

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

1404

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Shell, Deck with Tonnage Opening

(Type of Superstructures.)

Ship's Name <u>orden & harvik</u>	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
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Moulded Dimensions: Length 384.91 Breadth 53.41 Depth 26.06 topper
Moulded displacement at moulded draught = 85 per cent. of moulded depth 10115 tons
Coefficient of fineness for use with Tables .777

Port of Survey
Date of Survey
Name of Surveyor
Particulars of Classification

Depth for Freeboard (D) Moulded depth <u>26.06</u> Stringer plate <u>.52</u> <u>.04</u> Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ <input checked="" type="checkbox"/> Depth for Freeboard (D) = <u>26.10</u>	Depth correction (a) Where D is greater than Table depth (D-Table depth) R = <u>(26.10 - 25.66) 2.961 = + 1.30</u> (b) Where D is less than Table depth (if allowed) (Table depth-D) R = <input checked="" type="checkbox"/> If restricted by superstructures <input checked="" type="checkbox"/>	Round of Beam correction Moulded Breadth (B) <u>53.41</u> Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>12.82</u> Ship's Round of Beam = <u>13.00</u> Difference <u>.18</u> Restricted to Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.18}{4} \times .0076 =$ <u>.00076</u> = <u>nil</u>
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>31.00</u>	<u>31.00</u>	<u>8.0</u>	<input checked="" type="checkbox"/>	<u>31.00</u>
" overhang ...	<u>2.12</u>	<u>1.06</u>	<u>8.0</u>	<input checked="" type="checkbox"/>	<u>1.06</u>
R.Q.D. enclosed					
" overhang					
Bridge enclosed...					
" overhang aft					
" overhang forward	<u>345.41</u>	<u>345.41</u>	<u>8.0</u>	<input checked="" type="checkbox"/>	<u>345.41</u>
F'cle enclosed ...					
BRIDGE overhang aft	<u>2.12</u>	<u>1.59</u>			<u>1.59</u>
Trunk aft ...					
" forward ...					
Tonnage opening aft	<u>4.26</u>	<u>2.92</u>	<u>8.0</u>	<input checked="" type="checkbox"/>	<u>2.92</u>
" " forward					
Total ...	<u>384.91</u>	<u>381.98</u>			<u>381.98</u>

Standard Height of Superstructure 7.35
" " R.Q.D. ☒
Deduction for complete superstructure 40.99
Percentage covered $\frac{S}{L} =$ 100%
" " $\frac{S_1}{L} =$ 99.24%
" " $\frac{E}{L} =$ 99.24%
Percentage from Table, Line A. 99.06%
(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 = 40.99 x .9906 = - 40.60

SHEER CORRECTION.

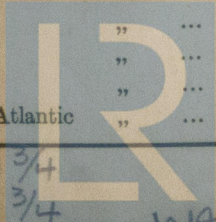
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>48.49</u>	<u>1</u>	<u>48.49</u>	<u>53.00</u>	<u>60.80</u>	<u>1</u>	<u>60.80</u>		
$\frac{1}{2}$ L from A.P. ...	<u>21.58</u>	<u>4</u>	<u>86.32</u>		<u>27.05</u>	<u>4</u>	<u>108.20</u>		
$\frac{2}{3}$ L " ...	<u>5.33</u>	<u>2</u>	<u>10.66</u>		<u>6.69</u>	<u>2</u>	<u>13.38</u>		
Amidships ...	<input checked="" type="checkbox"/>	<u>4</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<u>4</u>	<input checked="" type="checkbox"/>		
$\frac{2}{3}$ L from F.P. ...	<u>10.67</u>	<u>2</u>	<u>21.34</u>		<u>14.06</u>	<u>2</u>	<u>28.12</u>		
$\frac{1}{2}$ L " ...	<u>43.15</u>	<u>4</u>	<u>172.60</u>		<u>56.87</u>	<u>4</u>	<u>227.48</u>		
F.P. ...	<u>96.98</u>	<u>1</u>	<u>96.98</u>	<u>120.00</u>	<u>127.80</u>	<u>1</u>	<u>127.80</u>		
Total ...			<u>436.39</u>				<u>565.78</u>		

Mean actual sheer aft =
Mean standard sheer aft =
Mean actual sheer forward =
Mean standard sheer forward =
Length of enclosed superstructure forward of amidships =
" " aft of " =
Standard Tween 194 Hgt. = 8.00
Actual " " = 7.35
Difference = .65
Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{129.39}{18} \times (.75 - .50) =$ - 1.80
If limited on account of midship superstructure. ☒
If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. ☒

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Ft. Depth to Freeboard Deck = <u>26.10</u> Summer freeboard = <u>2.54</u> Moulded draught (d) = <u>23.56</u> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>5.89 = 6"</u> Addition for Winter North Atlantic Freeboard (if required =	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ Tons per inch immersion at summer load water line $T =$ Deduction = $\frac{\Delta}{40 T}$ inches =	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.777 + .68}{1.36} = \frac{1.457}{1.36}$ <table><tr><th></th><th>+</th><th>-</th></tr><tr><td>Depth Correction ...</td><td><u>1.30</u></td><td><input checked="" type="checkbox"/></td></tr><tr><td>Deduction for superstructures ...</td><td><input checked="" type="checkbox"/></td><td><u>40.60</u></td></tr><tr><td>Sheer correction ...</td><td><input checked="" type="checkbox"/></td><td><u>1.80</u></td></tr><tr><td>Round of Beam correction ...</td><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td>Correction for Thickness of Deck amidships ...</td><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td>Other corrections, scantlings, etc. ...</td><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td></td><td><u>1.30</u></td><td><u>42.40</u></td></tr><tr><td>Summer Freeboard =</td><td></td><td><u>30.54</u></td></tr></table>		+	-	Depth Correction ...	<u>1.30</u>	<input checked="" type="checkbox"/>	Deduction for superstructures ...	<input checked="" type="checkbox"/>	<u>40.60</u>	Sheer correction ...	<input checked="" type="checkbox"/>	<u>1.80</u>	Round of Beam correction ...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Correction for Thickness of Deck amidships ...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Other corrections, scantlings, etc. ...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<u>1.30</u>	<u>42.40</u>	Summer Freeboard =		<u>30.54</u>
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck :- 2'-6 1/2"

Tropical Fresh Water Line above Centre of Disc ...	...	Tropical Fresh Water Freeboard ...	...
Fresh Water Line " " ...	...	Fresh Water " " ...	...
Tropical Line " " ...	...	Tropical " " ...	...
Winter Line below " " ...	<u>6"</u>	Winter " " ...	<u>3'-0 1/2"</u>
Winter North Atlantic Line " " ...	...	Winter North Atlantic " " ...	...



PARTICULARS OF PROTECTION TO OPENINGS

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway									
Dimensions of Hatchway									
COAMINGS	Height above Deck								
	Thickness								
	Stiffeners								
	Brackets, Stays								
HATCH BEAMS	Number								
	Spacing								
	Scantling and Sketch								
	Bearing Surface								
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 (F. and A. position and height above deck edge) After Well:—
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.

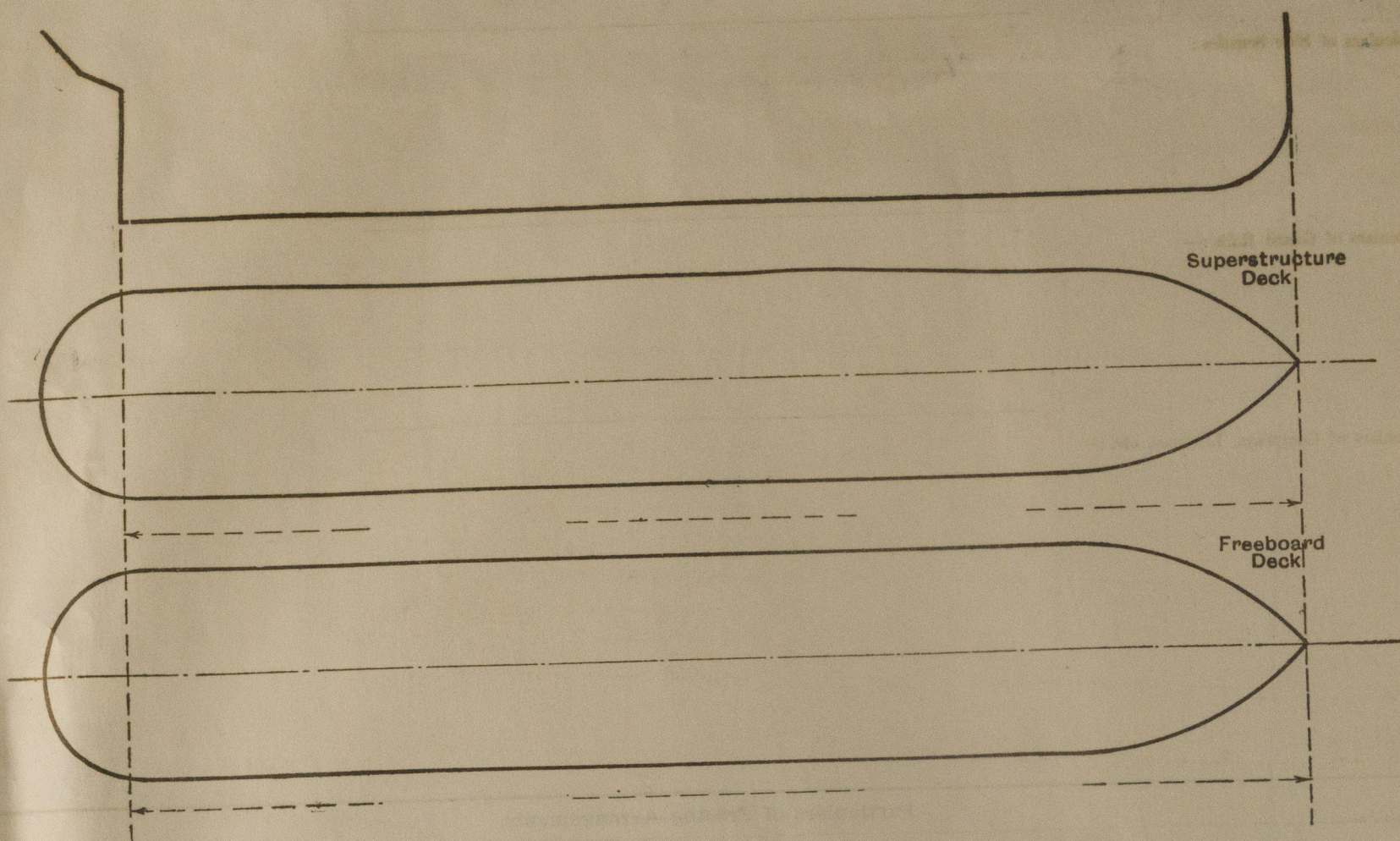
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	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:—

Builder's name and yard number

Names of sister ships

Owners

Fee £ : : :

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