

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. **3559**
(For London Office only.)

18 AUG 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having *Prop, Raised Quarter, Bridge and Forecastle decks.*Port of Survey *Bellingham.*

(Type of Superstructures.)

Date of Survey *2nd 3rd August, 1932.*

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

*1/2 "ERIKSBORG"**Swedish, Landskrona**7108**1447**1890-8.*Name of Surveyor *J. Arneson.*Moulded Dimensions: Length *46.19 m.* Breadth *10.62 m.* Depth *5.892 m.*Moulded displacement at moulded draught = 85 per cent. of moulded depth *4052 m.* tonsCoefficient of fineness for use with Tables *.79*Particulars of Classification *8/10071.**ss. Nbg. 3rd No. 3-4.28.*Depth for Freeboard (D) *5.892.*

Depth correction

Round of Beam correction

Moulded depth ... *5.892 m.*

(a) Where D is greater than Table depth

Moulded Breadth (B) *10.62 m.*Stringer plate ... *12.5 mm.*(D-Table depth) R = *8.33(5.905-5.080)19.24 = 132 m.*Standard Round of Beam = $\frac{B \times 12}{50} = 212 m.$ Sheathing on exposed deck *2" wood sheathing on*

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

Ship's Round of Beam = *150 mm.* $T \left(\frac{L-S}{L} \right) =$

(Table depth-D) R =

Difference *62*Depth for Freeboard (D) = *5.905*

If restricted by superstructures

Correction = $\frac{\text{Diff}^o}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{62}{4} \times .1186 = + 27$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Prop enclosed ...	7,550	7,550	2280	✓	7,550
" overhang ...			900		
R.Q.D. enclosed ...	19,500	19,500	1220	✓	19,500
" overhang ...					
Bridge enclosed ...	33,580	30,220	2135	✓	30,220
" overhang aft ...			900		
" overhang forward ...			2135		
Fore enclosed ...	9,474	9,474	2135	✓	9,474
" overhang ...	806	403	2135	✓	403
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	70,910	67,147			67,147

Standard Height of Superstructure *1830*" " R.Q.D. *1220*Deduction for complete superstructure *788*Percentage covered $\frac{S}{L} = 93.08 \%$ " $\frac{S_1}{L} = 88.14 \%$ " $\frac{E}{L} = 88.14 \%$ Percentage from Table, Line A. *85.39%*

(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 = $788 \times .8539 = - 673 m.$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	889	1		889	840	838	838	1	838
1/4 L from A.P. ...	395	4		1580	310	260	260	4	1040
1/2 L " ...	099	2		198	50	-51	-51	2	-102
Amidships ...		4			0			4	
3/4 L from F.P. ...	197	2		394	275	305	248	2	496
1/4 L " ...	790	4		3160	900	952	866	4	3464
F.P. ...	1777	1		1777	2055	2057	1909	1	1909
Total ...				7998					7645

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ $\frac{353}{18} \times (.75 - .4654) = + 6 m/m$

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.

Depth to Freeboard Deck = *5,905*Summer freeboard = *353*Moulded draught (d) = *5,552*

Deduction for Tropical freeboard and addition for

Winter freeboard = *116 m.*

Addition for Winter North Atlantic Freeboard (if

required = *51 m.*

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*116 m.*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{79+.68}{1.36} = \frac{147}{1.36}$ Depth Correction ... *132* ✓Deduction for superstructures ... *673* ✓Sheer correction ... *6* ✓Round of Beam correction ... *2* ✓

Correction for Thickness of Deck amidships ... ✓

Other corrections, scantlings, etc. ... ✓

*140 673 - 533*Summer Freeboard = *353*

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

Tropical Fresh Water Line above Centre of Disc *232 m.*Fresh Water Line " *116 m.*Tropical Line " *116 m.*Winter Line below " *116 m.*Winter North Atlantic Line " *167 m.*Tropical Fresh Water Freeboard ... *121 m.*Fresh Water " *237 m.*Tropical " *237 m.*Winter " *469 m.*Winter North Atlantic " *520 m.*

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
Description of Hatchway	...	...	...	...	...	...	...	...	...	...	...
Dimensions of Hatchway	...	...	...	...	...	...	...	...	...	...	...
COAMINGS	Height above Deck	...	1040	450	400	450	400	850	850	450	310
	Thickness	...	10	10	10	10	8	9	9	8	7
	Stiffeners	...	None	None	None	None	None	5, 170 x 75 x 10 B.	None	None	None
	Brackets, Stays	...	None	None	None	None	None	None	None	None	None
	Bearing Surface	...	75 x 15.	75 x 10	75 x 15.	75 x 15.	75 x 9	75 x 9.	75 x 9.	75 x 9.	75 x 9.
HATCH BEAMS	Number	...	1815.	3035	3030	None	None	3025	2725	None	None
	Spacing	...	1815.	3035	3030.	None	None	3025	2725.	None	None
	Scantling and Sketch	...	175 x 12 Bpl. 70 x 70 x 10 B.	175 x 12 Bpl. 70 x 70 x 10 B.	175 x 12 Bpl. 70 x 70 x 10 B.	None	None	175 x 10 Bpl. 70 x 70 x 10 B.	175 x 10 Bpl. 70 x 70 x 10 B.	None	None
	Bearing Surface	...	65.	75	50 mm	50 mm	50 mm	75	75.	50 mm	50 mm
	Bearing Surface	...	65.	75	50 mm	50 mm	50 mm	75	75.	50 mm	50 mm
FORE AND AFTERS	Material	...	wood	wood	None	wood	wood	wood	wood	wood	wood
	Thickness	...	65	65	None	65	65	65	65	60	60
	How fitted	...	Thwartships	Thwartships	Thwartships	Fore & aft	Fore & aft	Thwartships	Thwartships	Fore & aft	Thwartships
	Bearing Surface	...	50 and 65	53	65	50 and 50	50 and 40	55	52	50 and 34	29 and 67.
	Bearing Surface	...	50 and 65	53	65	50 and 50	50 and 40	55	52	50 and 34	29 and 67.
Spacing of Cleats	...	...	670	650	None	660	None	620	700	680	730
Number of Tarpaulins	...	...	2.	2	None.	2	None	2	2	2	1

Particulars of fiddle, funnel and ventilator coamings:— Fiddle openings closed by steel covers, Funnel coaming 750; 2 vents to boiler top 210 x 5 - ϕ 290 with screwed covers
 2 vents to boiler top 210 x 5 - ϕ 290 with screwed covers
 1 vent to Engine room 700 x 6 - ϕ 300; 1 vent 280 x 5 - ϕ 190;
 engine skylight steel with wood covers, opening 340 from top of engine casing.
 All placed on top of boiler and engine casings 920 mm. above the bridge deck.

Particulars of Flush Bunker Scuttles:— None
 Hatch fwd to peaks 1060 x 870. Litter to chain locker 700 x 500. Port with 75 mm bearing surfaces on all sides for 65 mm. wooden covers. Flush with wood deck. No battering down arrangements.

Particulars of Companionways:— 1 comp. hood on f'dle deck 1170 x 780 x h = 1460, sill 120 mm. No door, steel and riveted to deck.
 1 disto 22 after end of bridge 1250 x 940 x h 1780, sill 320, wooden doors, Hood of steel and riveted to deck.
 1 disto aft on poop 1320 x 1200 x h = 1800 steel and riveted to deck. Hood of wood with wooden doors, and wood sill 420 mm.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—
 Fore deck:— 2 vent. coamings p.s. to crew quarters and one disto fwd to peaks 250 x 8 x ϕ 250, all bolted to wood deck; 1 to hold 600 x 8 - ϕ 300 throughgoing to well. 2 funnel coamings.
 Fore well:— 1 to hold on p.s. 600 x 10 - ϕ 300.
 Bridge deck:— 1 p.s. abreast mast 650 x 10 - ϕ 300. 1 ss in front of houses; 1 p.s. abreast boiler casing 685 x 8 - ϕ 300; 2 p.s. at after end of bridge 320 x 5 - ϕ 190 bolted to wood deck.
 R. Q. deck:— 1 fwd N° 3 and aft N° 4 and 2 disto abreast N° 3 & 4 battens 650 x 8 - ϕ 300; 1 to funnel 690 x 8 - ϕ 150;
 Poop deck:— 1 ss. 280 x 5 - ϕ 190; 1 goose neck 3 1/2" h. 400; 5 vent. with screwed covers, All bolted to wood deck.
 All with wood plugs and tarpaulins for closing.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—
 Bridge deck:— 1 - 1 1/2" p.s. h = 240; 1 1/2" p.s. at after end of bridge 65 mm.
 R. Q. deck:— 1 p.s. 2" h = 910.

All with goose necks, ~~but not~~ means for closing. *provided*

Particulars of Gangway, Cargo and Coaling Ports:— None

Poop deck: skylight to saloon steel coaming 400 mm. with wooden top and skylight to pecky all of wood. Both with battering down arrangements.



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3-8 p.s. and 4
 s. ERIKSBORG

Hy. Rpt. N° 662.

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS								
Description of Hatchway	Escape hatch 55' in front of bridge.	Hatch on poop to pentry way of bridge.	Hatch at after way of bridge to mainmast.	Bulkhead frames p.s. in main deck.	Trimming hatch p.s. with main deck to hold.	Trimming hatch to bulkheads		
Dimensions of Hatchway	520 x 520	750 x 750	750 x 680	2470 x 1065	1270 x 1100	700 x 850	700 x 850.	
COAMINGS	Height above Deck	440	410	730	90	90	75	
	Thickness	6	7	6	90 x 90 x 12	90 x 90 x 12	75 x 75 x 10	
	Sides	6	7	6	A.	A.	A.	
	Stiffeners	None	None	None	None	None	None	
	Brackets, Stays	None	None	None	None	None	None	
HATCH BEAMS	Number	None	None	None	None	None	None	
	Spacing							
	Scantling and Sketch							
FORE AND AFTERS	Bearing Surface							
	Number	None	None	None	None	None	None	
	Spacing							
	Unsupported Lengths							
	Scantling* and Sketch							
HATCH COVERS	Bearing Surface							
	Material	wood	wood	wood	None	None	None	
	Thickness	55	60	50				
	How fitted	Thwartships	Thwartships	Hinged cover	Thwartships	Thwartships	Thwartships	
Spacing of Cleats	Bearing Surface	51	25		80	80	70	
	Number of Tarpaulins	2 each side	2 each side	2 each side	None	None	None	
*Are wood fore and afters steel shod at all bearing surfaces? None.								
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? Yes								

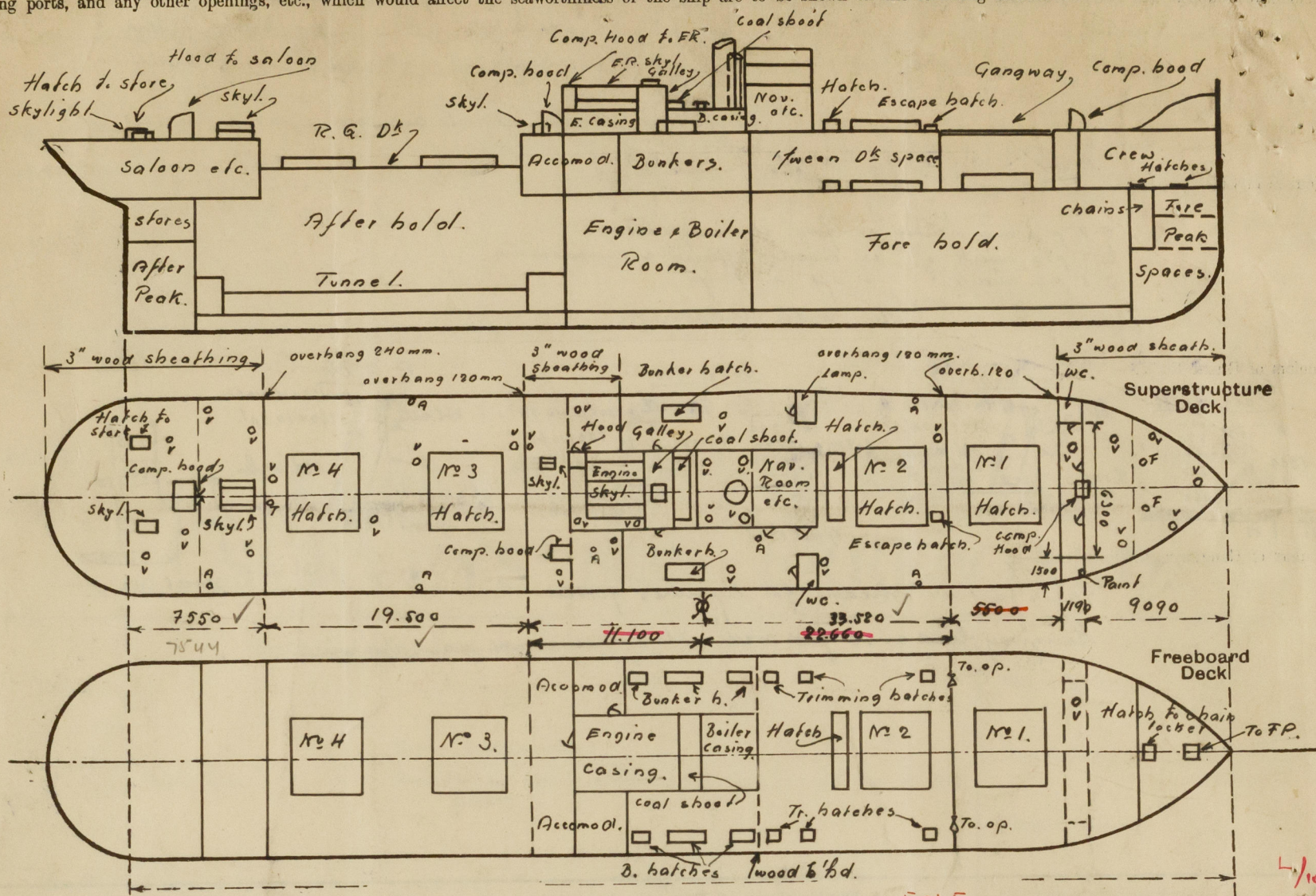
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Bridge, After Bulkhead	8	75 x 75 x 10. A.	800	None	5-9" sides.	900
Bridge, Forward Bulkhead	480 x 12	9	175 x 75 x 10 B.A.	700	Bracketed top & bottom.	1400 1200 x 900
Forecastle Bulkhead	8	80 x 80 x 10 A.	750	None	2 doors 1270 x 610.	520 2135

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 shown on the following sketches:—



$$\begin{aligned}
 & \text{FLE} \quad \text{LEN} = 10,280 \\
 & \text{DEDUCT } \frac{6,300 \times 1,190}{9,300} = \frac{806}{9,474} = \text{Equival} \\
 & \quad \quad \quad 806 = 0.14
 \end{aligned}$$

State any special features in the construction of the ship:—

No wood cargo deck freeboard is desired.

The vessel examined in dry dock and afloat during port special Survey.
The vessel is laid up at this port.

Builder's name and yard number *J. Blumer & Co, Sunderland.*

Names of sister ships

Owners *Red. MS Landokoma. (J. Leonard.)*

Fee *Re. 170:00*

Received by me

Assistance *Re. 10:00*

L. Alesau.



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