

Preliminary
Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Index No. **35160**
 (For London Office only.)

Computation of Freeboard for ~~Steamer~~ *Sailing Ship*, Tanker
 having *Loop, bridge and forecastle*

Port of Survey _____
 Date of Survey *15/1/37*
 Name of Surveyor _____

(Type of Superstructures.)

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<i>Sevan Hunter & Wigham Richardson</i> <i>No. 1545</i>				

Moulded Dimensions: Length *500'* Breadth *68'* Depth *35.75'*
 Moulded displacement at moulded draught = 85 per cent. of moulded depth *22070* tons
 Coefficient of fineness for use with Tables *.748*

Particulars of Classification *100A1*
carrying Petroleum in Bulk contemplated

RETAIN

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... <i>35.75</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>35.82 - 33.33 = 2.49</i> <i>3</i> = <i>+ 7.47</i>	Moulded Breadth (B) <i>68.0</i> Standard Round of Beam = $\frac{B \times 12}{50} = 16.32$ Ship's Round of Beam = <i>17</i>
Stringer plate ... <i>.07</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = _____	Difference <i>.68 excess</i> Restricted to _____ Correction = $\frac{\text{Diff}^e}{4} \times (1 - \frac{S_1}{L}) = \frac{.68}{4} \times .5534 = -.09$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	
Depth for Freeboard (D) = <i>35.82</i>		

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<i>110.17</i>	<i>110.17</i>	<i>7.5</i>		<i>110.17</i>
„ overhang ...					
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed <i>EQUIVALENT</i>	<i>44.33</i>	<i>44.33</i>	<i>7.5</i>		<i>44.33</i>
„ overhang aft ...					
„ overhang forward					
F'cle enclosed ...	<i>68.83</i>	<i>68.83</i>	<i>7.5</i>		<i>68.83</i>
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward					
Total ...	<i>223.33</i>	<i>223.33</i>			<i>223.33</i>

Standard Height of Superstructure *7.5*
 „ „ R.Q.D. ✓
 Deduction for complete superstructure *42.00*
 Percentage covered $\frac{S}{L} = 44.66\%$
 „ „ $\frac{S_1}{L} = 44.66\%$
 „ „ $\frac{E}{L} = 44.66\%$
 Percentage from Table, ~~Steamer~~ *Tanker* *35.66%*
 (corrected for absence of forecastle (if required))
 Percentage from Table, Line B.
 (corrected for absence of forecastle (if required))
 Interpolation for bridge less than 2L (if required)
 Deduction = *42.00* × *.3566* = *- 14.98*

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>60.00</i>	<i>1</i>		<i>60.00</i>	<i>60.00</i>	<i>60.00</i>	<i>1</i>		<i>60.00</i>
$\frac{1}{8}L$ from A.P. ...	<i>26.70</i>	<i>4</i>		<i>106.80</i>	<i>26.625</i>	<i>26.625</i>	<i>4</i>		<i>106.50</i>
$\frac{2}{8}L$ „ ...	<i>6.60</i>	<i>2</i>		<i>13.20</i>	<i>6.625</i>	<i>6.625</i>	<i>2</i>		<i>13.25</i>
Amidships ...		<i>4</i>					<i>4</i>		
$\frac{2}{8}L$ from F.P. ...	<i>13.20</i>	<i>2</i>		<i>26.40</i>	<i>13.31</i>	<i>13.31</i>	<i>2</i>		<i>26.62</i>
$\frac{1}{8}L$ „ ...	<i>53.40</i>	<i>4</i>		<i>213.60</i>	<i>53.31</i>	<i>53.31</i>	<i>4</i>		<i>213.24</i>
F.P. ...	<i>120.00</i>	<i>1</i>		<i>120.00</i>	<i>120.00</i>	<i>120.00</i>	<i>1</i>		<i>120.00</i>
Total ...				<i>540.00</i>					<i>539.61</i>

Mean actual sheer aft = *Deficient > 75% Standard*
 Mean standard sheer aft

Mean actual sheer forward = *Excess*
 Mean standard sheer forward

Length of enclosed superstructure forward of amidships = } *Tanker*
 „ „ aft of „ = }

ford sheer

<i>13.20</i>	<i>3</i>	<i>39.60</i>	<i>13.31</i>	<i>3</i>	<i>39.93</i>
<i>53.40</i>	<i>3</i>	<i>160.20</i>	<i>53.31</i>	<i>3</i>	<i>159.93</i>
<i>120.00</i>	<i>1</i>	<i>120.00</i>	<i>120.00</i>	<i>1</i>	<i>120.00</i>
		<i>319.80</i>			<i>319.86</i>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{.39}{18} (.75 - .2233) = +.01$
 If limited on account of midship superstructure. *.5267*

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

<p>Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard.</p> <p style="text-align: right;">Ft.</p> <p>Depth to Freeboard Deck = <i>35.82</i> Summer freeboard = <i>7.02</i> Moulded draught (d) = <i>28.80</i></p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <i>7.2 = 7¼</i> Addition for Winter North Atlantic Freeboard (if required) = <i>7.2 + 5 = 12¼</i></p>	<p>Deduction for Fresh Water.</p> <p>Displacement in salt water at summer load water line $\Delta =$ Tons per inch immersion at summer load water line $T =$ Deduction = $\frac{\Delta}{40T}$ inches $\frac{d}{4} = 7¼$</p>	<p>TABULAR FREEBOARD corrected for Flush Deck (if required)</p> <p>Correction for coefficient $\frac{.748 + .68}{1.36} = \frac{1.428}{1.36}$</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <th></th> <th style="text-align: center;">+</th> <th style="text-align: center;">-</th> </tr> <tr> <td>Depth Correction ...</td> <td style="text-align: center;"><i>7.47</i></td> <td style="text-align: center;">-</td> </tr> <tr> <td>Deduction for superstructures ...</td> <td style="text-align: center;">-</td> <td style="text-align: center;"><i>14.98</i></td> </tr> <tr> <td>Sheer correction ...</td> <td style="text-align: center;"><i>.01</i></td> <td style="text-align: center;">-</td> </tr> <tr> <td>Round of Beam correction ...</td> <td style="text-align: center;">-</td> <td style="text-align: center;"><i>.09</i></td> </tr> <tr> <td>Correction for Thickness of Deck amidships ...</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Other corrections, scantlings, etc. ...</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td></td> <td style="text-align: center;"><i>7.48</i></td> <td style="text-align: center;"><i>15.07</i></td> </tr> <tr> <td></td> <td colspan="2" style="text-align: center;"><i>- 7.59</i></td> </tr> <tr> <td></td> <td colspan="2" style="text-align: center;">Summer Freeboard = <i>84.28</i></td> </tr> </table>		+	-	Depth Correction ...	<i>7.47</i>	-	Deduction for superstructures ...	-	<i>14.98</i>	Sheer correction ...	<i>.01</i>	-	Round of Beam correction ...	-	<i>.09</i>	Correction for Thickness of Deck amidships ...	-	-	Other corrections, scantlings, etc. ...	-	-		<i>7.48</i>	<i>15.07</i>		<i>- 7.59</i>			Summer Freeboard = <i>84.28</i>	
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ **Steel**, Deck :-

Tropical Fresh Water Line above Centre of Disc ... <i>14½</i>	Tropical Fresh Water Freeboard ... <i>7'-0¼</i>
Fresh Water Line „ „ ... <i>7¼</i>	Fresh Water „ „ ... <i>5'-9¾</i>
Tropical Line „ „ ... <i>7¼</i>	Tropical „ „ ... <i>6'-5</i>
Winter Line below „ „ ... <i>7¼</i>	Winter „ „ ... <i>6'-5</i>
Winter North Atlantic Line „ „ ... <i>12¼</i>	Winter North Atlantic „ „ ... <i>7'-7½</i>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS.									
Description of Hatchway	...	...	...	...	...	...	...	...	...
Dimensions of Hatchway	...	...	...	...	...	...	...	...	...
COAMINGS	{ Height above Deck ... Thickness { Sides ... Ends ... Stiffeners ... Brackets, Stays ...	...	...	...	...	...	...	...	...
	
	
	
HATCH BEAMS	{ Number ... Spacing ... Scantling and Sketch ...	...	...	...	...	...	...	...	...
	
FORE AND AFTERS	{ Number ... Spacing ... Unsupported Lengths ... Scantling* and Sketch ...	...	...	...	...	...	...	...	...
	
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. :—

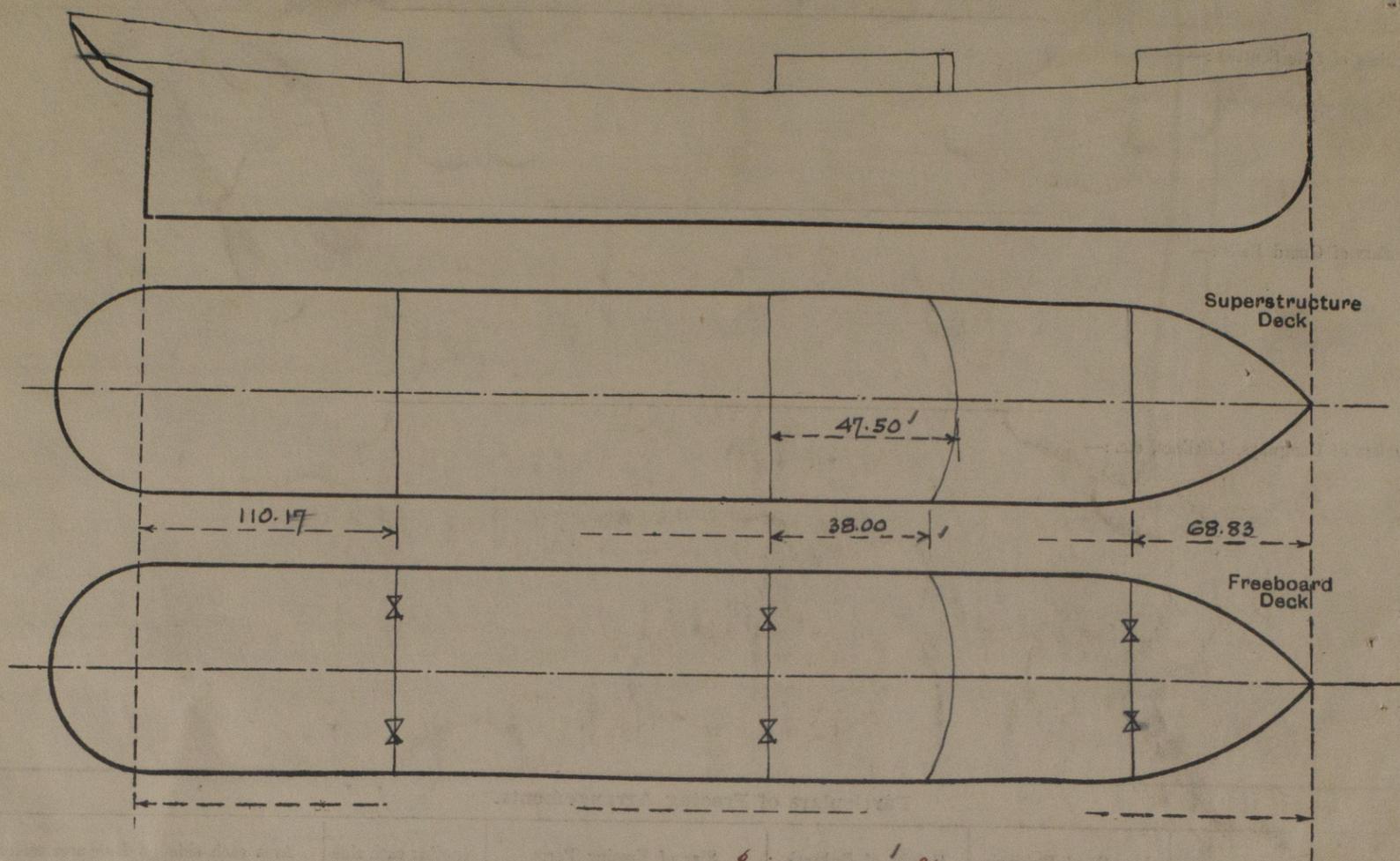
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well ...						
Forward Well ...						

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:—



Bridge $9.5 \times \frac{2}{3} = 6.33$
 $\frac{38.00}{44.33}$ Equivalent

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

Builder's name and yard number

Names of sister ships

Owners

Fee £

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