

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

 Index. No. 34722
 (For London Office only.)

Computation of Freeboard for ~~Steamer, Sailing Ship, Tanker~~

having poop, bridge and forecastle

(Type of Superstructures.)

Port of Survey _____

Date of Survey 13.12.35

Name of Surveyor _____

Particulars of Classification 100A1
carrying petroleum in bulk
(Contaminated)

Ship's Name John Brown & Co. Ltd.
Mary No 544
for Anglo American oil Co.

Nationality and Port of Registry _____

Official Number _____

Gross Tonnage _____

Date of Build _____

Moulded Dimensions: Length 445.0 Breadth 61.0 Depth 32.17

Moulded displacement at moulded draught = 85 per cent. of moulded depth 15900 tons

Coefficient of fineness for use with Tables .750 ✓

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>32.17</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(32.25 - 29.67) × 3 = 7.74</u> ✓	Moulded Breadth (B) <u>61.0</u>
Stringer plate ... <u>1.01</u> <u>.08</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>2.58</u> ✓	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{61.0 \times 12}{50} = 14.64$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ _____	If restricted by superstructures ✓	Ship's Round of Beam = <u>15.50</u>
Depth for Freeboard (D) = <u>32.25</u>		Difference = <u>.86</u>
		Restricted to _____
		Correction = $\frac{\text{Diff}^a}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.86}{4} \times \frac{62.11}{61.0} = -.13 ✓$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	<u>104.00</u> ✓	<u>104.00</u>	<u>7.75</u>	✓	<u>104.00</u>
„ overhang					
R.Q.D. enclosed					
„ overhang					
Bridge enclosed <u>equivalent</u>	<u>32.50</u> ✓	<u>32.50</u>	<u>7.75</u>	✓	<u>32.50</u>
„ overhang aft					
„ overhang forward					
F'cle enclosed	<u>32.11</u> ✓	<u>32.11</u>	<u>7.75</u>	✓	<u>32.11</u>
„ overhang					
Trunk aft					
„ forward					
Tonnage opening aft					
„ „ forward					
Total	<u>168.61</u>	<u>168.61</u>			<u>168.61</u>

Standard Height of Superstructure <u>7.5</u>	
„ „ R.Q.D. <u>✓</u>	
Deduction for complete superstructure <u>42</u>	
Percentage covered $\frac{S}{L} = \frac{168.61}{445.0} = 37.89$ ✓	
„ „ $\frac{S_1}{L} = \frac{168.61}{445.0} = 37.89$ ✓	
„ „ $\frac{E}{L} = \frac{168.61}{445.0} = 37.89$ ✓	
Percentage from Table, Line A, Tanker <u>28.89</u> ✓	
(corrected for absence of forecastle (if required))	
Percentage from Table, Line B. <u>✓</u>	
(corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction = <u>42 × 28.89 = -12.13</u> ✓	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<u>54.50</u>	1		<u>54.50</u>	<u>55.50</u>	<u>55.50</u>	1		<u>55.50</u>
$\frac{1}{6}$ L from A.P.	<u>24.25</u>	4		<u>97.00</u>	<u>24.66</u>	<u>98.64</u>	4		<u>394.56</u>
$\frac{2}{6}$ L „	<u>5.995</u>	2		<u>11.99</u>	<u>6.17</u>	<u>12.34</u>	2		<u>24.68</u>
Amidships	<u>-</u>	4		<u>-</u>	<u>-</u>	<u>-</u>	4		<u>-</u>
$\frac{2}{6}$ L from F.P.	<u>11.99</u>	2		<u>23.98</u>	<u>12.34</u>	<u>24.68</u>	2		<u>49.36</u>
$\frac{1}{6}$ L „	<u>48.50</u>	4		<u>194.00</u>	<u>49.32</u>	<u>197.28</u>	4		<u>789.12</u>
F.P.	<u>109.00</u>	1		<u>109.00</u>	<u>111.00</u>	<u>111.00</u>	1		<u>111.00</u>
Total				<u>490.47</u>					<u>499.44</u> ✓

Mean actual sheer aft = <u>Sum</u>	
Mean standard sheer aft = <u>Sum</u>	
Mean actual sheer forward = <u>Sum</u>	
Mean standard sheer forward = <u>Sum</u>	
Length of enclosed superstructure forward of amidships = <u>Tanker</u>	
„ „ aft of „ = <u>Tanker</u>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{8.97}{18} \left(.75 - \frac{1.894}{560.6} \right) = -.28$ ✓

If limited on account of midship superstructure. ✓

If limited to maximum allowance of 1½ ins. per 100 ft. ✓

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Corrected for Flush Deck (if required)
Depth to Freeboard Deck = <u>32.25</u>	$\Delta = 15262$ ✓	Correction for coefficient $\frac{.750 + .68}{1.36} = \frac{1.43}{1.36} = 1.05$ ✓
Summer freeboard = <u>6.06</u>	Tons per inch immersion at summer load water line	Depth Correction <u>7.74</u>
Moulded draught (d) = <u>26.19</u>	T = <u>54.55</u> ✓	Deduction for superstructures <u>12.13</u> ✓
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>6.55</u> ✓	Deduction = $\frac{\Delta}{40T}$ inches = <u>6.99</u> ✓	Sheer correction <u>0.28</u> ✓
Addition for Winter North Atlantic Freeboard (if required) = <u>4.2 + 6.2 = 10.4</u>	<u>7</u> ✓	Round of Beam correction <u>0.13</u> ✓
		Correction for Thickness of Deck amidships <u>-</u>
		Other corrections, scantlings, etc. <u>-</u>
		Summer Freeboard = <u>72.80</u> ✓

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, W, Steel, Deck: 16.03 3/4

Tropical Fresh Water Line above Centre of Disc ...	<u>1.13 1/2</u>
Fresh Water Line „ „ ...	<u>7</u>
Tropical Line „ „ ...	<u>6 1/2</u>
Winter Line below „ „ ...	<u>6 1/2</u>
Winter North Atlantic Line „ „ ...	<u>11</u>

Tropical Fresh Water Freeboard ...	<u>4.11 1/4</u>
Fresh Water „ „ ...	<u>5.5 3/4</u>
Tropical „ „ ...	<u>5.6 1/4</u>
Winter „ „ ...	<u>6.7 1/4</u>
Winter North Atlantic „ „ ...	<u>6.11 3/4</u>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	...	...	...	...	...	...	...	...	...
Dimensions of Hatchway	...	...	...	...	...	...	...	...	...
COAMINGS	{	Height above Deck	...	...	...	...	...	...	...
		Thickness	...	...	...	...	...	...	...
		Sides	...	...	...	...	...	...	...
		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	...	...	...	...	...	...	...
		Thickness	...	...	...	...	...	...	...
		How fitted	...	...	...	...	...	...	...
		Bearing Surface	...	...	...	...	...	...	...
Spacing of Cleats	...	...	...	...	...	...	...	...
Number of Tarpaulins	...	...	...	...	...	...	...	...

*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 :—

Particulars of Flush Bunker Scuttles :—

Particulars of Companionways :—

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

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

Particulars of Gangway Cargo and Coaling Ports :—

Particulars of Scuppers and Sanitary Discharge Pipes :—

Particulars of Side Scuttles :—

Particulars of Guard Rails :—

Particulars of Gangways, Lifelines, etc. :—

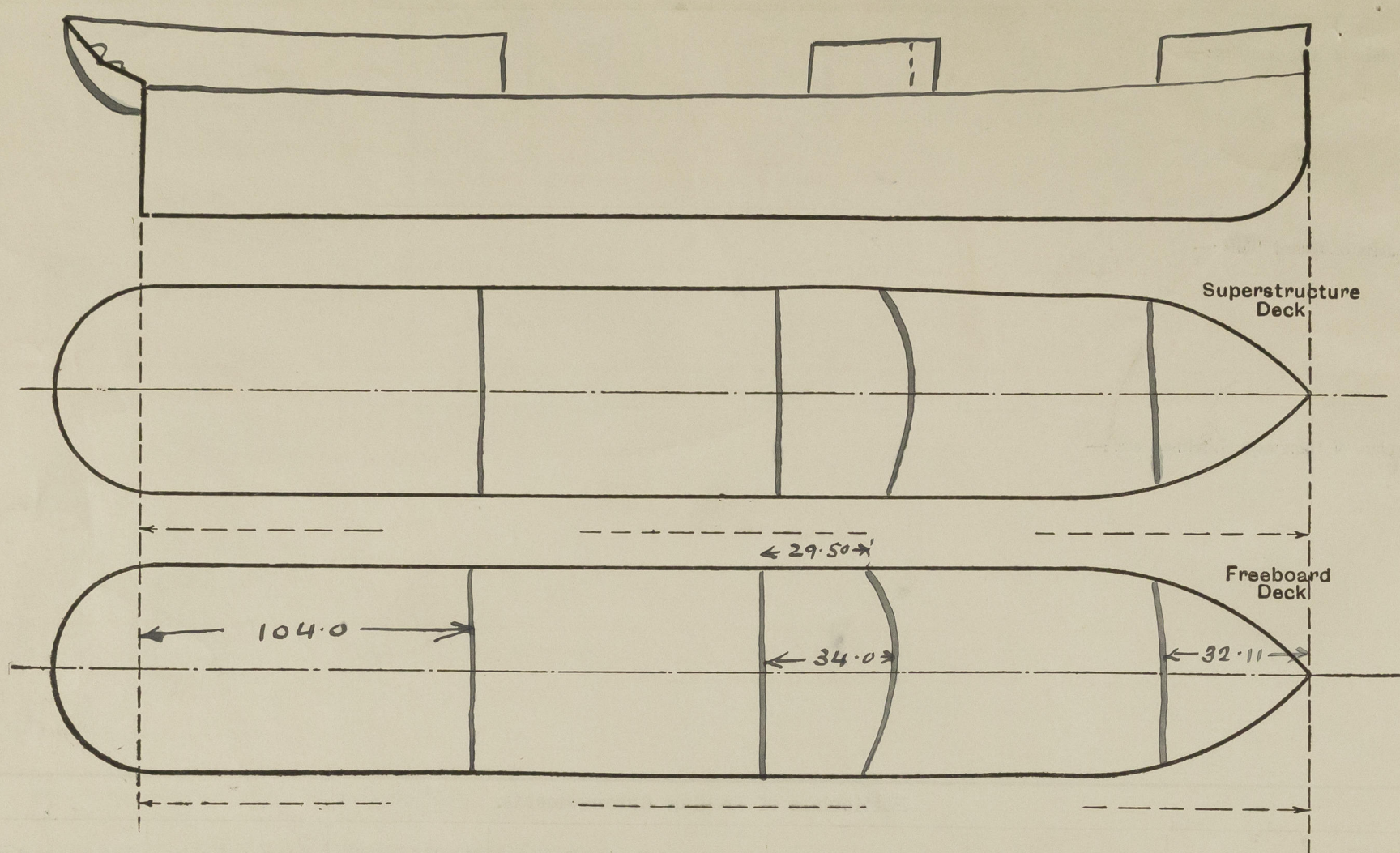
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well
Forward Well

State position of each freeing port ... { After Well :—
(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 :—
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
Raised Quarter Deck Bulkhead
Bridge, After Bulkhead
Bridge, Forward Bulkhead
Forecastle Bulkhead
Trunk, Aft
Trunk, Forward
Exposed Machinery Casings on Freeboard or Raised Quarter Decks
Exposed Machinery Casings on Superstructure Decks
Machinery Casings within Superstructures not fitted with Class I Closing Appliances
Deckhouses on Flush Deck Ships

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	...
Raised Quarter Deck Bulkhead	...
Bridge, After Bulkhead	...
Bridge, Forward Bulkhead	...
Forecastle Bulkhead	...
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	...
Exposed Machinery Casings on Superstructure Decks	...
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:—



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

Bridge at side 29.50 ✓
 $\frac{2}{3} \times 4.5 = 3.00$ ✓
32.50 equivalent 29.50

Builder's name and yard number

Names of sister ships

Owners

Fee £

Received by me



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Foundation