

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

26 NOV 6

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having *complete superstructure dk. with tonnage opening aft.*Port of Survey *Helsingfors*Date of Survey *23-11-36*Name of Surveyor *Oliver Tylech*Particulars of Classification *8100A1**w/ff freeboard*

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

*INGRID THORDEN**Swedish**6365**1884**1920-10*

Moulded Dimensions: Length *264.29* Breadth *42.50* Depth *20'-6"*
 Moulded displacement at moulded draught = 85 per cent. of moulded depth *42.46* tons
 Coefficient of fineness for use with Tables *.777*

Depth for Freeboard (D)

Moulded depth ... *20.50*Stringer plate ... *.04*

Sheathing on exposed deck

 $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = *20.54*

Depth correction

(a) Where D is greater than Table depth

(D - Table depth) R =

(20.54 - 14.62) 2.032 = + 5.93"

(b) Where D is less than Table depth (if allowed)

(Table depth - D) R =

If restricted by superstructures ☒

Round of Beam correction

Moulded Breadth (B) *42.50*Standard Round of Beam = $\frac{B \times 12}{50} =$ *10.20*Ship's Round of Beam = *10.12*Difference *excess* = *.30*

Restricted to

Correction = $\frac{\text{Diff}^\circ}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.30}{4} \times .0082 = \text{NIL}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<i>23'-6"</i>	<i>23.50</i>	<i>7'-0"</i>	<input checked="" type="checkbox"/>	<i>23.50</i>
" overhang ...	<input checked="" type="checkbox"/>				
R.Q.D. enclosed ...	<input checked="" type="checkbox"/>				
" overhang ...	<input checked="" type="checkbox"/>				
Bridge enclosed ...	<i>210'-9 1/2"</i>	<i>210.79</i>	<i>7'-0"</i>	<input checked="" type="checkbox"/>	<i>210.79</i>
" overhang aft ...	<input checked="" type="checkbox"/>				
" overhang forward ...	<input checked="" type="checkbox"/>				
F'cle enclosed ...	<i>26'-0"</i>	<i>26.00</i>	<i>7'-0"</i>	<input checked="" type="checkbox"/>	<i>26.00</i>
" overhang ...	<input checked="" type="checkbox"/>				
Trunk aft ...					
" forward ...					
Tonnage opening aft ...	<i>4'-0"</i>	<i>1.82</i>	<i>Diff. x .456</i>	<input checked="" type="checkbox"/>	<i>1.82</i>
" forward ...					
Total ...	<i>264.29</i>	<i>262.11</i>			<i>262.11</i>

Standard Height of Superstructure *6.143*" " R.Q.D. ☒Deduction for complete superstructure *32.43*Percentage covered $\frac{S}{L} =$ *100.00*" $\frac{S_1}{L} =$ *99.18*" $\frac{E}{L} =$ *99.18*Percentage from Table, Line A. *98.99*

(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 = *32.43 x .9899 = - 32.10*

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	<i>36.43</i>	1	<i>36.43</i>	<i>+ 10.28</i>	<i>43.78</i>	1	<i>43.78</i>
1/8 L from A.P. ...	<i>16.21</i>	4	<i>64.84</i>		<i>19.48</i>	4	<i>77.92</i>
2/8 L " ...	<i>4.01</i>	2	<i>8.02</i>		<i>4.82</i>	2	<i>9.64</i>
Amidships ...	-	4	-		-	4	-
2/8 L from F.P. ...	<i>8.02</i>	2	<i>16.04</i>		<i>9.66</i>	2	<i>19.32</i>
1/8 L " ...	<i>32.42</i>	4	<i>129.68</i>		<i>39.06</i>	4	<i>156.24</i>
F.P. ...	<i>72.86</i>	1	<i>72.86</i>	<i>+ 10.28</i>	<i>87.78</i>	1	<i>87.78</i>
Total ...			<i>327.87</i>				<i>394.68</i>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{66.81}{18} (.75 - .50) = -.93"$ If limited on account of midship superstructure. ☒*.25*If limited to maximum allowance of 1 1/2 ins. per 100 ft. ☒

Actual height of superstructure = 7.000

Standard " " = 6.143

Excess = .857

= 10.28"

Mean actual sheer aft = Excess

Mean actual sheer forward = Excess

Length of enclosed superstructure forward of amidships = } b.s.s.

" " aft of " = }

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.Depth to Freeboard Deck = *20.54*Summer freeboard = *1.46*Moulded draught (d) = *19.08*

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = *4.77 = 121 m/m*

Addition for Winter North Atlantic Freeboard (if

required) = *6.77 = 172 m/m*

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ *4809*

Tons per inch immersion at summer load water line

 $T =$ *22.25*Deduction = $\frac{\Delta}{40 T}$ inches= *5.40 = 137 m/m*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient *.777 + .68 = 1.457**1.36 1.36*Depth Correction ... *5.93*Deduction for superstructures ... *32.10*Sheer correction ... *0.93*

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

*6.83**12.76 33.03**35.30**37.82**82.8**27-11-36**14.55*SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck:—Tropical Fresh Water Line above Centre of Disc ... *258 m/m*Fresh Water Line " " ... *137*Tropical Line " " ... *121*Winter Line below " " ... *121*Winter North Atlantic Line " " ... *172*Tropical Fresh Water Freeboard ... *188*Fresh Water " " ... *309*Tropical " " ... *325*Winter " " ... *567*Winter North Atlantic " " ... *618*

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS.									
Description of Hatchway		No. 1	No. 4	No. 1	No. 4	No. 5	Tonnage opening		
Dimensions of Hatchway		25'-10" x 18'	23'-9" x 18'	25'-10" x 18'	23'-9" x 18'	4' x 19'-7"			
COAMINGS	Height above Deck	34"	34"	14 1/2"	14 1/2"	8"			
	Thickness	46"	46"	46"	46"	50"			
	Stiffeners	7" x 2 3/4" x .42 L	7" x 2 3/4" x .42 L	44"	44"	50"			
	Brackets, Stays	2 x 1 3/8"	2 x 1 3/8"						
HATCH BEAMS	Number	4	4	4	4				
	Spacing	62"	57"	62"	57"				
	Scantling and Sketch	16" x 36" (5) 3" x 44"	see no. 1	16" x 42 3/4" x 46"	see no. 1				
	Bearing Surface	3 1/2"	3 1/2"	3 1/2"	3 1/2"				
FORE AND AFTERS	Number								
	Spacing								
	Unsupported Lengths								
	Scantling and Sketch								
HATCH COVERS	Material	wood	wood	wood	wood	wood			
	Thickness	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"			
	How fitted	F + A	F + A	F + A	F + A	F + A			
	Bearing Surface	3"	3"	3"	3"	1 1/2"			
Spacing of Cleats		21"	21"	22"	22"				
Number of Tarpaulins		2	2	2	2	2			

Particulars of fiddle, funnel and ventilator coamings:—

Unaltered

Particulars of Flush Bunker Scuttles:—

Particulars of Companionways:—

Unaltered

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

Unaltered

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

Unaltered

Particulars of Gangway Cargo and Coaling Ports:—

Particulars of Scuppers and Sanitary Discharge Pipes:—

Sanitary discharge pipes fitted with non-return valves. The scuppers in the wells closed. The tonnage well provided with a non-return valve closed from deck (see the attached drawing) and scuppers from tween deck to the engine room bilge (one on each side).

Particulars of Side Scuttles:—

Unaltered

Particulars of Guard Rails:—

Unaltered

Particulars of Gangways, Lifelines, etc.:—

Unaltered

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		Closed to				
Forward Well		Closed to				

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.

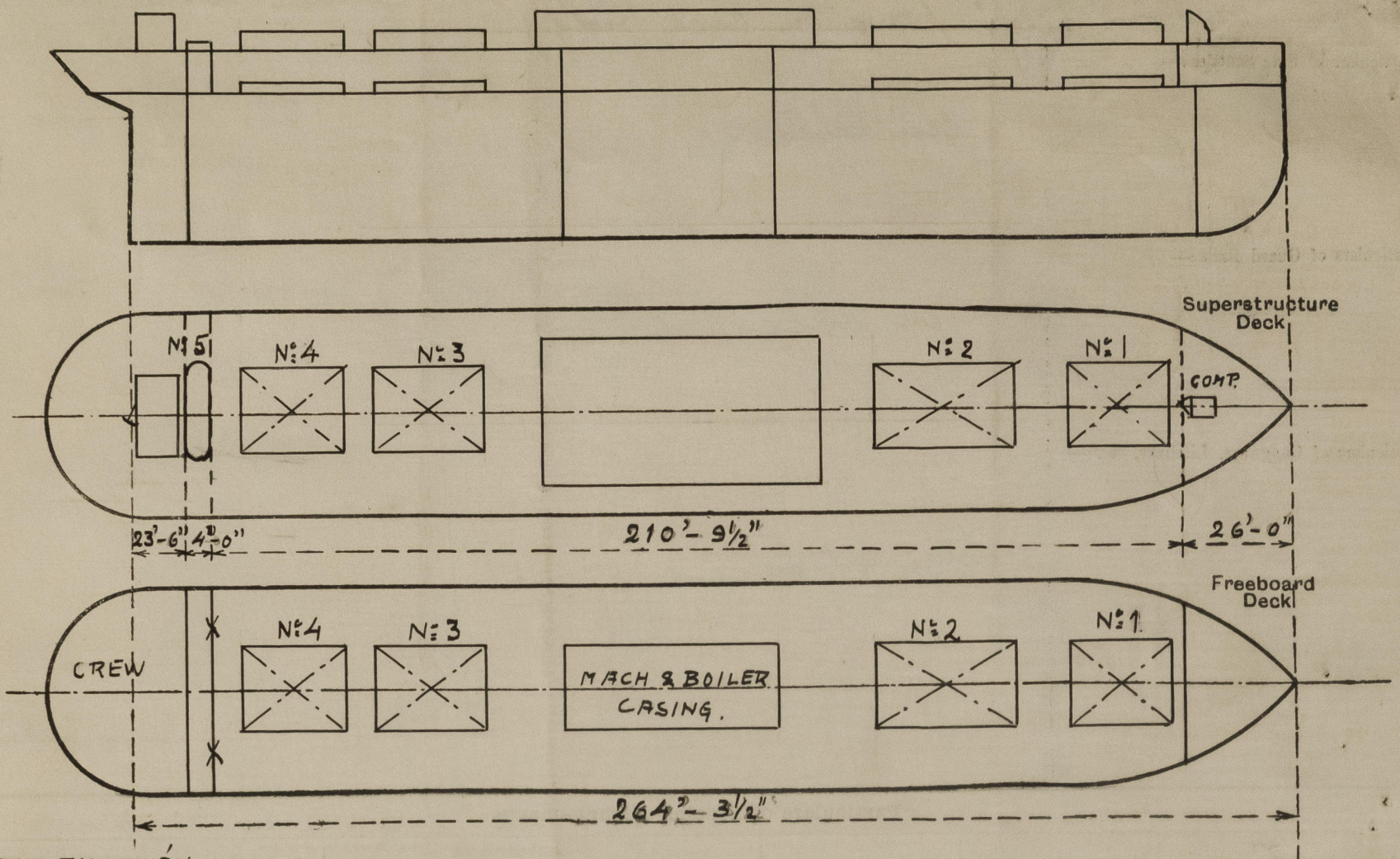
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	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	7"	30	3 1/2" x 3" x .46 L	28"	—	2 x 6'-5 1/4" x 3'-1"	3 1/4"	—
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	Closed by 3" wood planks in channel-bars.
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:—



5/3 INGRID THORDÉN

State any special features in the construction of the ship:— The vessel has been altered to a complete superstructure vessel with tonnage opening aft.

Tonnage opening. $\frac{36.00 - 19.58}{36.00} = \frac{16.42}{36.00} = .456$

Builder's name and yard number

Ahti. Lindholm en - Molala. Gothenburg

Names of sister ships

Owners

Rederi Yrö Aranas

Fee £

3 : 10 : 0

Received by me



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