

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

10 DEC 1932

1/3
015366-015379-0413

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having *poop, bridge & forecastle*Port of Survey *Langesund*

(Type of Superstructures.)

Date of Survey *30/11/1932*

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

*" ST. THERESE "**Norwegian*
*Tonsberg**2280**1928**3*Name of Surveyor *R. K. R. R.*

Moulded Dimensions: Length *292.0* Breadth *44.0* Depth *21.5*
 Moulded displacement at moulded draught = 85 per cent. of moulded depth *5192* tons
 Coefficient of fineness for use with Tables *.774*

Particulars of Classification *100 A1*

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	<i>21.50</i>	(a) Where D is greater than Table depth (D - Table depth) R =	<i>(21.56 - 19.47) 2.247 = +4.70</i>	Moulded Breadth (B)	<i>44.0</i>
Stringer plate	<i>.06</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	<i>✓</i>	Standard Round of Beam = $\frac{B \times 12}{50}$	<i>10.56</i>
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	<i>✓</i>	If restricted by superstructures	<i>✓</i>	Ship's Round of Beam	<i>10.50</i>
Depth for Freeboard (D) =	<i>21.56</i>			Difference	<i>.06</i>
				Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	<i>= .06/4 x .5651 = +.01</i>

DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	<i>26.62</i>	<i>7'6"</i>	<i>✓</i>	<i>26.62</i>	Standard Height of Superstructure <i>6.42</i>
" overhang ...					" " R.Q.D. <i>✓</i>
R.Q.D. enclosed ...					Deduction for complete superstructure <i>34.80</i>
" overhang ...					Percentage covered $\frac{S}{L} =$ <i>44.09%</i>
Bridge enclosed ...	<i>72.00</i>	<i>7'6"</i>	<i>✓</i>	<i>72.00</i>	" " $\frac{S_1}{L} =$ <i>43.49%</i>
" overhang aft ...	<i>2.5</i>	<i>1.87</i>		<i>1.87</i>	" " $\frac{E}{L} =$ <i>43.49%</i>
" overhang forward ...	<i>2.25</i>	<i>1.12</i>		<i>1.12</i>	Percentage from Table, Line A.
Fore enclosed ...	<i>25.37</i>	<i>7'6"</i>	<i>✓</i>	<i>25.37</i>	(corrected for absence of forecastle (if required))
" overhang ...					Percentage from Table, Line B.
Trunk aft ...					(corrected for absence of forecastle (if required))
" forward ...					Interpolation for bridge less than 2L (if required)
Tonnage opening aft ...					Deduction = <i>34.80 x .3046 = -10.60</i>
" " forward					
Total ...	<i>128.74</i>	<i>126.98</i>		<i>126.98</i>	

Measured afloat

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	<i>39.20</i>	<i>1</i>		<i>39.20</i>	<i>42"</i>	<i>42.00</i>	<i>42.00</i>	<i>1</i>	<i>42.00</i>	Mean actual sheer aft = <i>Excess</i>
$\frac{1}{2}$ L from A.P. ...	<i>17.44</i>	<i>4</i>		<i>69.76</i>	<i>18"</i>	<i>18.27</i>	<i>18.27</i>	<i>4</i>	<i>73.08</i>	Mean actual sheer forward = <i>Excess</i>
$\frac{2}{3}$ L " ...	<i>4.31</i>	<i>2</i>		<i>8.62</i>	<i>4"</i>	<i>4.57</i>	<i>4.57</i>	<i>2</i>	<i>9.14</i>	Mean standard sheer aft
Amidships ...	<i>✓</i>	<i>4</i>		<i>✓</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>	<i>4</i>	<i>✓</i>	Length of enclosed superstructure forward of amidships = <i>>.1L</i>
$\frac{2}{3}$ L from F.P. ...	<i>8.62</i>	<i>2</i>		<i>17.24</i>	<i>10"</i>	<i>9.13</i>	<i>9.13</i>	<i>2</i>	<i>18.26</i>	" " aft of " = <i>>.1L</i>
$\frac{1}{2}$ L " ...	<i>34.89</i>	<i>4</i>		<i>139.56</i>	<i>37"</i>	<i>36.54</i>	<i>36.54</i>	<i>4</i>	<i>146.16</i>	
F.P. ...	<i>78.40</i>	<i>1</i>		<i>78.40</i>	<i>83"</i>	<i>84.00</i>	<i>84.00</i>	<i>1</i>	<i>84.00</i>	
Total ...				<i>352.78</i>					<i>372.64</i>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ *19.86/18 x (.75 - .2204) = -.58"*

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.

Depth to Freeboard Deck = *21.56*
 Summer freeboard = *3.17*
 Moulded draught (d) = *18.39*

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = *4.59*
 Addition for Winter North Atlantic Freeboard (if required) = *2" = 51 mm*

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ *5265*

Tons per inch immersion at summer load water line

 $T =$ *26.1*Deduction = $\frac{\Delta}{40T}$ inches $=$ *5.04* $=$ *5"* $=$ *127 mm*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.774 + .68}{1.36} = \frac{1.454}{1.36}$ $\frac{1.454}{1.36} = 1.07$ Depth Correction ... *4.70*Deduction for superstructures ... *10.60*Sheer correction ... *.58*Round of Beam correction ... *.01*Correction for Thickness of Deck amidships ... *✓*Other corrections, scantlings, etc. ... *✓**4.71 11.18 -6.47*Summer Freeboard = *37.88*

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc ... *9 1/2" = 241 mm*Fresh Water Line " " ... *5 1/2" = 127 mm*Tropical Line " " ... *4 1/2" = 114 mm*Winter Line below " " ... *4 1/2" = 114 mm*Winter North Atlantic Line " " ... *6 1/2" = 165 mm*Tropical Fresh Water Freeboard ... *3'-2" = 965 mm*Fresh Water " " ... *2'-4 1/2" = 724 mm*Tropical " " ... *2'-9" = 838 mm*Winter " " ... *2'-9 1/2" = 851 mm*Winter North Atlantic " " ... *3'-6 1/2" = 1079 mm*Winter North Atlantic " " ... *3'-8 1/2" = 1130 mm*

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway	Upper Deck					Bridge Deck		Fore Deck		Prop Deck
	N ^o 1	N ^o 2	N ^o 3	N ^o 4	N ^o 5	Bridge	Fore	Fore	Fore	
Dimensions of Hatchway	28'0" x 20'0"	30'0" x 20'0"	2'0" x 2'0"	6'0" x 15'0"	3'9" x 3'0"	17'6" x 3'0"	3'0" x 2'6"	8'0" x 3'0"	3'0" x 2'6"	3'8" x 3'0"
COAMINGS	Height above Deck	4'2"	9'8"	9'8"	9'8"	9'8"	3'3" x 3'0"	3'4"	2'4"	1'5" above deck
	Thickness	4'4"	5'8"	5'8"	5'8"	5'8"	3'6"	3'8"	3'8"	5'8"
	Stiffeners	4'4"	5'8"	5'8"	5'8"	5'8"	3'6"	3'8"	3'8"	5'8"
	Brackets, Stays	4'4"	5'8"	5'8"	5'8"	5'8"	3'6"	3'8"	3'8"	5'8"
HATCH BEAMS	Number	4	5							
	Spacing	5'7"	5'0"							
	Scantling and Sketch	19" x 36"	18" x 36"							
	Bearing Surface	3"								
FORE AND AFTERS	Number									
	Spacing									
	Unsupported Lengths									
	Scantling and Sketch									
HATCH COVERS	Material	wood	wood	wood	wood	wood	wood	wood	wood	wood
	Thickness	3"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
	How fitted	3"	3"	3"	3"	3"	3"	3"	3"	3"
	Bearing Surface	3"	3"	3"	3"	3"	3"	3"	3"	3"
Spacing of Cleats	2'4"	1'3"	2'4"	1'5"	2'3"	2'3"	2'1"	1'4"		
Number of Tarpaulins	3	2	2	1	2	2	2	2		

*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? ☒

Remainder of hatchways on last page.

Particulars of fiddle, funnel and ventilator coamings:—
 Fiddle openings closed by steel hinged covers.
 Funnel and ventilator coamings on top of casing, 7'6" above bridge deck, in good condition.

Particulars of Flush Bunker Scuttles:— ☒

Particulars of Companionways:—
 House on poop, leading to crew's quarters, of strong construction, wood doors, opening from both sides, sill 12"

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

Forecastle: one 6" x 3'0" x 30" to fore hatch. Bridge deck: four, P.S. 7' x 18" grooved, one 9' x 9' x 32" to fore hatch. After well: one 9' x 9' x 32" to fore hatch. Poop: two 18" x 2'6" x 36" to after hold. Right 5' x 2'6" x 32" to mess room. Two 8' x 2'6" x 36" to after hold. One 10' x 2'6" x 32" to store.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—
 Forecastle: one 3 1/2" x 12". Fore well: two 3" x 3'8" P.S. Bridge: two 3" x 12" P.S. After well: one 3" x 3'7" P.S. Poop: one 4" x 10".

Particulars of Gangway Cargo and Coaling Ports:— ☒

Particulars of Scuppers and Sanitary Discharge Pipes:—
 Sanitary discharge: forward, from W.C. port side, led overboard at 3'0" below upper deck, fitted with storm valve. Amidships: from fore, port side, led overboard at 1'6" above. Aft: from W.C. port side, led overboard at 1'6" above. Washroom: from W.C. port side, led overboard at 1'6" above.

Particulars of Side Scuttles:—
 In crew space in poop, 1'6" above deck, fitted with hinged deadlights.

Particulars of Guard Rails:—
 Forecastle: Stanchions 3'3", spaced 3'0" to 4'6" apart, 3 rails.
 Poop: " " 3'6", " " 4'0" to 4'6" " " , 3 rails.

Particulars of Gangways, Lifelines, etc.:—
 From N^o 3 to N^o 4 hatchway gangway, with portable stanchions, sp. 14'0", gangway from N^o 4 hatchway on to poop ladder. Portable stanchions on hatch side sp. at 11'0", with lifelines.

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	82'0"	4'6"	3'0" x 1'6"	4	18'0 ft. ²	16'4
Forward Well	86'0"	4'6"	3'0" x 1'6"	4	18'0 ft. ²	77.2

State position of each freeing port from bridge ends. After Well: 7'10", 26'6", 33'6", 73'11". (F. and A. position and height above deck edge). Forward Well: 9'2", 28'6", 48'8", 73'3". State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—

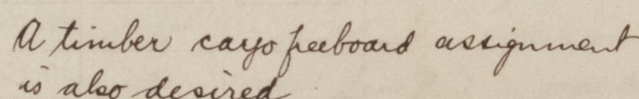
Additional area where sheer is less than standard.

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	18" x 40"	28"	not available	30"	not available	none	✓	4'6"
Raised Quarter Deck Bulkhead			3 1/2" x 3'0" x 3'0"	30"	none	4'0" x 3'0" x 3'0"	18"	4'6"
Bridge, After Bulkhead	✓	26"	3 1/2" x 3'0" x 3'0"	30"	lugs top & bottom	4'8" x 2'0" x 2'0"	18"	4'6"
Bridge, Forward Bulkhead	18" x 40"	34"	3 1/2" x 3'0" x 3'0"	30"	none	4'0" x 3'0" x 3'0"	18"	4'6"
Forecastle Bulkhead	✓	28"	3 1/2" x 3'0" x 3'0"	30"	none	4'0" x 3'0" x 3'0"	18"	4'6"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	18" x 38"	34"	3 1/2" x 2'6" x 3'6"	36"	Bracket Top, cut at bottom	4'8" x 2'0" x 2'0"	18"	4'6"
Exposed Machinery Casings on Superstructure Decks	18" x 38"	34"	3 1/2" x 3'0" x 3'6"	33"	none	4'8" x 2'0" x 2'0"	18"	4'6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	18" x 32"	28"	3 1/2" x 2'6" x 3'6"	36"	continuous from above	4'6" x 2'0" x 2'0"	18"	4'6"
Deckhouses on Flush Deck Ships								

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

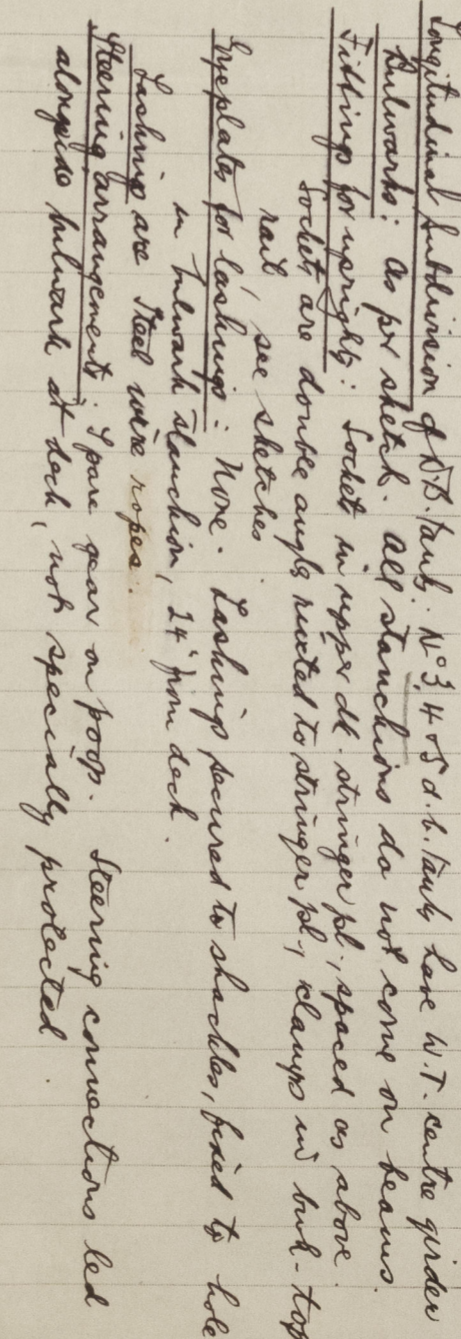
Poop Bulkhead	✓
Raised Quarter Deck Bulkhead	2 3/4" weather boards in riveted angles full height.
Bridge, After Bulkhead	Steel hinged door, P.S., with clips sp. 21" x 24". Opening only from outside.
Bridge, Forward Bulkhead	2 3/4" weather boards in riv. angles full height.
Forecastle Bulkhead	Steel hinged door to W.C. port side, lamp room & stairs.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	Steel hinged door P.S. to stokehold, and P.S. to E.R. (now exposed).
Exposed Machinery Casings on Superstructure Decks	Steel hinged door port side to DB space on upper deck.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	Steel hinged door port side to DB space.
Deckhouses on Flush Deck Ships	

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The survey was held afloat and was confined to obtaining the above particulars.

on the



S.S. "ST. THERESE"
Tinker Clogs freedhand Report. vol Eps N^o 3966