

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

11 AUG 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having *R.Q. deck, bridge, raised deck forward with fore-castle on top of raised deck.*

(Type of Superstructures.)

Port of Survey *Linnhamm*

Date of Survey *8th Aug. 1932*

Name of Surveyor *Asundero*

Particulars of Classification *100A1*
S.S. Memo. 2nd No. 3-4, 27
S.S. Memo No. 1-32

Ship's Name *S/S "RIBERSBORG"* Nationality and Port of Registry *Swedish, Malmö* Official Number *7103* Gross Tonnage *1211* Date of Build *1901-5 mo.*

Moulded Dimensions: Length *224.6* Breadth *33.75* Depth *16.54*

Moulded displacement at moulded draught = 85 per cent. of moulded depth *2256* tons

Coefficient of fineness for use with Tables *.743*

Depth for Freeboard (D)

Moulded depth ... *16.54*

Stringer plate ... *.04*

Sheathing on exposed deck

$T \left(\frac{L-S}{L} \right) =$ *✓*

Depth for Freeboard (D) = *16.58*

Depth correction

(a) Where D is greater than Table depth
(D-Table depth) R = *(16.54-14.97) 1.728*
= + 2.71"

(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) *33.75*

Standard Round of Beam = $\frac{B \times 12}{50} =$ *8.10"*

Ship's Round of Beam = *8 1/2"*

Difference *.4 Excess*

Restricted to

Correction = $\frac{\text{Diff}^a}{4} \times \left(1 - \frac{S_1}{L} \right) =$ *1/4 (1-1) = Nil.*

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...						Standard Height of Superstructure <i>6.00</i>
" overhang ...	<i>83.25</i>					" " R.Q.D. <i>3.831</i>
R.Q.D. enclosed ...	<i>83.25</i>	<i>83.25</i>	<i>3'-6"</i>	<i>35</i>	<i>76.06</i>	Deduction for complete superstructure <i>28.46"</i>
R.Q.D. overhang <i>61.23</i>	<i>85.79</i>	<i>61.23</i>	<i>3'-6"</i>	<i>35/6.00</i>	<i>35.72</i>	Percentage covered $\frac{S}{L} =$ <i>100%</i>
Bridge enclosed...	<i>55.58</i>	<i>55.58</i>	<i>7'-0 1/2"</i>		<i>55.58</i>	" " $\frac{S_1}{L} =$ <i>100%</i>
" overhang aft ...						" " $\frac{E}{L} =$ <i>85.46%</i>
" overhang forward	<i>24.54</i>					Percentage from Table, Line A. <i>82.07</i>
" enclosed on top of R.Q.D.	<i>24.54</i>	<i>24.54</i>	<i>7'-1"</i>		<i>24.54</i>	(corrected for absence of fore-castle (if required))
SIDE HOUSES See Sketch						Percentage from Table, Line B.
Trunk-aft ...						(corrected for absence of fore-castle (if required))
" forward ...						Interpolation for bridge less than 2L (if required)
Tonnage opening aft ...						Deduction = <i>28.46 x .8207 = - 23.35"</i>
" forward						
Total ...	<i>224.6</i>	<i>224.60</i>			<i>191.90</i>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	<i>32.46</i>	1		<i>32.46</i>	<i>30"</i>	<i>27.00</i>	1		<i>27.00</i>	Mean actual sheer aft = <i>Deficient</i>
1/2 L from A.P. ...	<i>14.44</i>	4		<i>57.76</i>	<i>12.4"</i>	<i>12.24</i>	4		<i>48.96</i>	Mean actual sheer forward = <i>Deficient</i>
2/3 L " ...	<i>3.57</i>	2		<i>7.14</i>	<i>2.8"</i>	<i>3.06</i>	2		<i>6.12</i>	Mean standard sheer forward
Amidships ...	<i>✓</i>	4		<i>✓</i>	<i>0</i>	<i>✓</i>	4		<i>✓</i>	Length of enclosed superstructure forward of amidships = <i>.1L</i>
2/3 L from F.P. ...	<i>7.14</i>	2		<i>14.38</i>	<i>6.25"</i>	<i>6.32</i>	2		<i>12.64</i>	" " aft of " = <i>.1L</i>
1/2 L " ...	<i>28.88</i>	4		<i>115.52</i>	<i>25.1"</i>	<i>25.28</i>	4		<i>101.12</i>	
F.P. ...	<i>64.92</i>	1		<i>64.92</i>	<i>56"</i>	<i>57.00</i>	1		<i>57.00</i>	
Total ...				<i>292.18</i>					<i>252.84</i>	

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{39.34}{18} (.75 - .58) = + .55"$$

If limited on account of midship superstructure. *✓*If limited to maximum allowance of 1 1/2 ins. per 100 ft. *✓*

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Ft.

Depth to Freeboard Deck =

Summer freeboard =

Moulded draught (d) =

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches =

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 Fresh Deck (if required)

Correction for coefficient $\frac{.743 + .68}{1.36} = \frac{1.423}{1.36}$

	+	-
Depth Correction ...	<i>2.71</i>	<i>-</i>
Deduction for superstructures ...	<i>-</i>	<i>23.35</i>
Sheer correction ...	<i>.55</i>	<i>-</i>
Round of Beam correction ...	<i>-</i>	<i>-</i>
Correction for Thickness of Deck amidships ...	<i>-</i>	<i>-</i>
Other corrections, scantlings, etc. ...	<i>84.50</i>	<i>-</i>
	<i>87.76</i>	<i>23.35</i>
Summer Freeboard =	<i>93.15</i>	

27.47
28.74

7'-9 1/4"

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

Tropical Fresh Water Line above Centre of Disc ...		Tropical Fresh Water Freeboard ...	
Fresh Water Line " " ...		Fresh Water " " ...	
Tropical Line " " ...		Tropical " " ...	
Winter Line below " " ...		Winter " " ...	
Winter North Atlantic Line " " ...		Winter North Atlantic " " ...	

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway		Raised decks Nos. 1 & 4		No. 2	No. 3	Cellar	Bridge deck	Main deck	Hold
Dimensions of Hatchway		19'-2" x 16'-0"	21'-1" x 16'-0"	17'-3" x 16'-0"	3'-10" x 5'-0"	5'-9" x 3'-2"	3'-6" x 3'-2"	3'-6" x 3'-2"	3'-6" x 3'-2"
COAMINGS	Height above Deck	39"			18"		3 1/2"		
	Thickness	40			32"		3 1/2" x 3"		
	Sides	40							
	Stiffeners								
Bridges, Stays			7 1/2" x 3" x 44 BA						
HATCH BEAMS	Number	1	2	1					
	Spacing	No. 1-11'-8"-2"	No. 4-9'-7"	703					
	Scantling and Sketch	7"-12" x 30"	7"-12" x 30"	7"-12" x 30"					
	Bearing Surface	3"							
FORE AND AFTERS	Number	3							
	Spacing	No. 110'-8"-7'-10"	No. 4-9'-3"	6'-8"	8'-3 1/2"				
	Unsupported Lengths	7 1/2" x 6"							
	Scantling* and Sketch	7" x 6"							
Bearing Surface		2" - 2 1/4"							
HATCH COVERS	Material	Wood							
	Thickness	2 3/4"-3"			2 1/2"			None	Wood 2 1/2"
	How fitted	Atwartships							
	Bearing Surface	C 2" S 1 3/4" 50%			1 3/4" 50%				3"
Spacing of Cleats		20'-22"	18'-20"		21'-27"	17'-25"		None	None
Number of Tarpaulins		2							1

*Are wood fore and afters steel shod at all bearing surfaces? *No. Cont. centre fore and afters not steel shod at hatchways.*
 Are battens and wedges efficient and in good condition? *Yes*
 Are tarpaulins in good condition and in accordance with rule requirements? *Yes*
 Are lashings provided in accordance with rule requirements? *Two ring bolts each side of each cargo hatchway.*

Particulars of fiddle, funnel and ventilator coamings:— *Fiddle openings fitted with hinged steel plate covers. Inner plating 24. B-room vents: - D = 20" Thicken. = 15. Hgt. above casing top 6'-3". E " " - D = 12" " = 15. " " 20".*

Particulars of Flush Bunker Scuttles:— *None.*

Particulars of Companionways:— *On fore deck: - Steel casing. Plating = 20. Opening 52" x 27". Hgt. of sill 16" Steel door capable of being manipulated from both sides.*

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— *Tube: - Cast iron coamings 6" high with screw covers. R.D.F.: - D = 15" Thicken. = 32" Hgt. = 20" " " D = 12" " = 32" " = 25" Bridge: - D = 12" " = 32" " = 25" All vents with means of closing. R.Q.D.: - D = 12" x 15" Thicken. = 32" " = 25" Cellar aft.: - D = 8" " = 26" " = 24" Inner: - D = 6" " = 26" " = 12"*

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— *Bridge deck: - Goosenecks 20" high. R.Q. & R.D.F.: - " 15" " means of closing provided.*

Particulars of Gangway Cargo and Coaling Ports:— *None.*

Rpt. 9a.

Port of

Mahmra

Freeboard

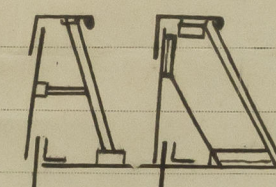
Continuation of Report No. 1147 dated 9th Aug. 1932 on the

S/S "Riversborg" of Mahmra.

A deckhouse or hood is not fitted at after end of R.Q. deck.

The centre girder in the boiler room tank, about 15' in length, is made watertight and is fitted with sections both sides.

Bulwarks in wells: - Plating 24. Rail 5 1/2" x 3" x 34" bulb angle.



Bulwark stays of 2" round iron, replaced in several places by 5 1/2" x 44 bulb plate stays.

No stays are fitted at deck beams. Spacing of stays 5' to 6'.

There are no fittings for uprights and no eye plates for lashings.

The steering rods and chains are carried along the bulwarks on R.Q. deck with athwartships connection to the steering engine drum on deck after of bridge after bulkhead.

A hand steering gear is fitted aft on R.Q. deck.

The present freeboards are:-

S = 7'-4 1/2" (from bridge deck)

FW = 4" above centre of disc.

I.S. = 2 1/2" " " "

W. = 2 1/2" below " " "

W.N.F. = 4 1/2" " " "

Asunder