

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

15 NOV 1932

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~
having Poop, R.Q.D., Bridge and Forecastle

(Type of Superstructures.)

Ship's Name <u>"THORNBURY"</u>	Nationality and Port of Registry <u>Finnish Marichamn</u>	Official Number <u>809</u>	Gross Tonnage <u>2163</u> <u>1216 net</u>	Date of Build <u>1905-4</u>
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Moulded Dimensions: Length 82.48 Breadth 12.56 Depth 6.28 6.248 m.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 4454 m³ tons ✓
Coefficient of fineness for use with Tables .799

Port of Survey Helsingfors
Date of Survey 31st Octob. 1932
Name of Surveyor Olavi Tylonen
Particulars of Classification 8100 A1
S.S. Cl. 2nd No 3-2.30. ✓

Depth for Freeboard (D) <u>6.248</u>	Depth correction	Round of Beam correction
Moulded depth ... <u>6.280</u>	(a) Where D is greater than Table depth (D-Table depth) R = <u>8.33(6.260 - 5.598)21.20 = +117%</u>	Moulded Breadth (B) <u>12.560</u> <u>12.50</u>
Stringer plate ... <u>12</u>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{12.50 \times 12}{50} = 250$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <u>255</u>
Depth for Freeboard (D) = <u>6.260</u>		Difference = <u>5</u>
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{5}{4} \times .3113 = \text{nil}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	<u>4.53</u>	<u>4.57</u>	<u>2.13</u>	✓	<u>4.57</u>	Standard Height of Superstructure <u>1908</u>
" overhang ...						" " R.Q.D. <u>1324</u>
R.Q.D. enclosed ...	<u>23.16</u>	<u>23.16</u>	<u>1.08</u>	✓	<u>18.66</u>	Deduction for complete superstructure <u>853</u>
" overhang ...	<u>20.12</u>					Percentage covered $\frac{S}{L} = \frac{69.51}{100} = 69.51\%$
Bridge enclosed ...	<u>19.44</u>	<u>20.12</u>	<u>2.134</u>	✓	<u>20.12</u>	" " $\frac{S_1}{L} = \frac{68.87}{100} = 68.87\%$
" overhang aft ...						" " $\frac{E}{L} = \frac{63.51}{100} = 63.51\%$
" overhang forward	<u>9.44</u>					Percentage from Table, Line A. <u>51.97%</u>
F'cle enclosed <u>Equival</u>	<u>9.44</u>	<u>9.44</u>	<u>2.10</u>	✓	<u>9.44</u>	(corrected for absence of forecastle (if required))
" overhang ...	<u>2.02</u>	<u>54</u>	<u>2.10</u>	✓	<u>54</u>	Percentage from Table, Line B.
Trunk aft ...	<u>1.08</u>					(corrected for absence of forecastle (if required))
" forward ...						Interpolation for bridge less than 2L (if required)
Tonnage opening aft ...						Deduction = <u>853</u> × .5197 = - <u>443%</u>
" " forward						
Total ...	<u>58.37</u>	<u>57.83</u>			<u>53.33</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	<u>953</u>	✓	1	<u>953</u>	<u>4.28</u>	<u>914</u>	✓	1	<u>914</u>	Mean actual sheer aft = <u>Deficient</u>
$\frac{1}{8}L$ from A.P. ...	<u>424</u>	✓	4	<u>1696</u>	<u>3.40</u>	<u>321</u>	✓	4	<u>1284</u>	Mean actual sheer forward = <u>Deficient</u>
$\frac{3}{8}L$ " ...	<u>106</u>	✓	2	<u>212</u>	<u>3.14</u>	<u>80</u>	✓	2	<u>160</u>	Mean standard sheer forward
Amidships ...	✓	✓	4	✓	<u>3.18</u>	✓	✓	4	✓	Length of enclosed superstructure forward of amidships =
$\frac{5}{8}L$ from F.P. ...	<u>212</u>	✓	2	<u>424</u>	<u>3.55</u>	<u>211</u>	✓	2	<u>422</u>	" " aft of " = } Def Sh.
$\frac{7}{8}L$ " ...	<u>847</u>	✓	4	<u>3388</u>	<u>4.12</u>	<u>843</u>	✓	4	<u>3372</u>	
F.P. ...	<u>1907</u>	✓	1	<u>1907</u>	<u>5.43</u>	<u>1829</u>	✓	1	<u>1829</u>	
Total ...				<u>8580</u>					<u>7981</u>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{599}{18} \times (.75 - .3475) = +13\%$

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 = 6.260
Summer freeboard = 728
Moulded draught (d) = 5532

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{48}$ inches = 115%

Addition for Winter North Atlantic Freeboard (if required) = 51%

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ =
Tons per inch immersion at summer load water line

Deduction = $\frac{\Delta}{40T}$ inches
= 115%

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.799 + .68}{1.36} = \frac{1.479}{1.36}$

	+	-
Depth Correction ...	<u>117</u>	✓
Deduction for superstructures ...	✓	<u>443</u>
Sheer correction ...	<u>13</u>	✓
Round of Beam correction ...	✓	✓
Correction for Thickness of Deck amidships ...	✓	✓
Other corrections, scantlings, etc. ...	✓	✓
	<u>130</u>	<u>443</u>

Summer Freeboard = 728SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc ...	
Fresh Water Line " " ...	
Tropical Line " " ...	
Winter Line below " " ...	<u>115%</u>
Winter North Atlantic Line " " ...	

Tropical Fresh Water Freeboard ...	
Fresh Water " " ...	
Tropical " " ...	
Winter " " ...	<u>843%</u>
Winter North Atlantic " " ...	

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

Particulars of fiddle, funnel and ventilator coverings:— Fiddle openings fitted with steel covers without ^{permanently attached} ~~brackets~~. Funnel and 4 ventilators placed on the top of engine casing. 2.17 mtr high. ✓

Particulars of Companionways:— access to the officers quarter through steel casings on Port and Starb. side amidships fitted with hinged teak doors 1520 x 580 x 35 mm, Sill 350 mm ✓


on pump deck 3 vent.	Height	to pump bulkhead	all closed by
1	140	220	wood covers
2	250	220	and tarpaulins
3	270	220	
4	360	260	
5	360	450	
6	190	270	
7	360	270	
8	380	250	
9	200	200	

Location	Depth	Temperature	Height	Notes
in pump dk	1	air pore	65	2, height = 110
R. Q. D.	1	"	46	" = 120
"	1	"	55	" = 700
bridge dk	2	"	45	" = 800
"	2	"	60	" = 620
deck forward	2	"	50	" = 1200
"	2	"	50	" = 900

all being closed by wood plugs.

None fixed.

All side scuttles fitted with deadlights. ✓

an isop and fore castle  910 m
The bulwark on bridge deck
is 930 m high.

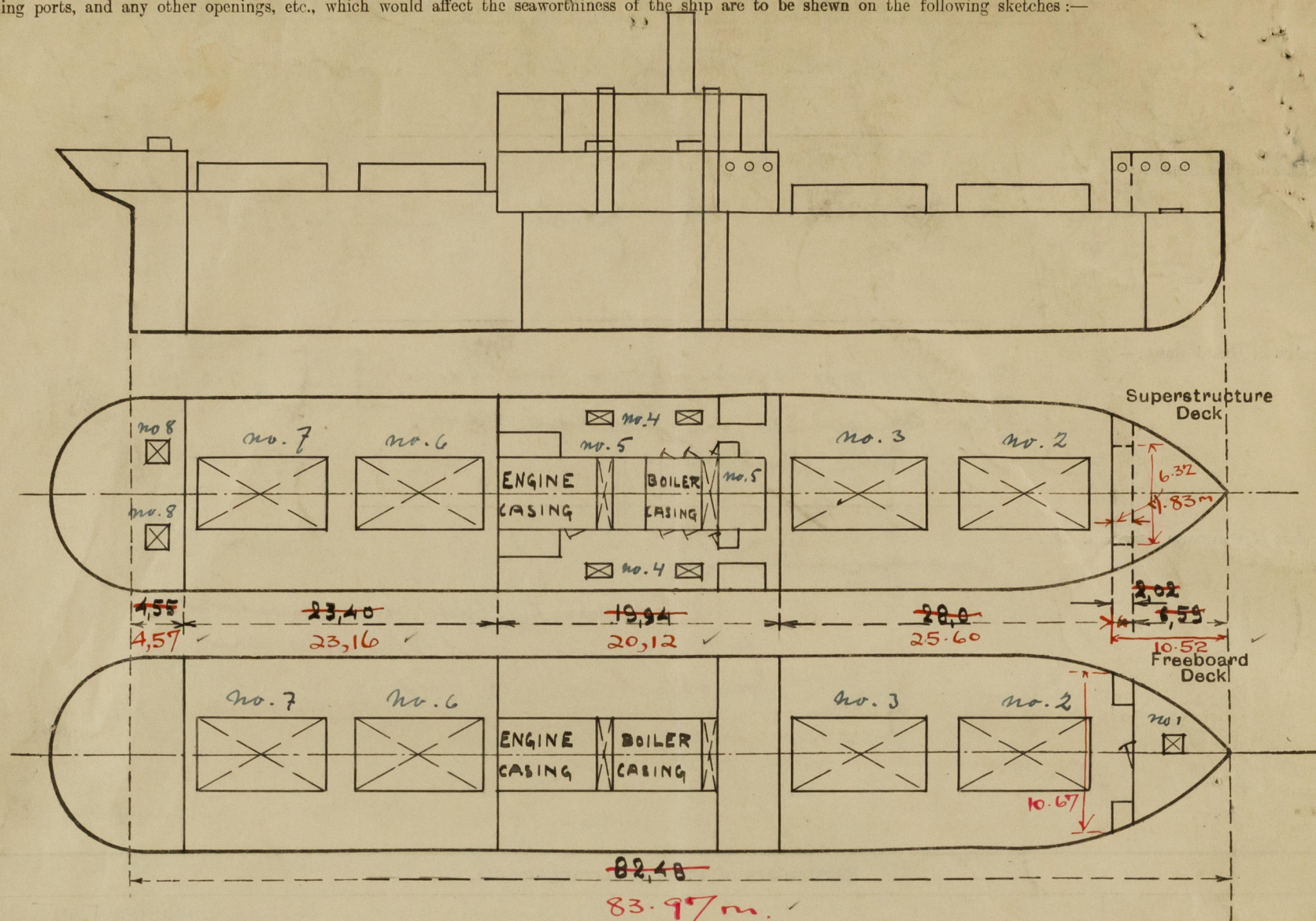
~~None fitted~~

Efficient lifelines are provided for use in any part of the ship which might have to be used by the crew in the regular working of the ship.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	—	10 —	130x90x12	0.77 —	—	—		
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead	—	8 —	90x90x10	0.78 —	—	—		
Bridge, Forward Bulkhead	10 —	10 —	← Wood lined	—	>	—		
Forecastle Bulkhead	8 —	8 —	← "	"	—	> 1.5 x 0.56	0.42 —	
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...								
Exposed Machinery Casings on Super- structure Decks	10 —	8 —	90x90x10	0.91 —	an Exp 600x800x10	4x1.59x0.59 2x0.75x0.68	0.32 —	2.17 —
Machinery Casings within Superstruc- tures 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 Free-board or Raised Quarter Decks ...	One hinged teak door, 36 2 thick, operated from both sides. ✓
Exposed Machinery Casings on Superstructure Decks	4 hinged steel doors, two operated from both sides and two from inside. ✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	2 " " " " operated from outside. ✓
Decks/houses on Fifth 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:—



$$\begin{aligned} \text{F.C.L.E. } L &= 10.52 \text{ m} \\ \text{DEDUCT } \frac{6.32 \times 1.83}{10.67} &= \frac{1.08}{9.44} = 8. \\ 1.08 &= 8. \end{aligned}$$

State any special features in the construction of the ship:— The sheer has been measured afloat, the draught being forward 2.97 and aft 3.03 met.

The Finnish measuring authorities have altered the Register Tonnage as follows { Gross ton. = 2163
Net ton. = 1216

Builder's name and yard number *Stettiner Oderwerke, Stettin*

Names of sister ships

Owners *Ansförtygss Abtiedelaget Alfa*

Fee £ *10 : 4 : 0*

Received by me

Oliver Tylor



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