

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

26 SEP 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>Hongkong</u>	
having <u>Poop, Bridge & Forecastle</u>					Date of Survey <u>Aug. 18, 19, 24, 1932.</u>	
(Type of Superstructures.)					Name of Surveyor <u>J. Morrison</u>	
Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build	Particulars of Classification <u>+100A1</u>	
<u>SAXICAVA</u>	<u>British London</u>	<u>146636</u>	<u>5693</u>	<u>1922</u> <u>9 mo</u>	<u>"Carrying petroleum in Bulk"</u> <u>S.S. Sng. 10.2.30</u>	
Moulded Dimensions: Length <u>410.84'</u> Breadth <u>53.08'</u> Depth <u>31.04'</u>						
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>13002</u> <u>13055</u> tons						
Coefficient of fineness for use with Tables <u>.794</u>						
Depth for Freeboard (D)			Depth correction		Round of Beam correction	
Moulded depth <u>31.04</u>			(a) Where D is greater than Table depth (D-Table depth) R = <u>(31.09 - 27.39) x 3.0 = +11.1</u>		Moulded Breadth (B) <u>53.08</u>	
Stringer plate <u>.05</u>			(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Standard Round of Beam = $\frac{B \times 12}{50} = 12.74$	
Sheathing on exposed deck <u>None</u>			If restricted by superstructures		Ship's Round of Beam = <u>13 1/4"</u>	
T $\left(\frac{L-S}{L}\right) =$					Difference <u>.51</u>	
Depth for Freeboard (D) = <u>31.09</u>					Restricted to	
					Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{.51}{4} \times \left(1 - \frac{.4344}{.5656}\right) = -.07$	

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed	<u>109.00</u>	<u>109.00</u>	<u>7'-6"</u>		<u>109.00</u>	Standard Height of Superstructure <u>7'-6"</u>
" overhang	<u>None</u>					" " R.Q.D. <u>-</u>
R.Q.D. enclosed	<u>✓</u>					Deduction for complete superstructure <u>42.0</u>
" overhang	<u>✓</u>					Percentage covered $\frac{S}{L} = 43.94$
Bridge enclosed	<u>26.00</u>	<u>26.00</u>	<u>7'-6"</u>		<u>26.00</u>	" " $\frac{S_1}{L} = 43.44$
" overhang aft	<u>None</u>					" " $\frac{E}{L} = 43.44$
" overhang forward	<u>None</u>					Percentage from Table, Line A. (corrected for absence of forecastle (if required))
Forecastle enclosed	<u>41.39</u>	<u>41.39</u>	<u>7'-6"</u>		<u>41.39</u>	Percentage from Table, Line B. <u>TANKER. 34.44</u> (corrected for absence of forecastle (if required))
" overhang	<u>2.05</u>	<u>2.05</u>	<u>7'-6"</u>		<u>2.05</u>	Interpolation for bridge less than 2L (if required) <u>Tanker does not apply.</u>
Trunk aft	<u>✓</u>					Deduction = <u>42.0 x .3444 = -14.46</u>
" forward	<u>✓</u>					
Tonnage opening aft	<u>✓</u>					
" forward	<u>✓</u>					
Total	<u>180.50</u>	<u>178.44</u>			<u>178.44</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P.	<u>51.08</u>	1		<u>51.08</u>	<u>51.00</u>	<u>51.00</u>	1		<u>51.00</u>	Mean actual sheer aft = <u>Defective.</u>
1/4 L from A.P.	<u>22.73</u>	4		<u>90.92</u>	<u>18.25</u>	<u>17.00</u>	4		<u>68.00</u>	Mean actual sheer forward = <u>Defective</u>
3/4 L "	<u>5.62</u>	2		<u>11.24</u>	<u>3.75</u>	<u>.50</u>	2		<u>1.00</u>	Mean standard sheer forward
Amidships	<u>-</u>	4		<u>0</u>	<u>0</u>	<u>0</u>	4		<u>0</u>	Length of enclosed superstructure forward of amidships = <u>Tanker</u>
3/4 L from F.P.	<u>11.24</u>	2		<u>22.48</u>	<u>11.25</u>	<u>10.00</u>	2		<u>20.00</u>	" " aft of " = <u>Does not apply</u>
1/4 L "	<u>45.46</u>	4		<u>181.84</u>	<u>40.75</u>	<u>40.00</u>	4		<u>160.00</u>	
F.P.	<u>102.16</u>	1		<u>102.16</u>	<u>96.00</u>	<u>96.00</u>	1		<u>96.00</u>	
Total				<u>459.72</u>					<u>396.00</u>	
Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{63.72}{18} \left(.75 - \frac{2197}{5303} \right) = +1.88$										
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 = 31.09
Summer freeboard = 5.75
Moulded draught (d) = 25.34

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 6.33 = 6 1/4Addition for Winter North Atlantic Freeboard (if required = ✓)

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 12637$

Tons per inch immersion at summer load water line

T = 44.42Deduction = $\frac{\Delta}{40T}$ inches= 7.11 = 7.0

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction	<u>11.10</u>	<u>-</u>
Deduction for superstructures	<u>-</u>	<u>14.46</u>
Sheer correction	<u>1.88</u>	<u>-</u>
Round of Beam correction	<u>-</u>	<u>.07</u>
Correction for Thickness of Deck amidships	<u>-</u>	<u>-</u>
Other corrections, scantlings, etc.	<u>-</u>	<u>-</u>
	<u>12.98</u>	<u>14.53</u>

Summer Freeboard = 69.02SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc ... 3 1/2"
Fresh Water Line " " ... 7"
Tropical Line " " ... 6 1/4"
Winter Line below " " ... 6 1/4"
Winter North Atlantic Line " " ... 10 1/2"

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

SAXICAVA

Particulars of Scuppers and Sanitary Discharge Pipes — All scuppers + discharge pipes are fitted with gunmetal storm valves at ship's side + efficient traps or wood plugs at inner ends.

Particulars of Guard Rails:— Guard rails 3'-3" high, 3 rods, stanchions spaced about 4'-6" apart, fitted on Poop, bridge & forecastle. Bulwarks in wells 3'-6" high, strongly constructed.

Particulars of Gangways, Lifelines, etc. :-

Gangway fitted from poop to bridge & from Bridge to Forecastle, efficiently supported, having stanchions with single wire rope rail 3'-0" high.

Supports spaced about 9'-0" apart.

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	120.5'	3' 6"	5' 3 1/2" x 2' 2" 3' 6" x 1' 3"	12 2	133.42 \$	105.75 \$	
Forward Well	110.0' 115.0'	3' 6"	5' 0" x 2' 2" 3' 0" x 1' 3"	11 2	114.80 \$	96.50 \$	
State position of each freeing port (F. and A. position and height above deck edge)			After Well :— 12" Forward Well :—				
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :— Small ports 3 vertical bars Large ports 2 Horizontal bars.							
Additional area where sheer is less than standard.							

Particulars of Flush Bunker Scuttles:— *None*

Particulars of Companionways:— one companion on Poop enclosed by steel deck house, leading to poop space, door of steel 5'-1" x 2'-0", sill 16½", can be operated from both sides.

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

<p><u>on Forecastle</u></p> <p>5-6" dia. coaming 36" x 7/80 to Crews 4-8" " " 35" x 5/80 } Quarters. 3-10" " " 26" x 7/80 to FP Store. 1-C.I. goose neck 4" dia x 9" high to W.C.</p> <p><u>on Bridge</u></p> <p>7-6" dia. coaming 9" x 7/80 to stores fitted with screw down covers.</p> <p>Particulars of Air Pipes in exposed positions on freeboard,</p>	<p><u>on Top</u></p> <p>6-16" dia. coaming 36" x 7/80 to Prop. space. 1-10" " " 36" x 4/80 to Steering engine. 2-6" " " 36" x 7/80 to 3-store room. 1-6" " " 9" x 7/80 to Boys room & fitted with screw down cover.</p> <p><u>Fore Well Deck</u></p> <p>3-16" dia. coaming 36" x 7/80 to Fore Hold 1-12" " " 36" x 7/80 to Fore Pump Room</p>	<p><u>Pump House Top.</u></p> <p>2-24" dia. coaming 31" x 8/80 to Pump room.</p> <p>All ventilators constructed in accordance with the Rules & closed with wood plugs & canvas covers where required.</p>
<p><u>on Forecastle</u></p> <p>1-4" dia to FP tank, 20" high 2-4" " " to Fore deep tank, 12" high</p> <p><u>Fore Well Deck</u></p> <p>2-2" dia to Fore Cofferdam, 14 1/2" high aft Well deck 2-2" dia to aft cofferdam, 14 1/2" high.</p>	<p><u>on Top</u></p> <p>1-4" dia. to A.P. tank, 11" high. 1-4" " " " 15" " " 2-2 1/2" " " FW tanks, 18" " 4-4" " " DB tanks, 11" " 2-4" " " to OF brackets 10" " " " " "</p>	<p>All air pipes of goose neck type & closed with wood plugs and canvas covers & gauge wire where required. Snifting holes at top of bend in air pipes 15" & less in height.</p>

Particulars of Gangway Cargo and Coaling Ports:—

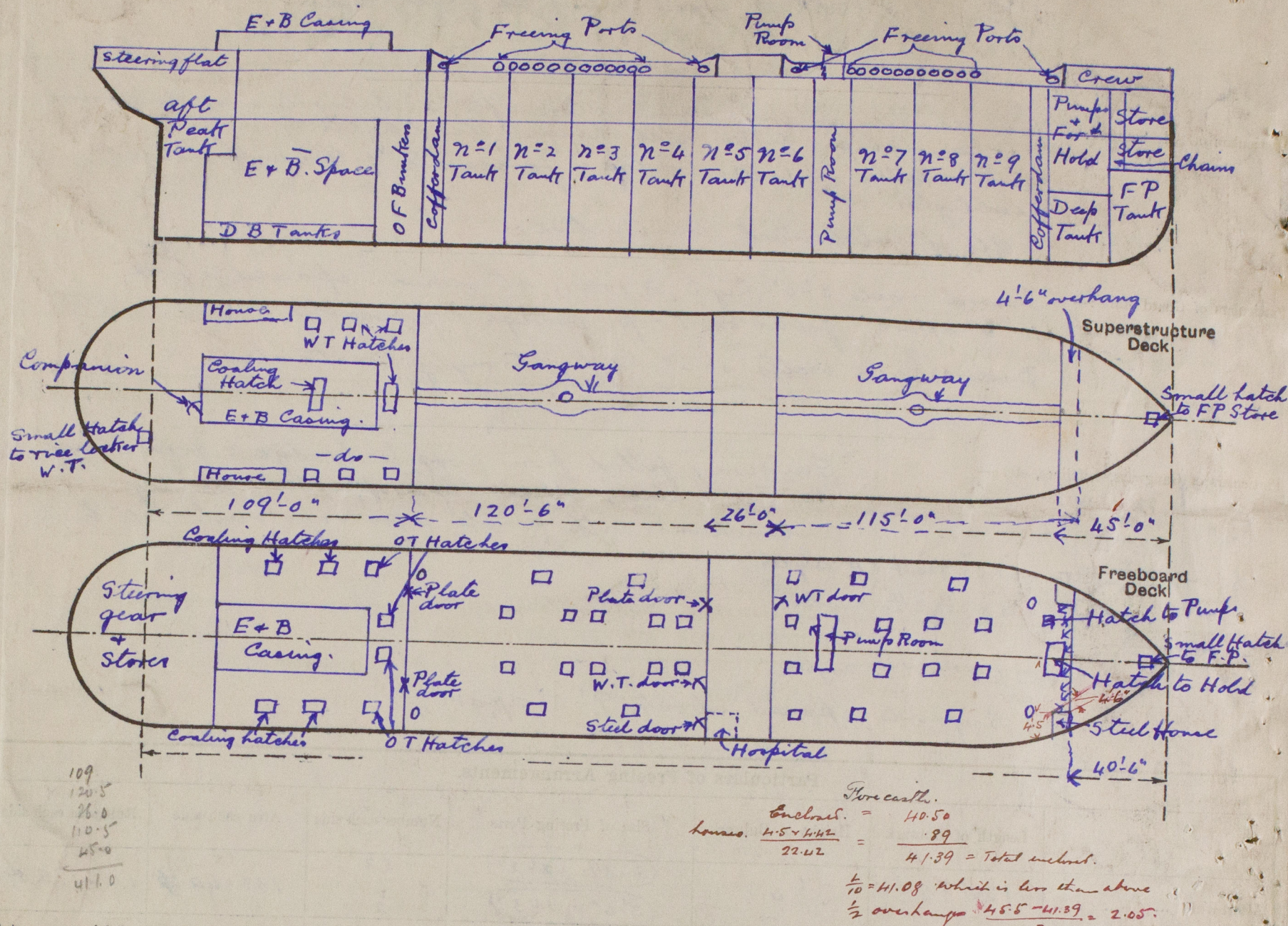
None

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	10/20 ✓	10/20 ✓	2 1/2" Vert. Wds # 8 x 3 1/2 x 50 Horsg. BA	30 1/2"	Brackets	4'-1" x 3'-0"	24"	7'-6"
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead	8/20 ✓	6/20 ✓	4 x 3 1/2 x 8/20 angles	34"	Taken Top x both angles	4'-1 1/2" x 2'-0"	24"	7'-6"
Bridge, Forward Bulkhead	10/20 ✓	6/20 ✓	6 1/2 x 3 1/4 x 10 angles	31"	Brackets	4'-11" x 3'-0"	18"	7'-6"
Forecastle Bulkhead	6/20 ✓	6/20 ✓	3 x 2 1/2 x 6/20 angles	29"	Taken top x both angles	5'-5" x 2'-1"	16"	7'-6"
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...	✓							
Exposed Machinery Casings on Super- structure Decks	6/20 ✓	6/20 ✓	3 x 2 1/2 x 8/20 angles	33"	Taken top x both angles	4'-10" x 2'-2"	19"	7'-6"
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances	7/20 ✓	6/20 ✓	13" x 6/20" Vert. Wds	9'-4"	Brackets	3'-10 1/2" x 2'-0"	11"	7'-6"
Pump Room Deckhouse on Flush Deck Ships ...	6/20 ✓	6/20 ✓	4 1/2 x 3 x 8/20 angles	36"	Brackets	4'-8" x 2'-2"	17 1/2"	6'-8"

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

Location	Door Type	Operation
Poop Bulkhead	Portable plates, attached with hook bolts.	
Raised Quarter Deck Bulkhead	✓	
Bridge, After Bulkhead	1-Hinged steel W.T. Door, } can be operated from both sides. 1-Hinged steel door to Hospital. }	
Bridge, Forward Bulkhead	1-Portable plate, attached with hook bolts. 1-Hinged W.T. door, can be operated from outside only.	
Forecastle Bulkhead	7-solid wood doors, 1 7/8" thick, can be operated from both sides.	
Exposed Machinery Casings on Fore-board or Raised Quarter Decks	✓	
Exposed Machinery Casings on Superstructure Decks	Hinged steel doors, can be operated from both sides.	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	Hinged steel doors, can be operated from both sides.	
Dockhouses on Flush Deck Ships	Hinged steel W.T. door, can be operated from both sides.	

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:— Oil Tanker, Longitudinal framing, Machinery aft.

Vessel surveyed in dry dock, Condition survey only ✓

Builder's name and yard number Swan Hunter & Wigham Richardson

Names of sister ships Spirila, Solen, Linnea

Owners Anglo-Saxon Petroleum Co. Ltd

Fee £ 415.00

Received by me



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