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7/12

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Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for ~~Steamer, Sailing Ship, Tanker~~
having Prop, Bridge & Forecastle

Port of Survey Hong Kong

Date of Survey April 7, 8, 9, 11th 1932

Name of Surveyor W. J. Morrison

Particulars of Classification +100 A1
Carrying Petroleum in Bulk
Under the Oil Fuel 929a

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<u>"MUREX"</u>	<u>London, British</u>	<u>146628</u>	<u>5830</u>	<u>1922</u>

Moulded Dimensions: Length 412 Breadth 53.08 Depth 31.0 1/2

Moulded displacement at moulded draught = 85 per cent. of moulded depth 13125 tons

Coefficient of fineness for use with Tables 797

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 - 27.47) x 3 = +10.86</u>	Moulded Breadth (B) <u>53.08</u>
Stringer plate ... <u>-0.55</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>12.74</u>
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <u>12.5</u>
Depth for Freeboard (D) = <u>31.095</u>		Difference <u>.24</u>
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) =$ <u>$\frac{.24}{4} \left(1 - \frac{47.25}{131.25} \right) = +.03$</u>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>110.25</u>	<u>110.25</u>	<u>7.5</u>	<u>✓</u>	<u>110.25</u>
" overhang ...	<u>✓</u>				
R.Q.D. enclosed ...	<u>✓</u>				
" overhang ...	<u>✓</u>				
Bridge enclosed ...	<u>26.0</u>	<u>26.00</u>	<u>7.5</u>	<u>✓</u>	<u>26.00</u>
" overhang aft ...	<u>2.83</u>	<u>2.13</u>			<u>2.13</u>
" overhang forward ...	<u>3.0</u>	<u>1.50</u>			<u>1.50</u>
F'cle enclosed ...	<u>52.75</u>	<u>52.75</u>	<u>7.5</u>	<u>✓</u>	<u>52.75</u>
" overhang ...	<u>4.0</u>	<u>2.00</u>			<u>2.00</u>
Trunk aft ...	<u>✓</u>				
" forward ...	<u>✓</u>				
Tonnage opening aft ...	<u>✓</u>				
" forward ...	<u>✓</u>				
Total ...	<u>198.83</u>	<u>194.63</u>			<u>194.63</u>

Standard Height of Superstructure 7'-6"

" " R.Q.D. 42.0

Deduction for complete superstructure 42.0

Percentage covered $\frac{S}{L} =$ 48.27

" " $\frac{S_1}{L} =$ 47.25

" " $\frac{E}{L} =$ 47.25

Percentage from Table, Line A.
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. TANKER 38.25
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required) DOES NOT APPLY.

Deduction = 42.0 x .3825 = -16.06

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	Mean actual shear aft = DEFICIENT.	Mean standard shear aft
A.P. ...	51.20	1	51.20	47.0	47.0	47.0	1	47.00			
$\frac{1}{4}$ L from A.P. ...	22.78	4	91.12	16.25	12.0	12.0	4	48.00	Mean actual shear forward = DEFICIENT.	Mean standard shear forward	
$\frac{2}{4}$ L " ...	5.63	2	11.26	1.75	.5	.5	2	1.00			
Amidships ...	-	4	-	0	-	-	4	-	Length of enclosed superstructure forward of amidships =		
$\frac{3}{4}$ L from F.P. ...	11.26	2	22.52	6.5	10.0	10.0	2	20.00	" " aft of " =	TANKER. DOES NOT APPLY.	
$\frac{1}{4}$ L " ...	45.57	4	182.28	39.0	42.0	42.0	4	168.00			
F.P. ...	102.40	1	102.40	101.5	101.5	101.5	1	101.50			
Total ...	460.80		460.78					385.50			

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{75.28}{18} \left(.75 - \frac{24.13}{131.25} \right) = +2.13$

If limited on account of midship superstructure. 575

If limited to maximum allowance of 1½ 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 <u>$\frac{797 + .68}{1.36} = \frac{1.477}{1.36}$</u>
Depth to Freeboard Deck = <u>31.095</u>	$\Delta =$ <u>12.665</u>	Depth Correction ... <u>10.86</u>
Summer freeboard = <u>5.67</u>	Tons per inch immersion at summer load water line	Deduction for superstructures ... <u>-16.06</u>
Moulded draught (d) = <u>25.42</u>	$T =$ <u>45.1</u>	Sheer correction ... <u>2.13</u>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>6.35</u> = <u>6 1/4</u>	Deduction = $\frac{\Delta}{40T}$ inches = <u>7.02</u> = <u>7 1/8</u>	Round of Beam correction ... <u>.03</u>
Addition for Winter North Atlantic Freeboard (if required) = <u>4.12</u> = <u>4"</u>		Correction for Thickness of Deck amidships ... <u>-</u>
		Other corrections, scantlings, etc. ... <u>-</u>
		Summer Freeboard = <u>67.98</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>13 1/4"</u>	Tropical Fresh Water Freeboard ...	<u>5'-8 3/4"</u>
Fresh Water Line " " ...	<u>7 1/4"</u>	Fresh Water " " ...	<u>4'-6 3/4"</u>
Tropical Line " " ...	<u>6 1/4"</u>	Tropical " " ...	<u>5'-1 1/4"</u>
Winter Line below " " ...	<u>6 1/4"</u>	Winter " " ...	<u>6'-2 1/4"</u>
Winter North Atlantic Line " " ...	<u>10 1/4"</u>	Winter North Atlantic " " ...	<u>4'-6 1/4"</u>

19 MAY '932

W564-0189

RECEIVED - 7 DEC 1932

Murphy 18 MAY 1932

Particulars of fiddle, funnel and ventilator coamings:— Stokeshold gratings covered by strong steel hinged covers ✓
Fidley + funnel ventilators in efficient condition ✓
Engine skylight of steel strongly constructed. ✓

None ✓

One companion on Poop, enclosed by strong steel deck house, leading to main deck, opening 4'-10" x 2'-2", sill 18", wood door, capable of being worked from both sides.

On Forecastle Deck

Pump Room
2-24" diam. 36" x 34 coaming ✓
Bridge Deck 5-5 1/2" diam 18" x 25"
1-8" " 24" x 34" ✓
2-4" Goose neck 18" high ✓

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

Forcassure: 1-3 1/2" u pipe u For deep taut, 18" u u u ✓
2-4" u u u O.F. brackets, 18" u Poof ✓
Poof Dact: 2-4" u u u 18" u u u ✓

Efficient means of access are provided for all airports

None. ✓

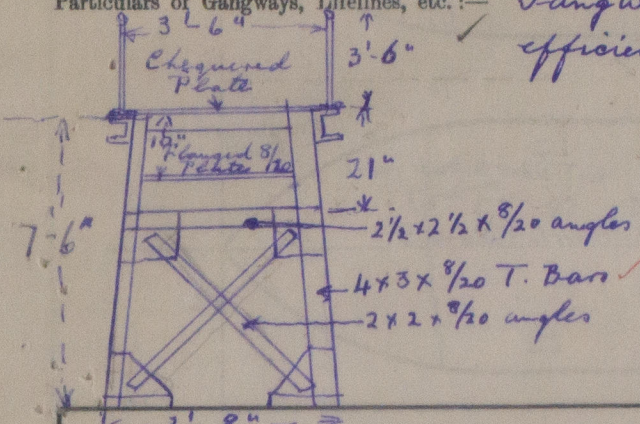
Particulars of Side Scuttles:

12" side scuttles in poop, bridge & fore-castle fitted with efficient hinged deadlights permanently attached. ✓

Particulars of Guard Rails :-

Guard rails on poop, bridge & forecastle 3'-6" high, 3 rods & stanchions spaced about 5'-0" apart. ✓
Steel bulwarks on freeboard deck in wells, 3'-6" high, efficiently constructed & supported. ✓

Particulars of Gangways, Lifelines, etc. :—



Gangway fitted from poop to bridge + from bridge to foreccastle,
efficiently supported, having stanchions + single rail 3'-6" high. ✓

freeing ports

5 @ 5'-1 x 24	after well	2 @ 5'-3 x 24
1 @ 4-10 x 24		4 @ 5'-6 x 24
2 @ 5-5 x 24		1 @ 4'-9 x 22
1 @ 5-9 x 24		1 @ 5-1 x 24
1 @ 4'-9 x 24		1 @ 4'-5 x 22
1 @ 4'-9 x 19		

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	99' 3"	3' 6"	3' 9" x 19" <i>above</i>	4	20 568 ⁸⁷	86 84
Forward Well	123' 5"	3' 6"	3' 9" x 19" <i>above</i>	6	20 852 ¹⁰⁸	108

State position of each freeing port { After Well:— } 13 1/2" above deck edge.

(F. and A. position and height above deck edge) { Forward Well:— }

State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Three vertical Bars ✓

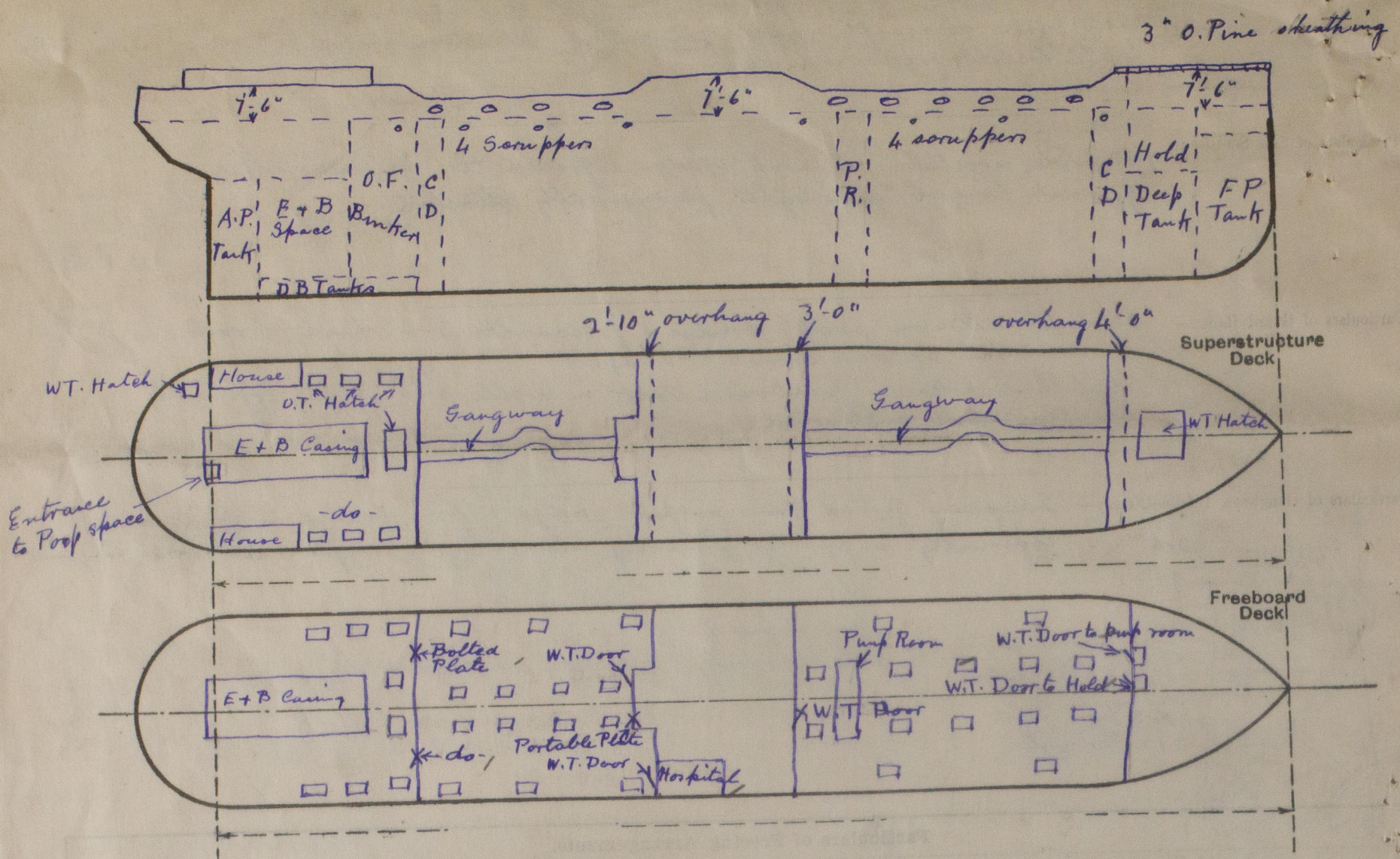
Additional area where sheer is less than standard.

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	1/20 ✓	1/20 ✓	Longitudinal 6 x 3 1/2 x 3 1/2 x 7/20 L ✓	30" ✓	Brackets each end	2'-3" x 3'-3"	24" ✓	7'-6" ✓
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead	8/20 ✓	8/20 ✓	6 x 2 1/2 x 2 1/2 x 7/20 L ✓	30" ✓	"	12' 5" x 3' 10" 10' 5" x 2' 3"	21" ✓	7'-6" ✓
Bridge, Forward Bulkhead	8/20 ✓	8/20 ✓	6 x 3 x 3 x 1/20 L ✓	30" ✓	"	5' 0" x 2' 3"	18" ✓	7'-6" ✓
Forecastle Bulkhead	9/20 ✓	9/20 ✓	4 x 3 x 5 x 9/20 L + fore aft bulkheads	42" ✓	"	5'-0" x 2'-3"	18" ✓	7'-6" ✓
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓							
Exposed Machinery Casings on Super-structure Decks	7/20 ✓	1/20 ✓	4 x 3 x 1/20 Vert. angles ✓	30" ✓	Taken foot + top angles	4'-10" x 2'-2"	18" ✓	7'-9" ✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓							
Pump Room	8/20 ✓	8/20 ✓	6 x 3 x 3 x 8/20 L Vertical	35" ✓	Taken foot + top angles	4'-0" x 2'-0"	12" ✓	6'-6" ✓
Deckhouses on Flush Deck Ships ...								

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

Poop Bulkhead	...	...	Bolted plates of steel. ^{second} by through bolts
Raised Quarter Deck Bulkhead	...	✓	
Bridge, After Bulkhead	...	...	2 Steel W.T. doors, capable of being operated from both sides. ✓ 1 steel plate tonnage door, attached with lugs (portable) ✓ as hook bolts
Bridge, Forward Bulkhead	...	...	1-steel W.T. door, capable of being operated from both sides. ✓
Forecastle Bulkhead	...	...	2-Steel W.T. doors, 1 to pump room & 1 to cargo hold, worked from both sides. ✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	...	✓	7 wood doors to rooms + forecassle, worked from both sides. ✓
Exposed Machinery Casings on Superstructure Decks	...	✓	Hinged steel doors, worked from both sides. ✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	...	...	✓
Pump Room	...	...
Deckhouse on Flush Deck Ships	...	...	one W.T. hinged steel door, 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 shewn on the following sketches:—



State any special features in the construction of the ship:— Oil Tanker/ Machinery aft. Longitudinal Framing.

Builder's name and yard number H. M. Dockyard, Portsmouth

Names of sister ships "Nassa"

Owners Anglo Saxon Petroleum Co. Ltd

Fee £ 16 : 0 : 0

Received by me



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