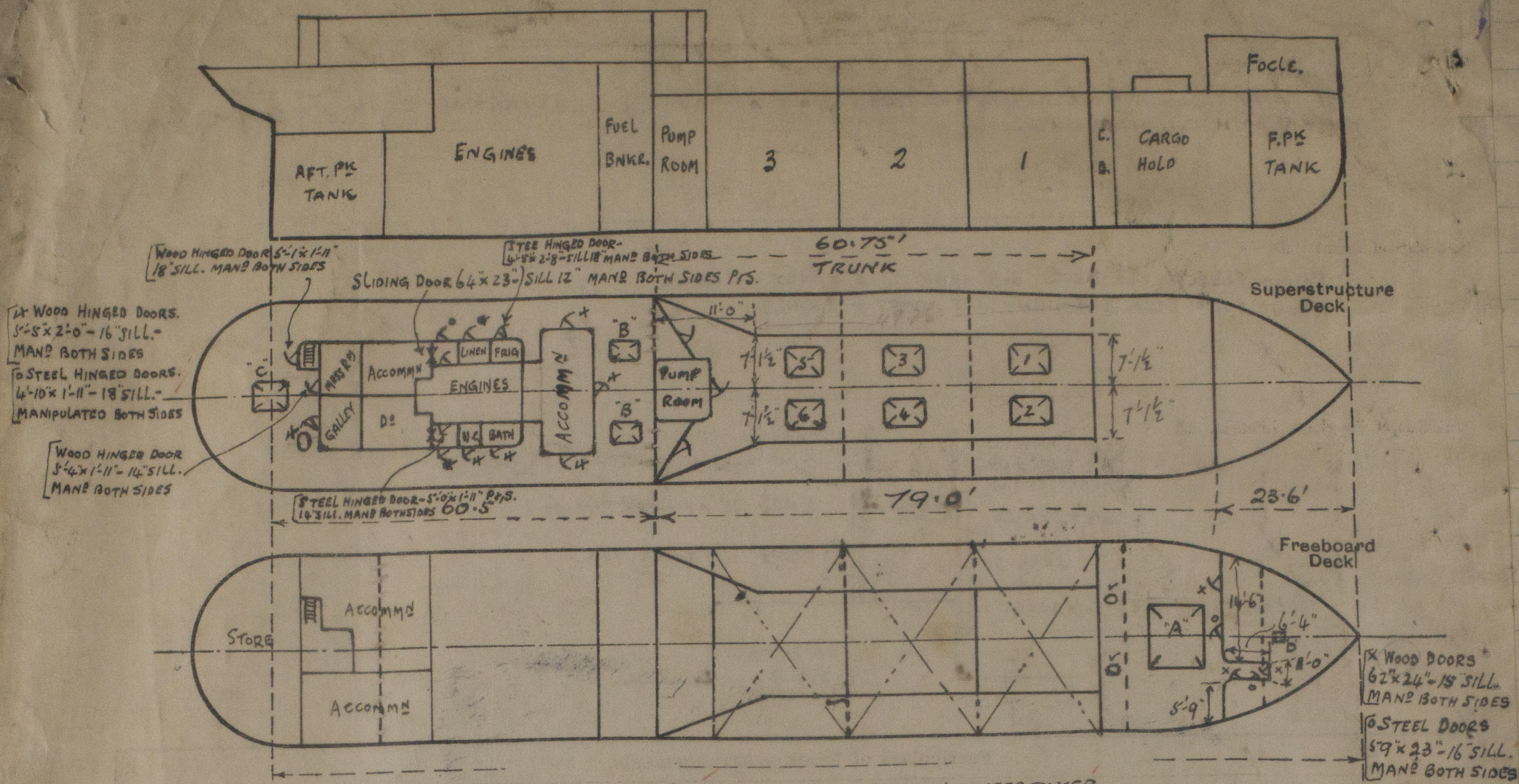
Q.A. CONNECTION

FBD. DECK

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"	5½ x 3 x .34 B.A.	22	BKTD. TOP & BOTTOM	NONE	NONE	4'0"
Raised Quarter Deck Bulkhead ...	-	-	-	-	-	-	-	-
Bridge, After Bulkhead	-	-	-	-	-	-	-	-
Bridge, Forward Bulkhead	-	*40"	5½ x 3 x .40 B.A.	26"	BKTD. TOP & BOTTOM	2- STEEL HINGED W.T. DOORS 5'-0" x 2'-4"	19"	7'-6"
Forecastle Bulkhead	-	*30"	3 x 2½ x .30 B.A.	30"	NONE	4- WOOD DOORS 5'-1" x 2'-0" 1- STEEL DOOR 4'-11½" x 1'-10"	17" 16"	7'-0"
Trunk, Aft	-	-	-	-	-	-	-	-
Trunk, Forward	-	*30"	4 x 3 x .30"	22"	BKTD. TOP & BOTTOM	-	-	4'-0"
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...	-	-	-	-	-	-	-	-
Exposed Machinery Casings on Super- structure Decks	*30"	*25"	3 x 2½ x .30 B.A.	30"	BKTD. TOP.	-	-	7'-6"
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances	-	-	-	-	-	-	-	-
Deckhouses on Flush Deck Ships ...	-	-	-	-	-	-	-	-

Location	Access
Poop Bulkhead	- NONE -
Raised Quarter Deck Bulkhead	-
Bridge, After Bulkhead	-
Bridge, Forward Bulkhead	STEEL HINGED M.T. DOORS MANIPULATED FROM FORE SIDE ONLY.
Forecastle Bulkhead	STEEL & WOOD HINGED DOORS MANIPULATED FROM BOTH SIDES.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	-
Exposed Machinery Casings on Superstructure Decks	STEEL & WOOD HINGED DOORS MANIPULATED FROM 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 shewn on the following sketches:—



- HATCH "A" 7'0" x 5'9" - TO FORE CARGO HOLD - 30" STEEL COAMING - W.T. STEEL HINGED COVER.
 " "B" 2'8" x 2'3" - TO FUEL BUNKERS - 7 1/2" B.A. COAMING - D.T. STEEL COVER.
 " "C" 4'6" x 4'0" - TO AFT STORE ROOM - 24" STEEL COAMING - CLEATS, BATTENS, WOOD COVERS & 2 TARPULINS FITTED.
 ✓ " "D" TO COFFERDAM - 22" x 18" - D.T. BOLTED COVER.
 " "E" TO GALLEY COAL BUNKER - 22" x 17" - 6" B.A. COAMING - STEEL W.T. HINGED COVER.
 + " "F" TO FORE PEAK TANK 24" x 22" - 6" STEEL COAMING WITH STEEL TOP WITH 19" x 16" STEEL BOLTED W.T. COVER.

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

PUMP ROOM HOUSE IS STRONGLY CONSTRUCTED OF STEEL AND HAS ENTRANCE DOOR OF STEEL HINGED 5'0" x 2'3" - 18" SILL. OPERATED FROM OUTSIDE ONLY.

Equip. enclosed length of trunk

$$\frac{11' \times \frac{1}{2} (28.46 + 14.25)}{28.46} + \frac{49.75 \times 14.25}{28.46} = 8.25 + 24.91 = 33.16$$

Equip. free Board

$$23.6 - \frac{6.33 \times 3}{23.25} = 22.78$$

VESSEL IN DRYDOCK FOR S.S. 2ND N.E. SURVEY COMPLETE, DAMAGE & FREEBOARD.

Builder's name and yard number

N.V. Schreepswerf Dordrecht. No 23.

Names of sister ships

Owners

Anglo-Saxon Petroleum Co. Ltd.

Fee £

6 : 16 : 0

Received by me