

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

now named RADMANSSÖ of Stockholm

-3 SEP 1932

 Computation of Freeboard for Steamer, Sailing Ship, Tanker
 having *Complete Superstructure Deck with Tonnage Opening aft.*
Port of Survey *Göteborg.*Date of Survey *31st Aug. 1932.*Name of Surveyor *H. Jell Hydman.*
 Particulars of Classification *100 A.1.*
St. Got. No 3-5.26. Sheller. dx. w. freeb.
St. Got. No 1-29.

 (Type of Superstructures.)
 Ship's Name *NORDIC* Nationality and Port of Registry *Swedish. Göteborg.* Official Number *5642.* Gross Tonnage *4280.* Date of Build *1914-9.*

 Moulded Dimensions: Length *384.91'* Breadth *53.42'* Depth *26'-0 3/4"*
 Moulded displacement at moulded draught = 85 per cent. of moulded depth *10109* tons
 Coefficient of fineness for use with Tables *.777*

 Depth for Freeboard (D)
 Moulded depth *26.06'*
 Stringer plate *.04*
 Sheathing on exposed deck
 $T \left(\frac{L-S}{L} \right) =$
 Depth for Freeboard (D) = *26.10*

 Depth correction
 (a) Where D is greater than Table depth
 (D - Table depth) R =
(26.10 - 25.66) 2.941 = + 1.30
 (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) *53.42'*
 Standard Round of Beam = $\frac{B \times 12}{50} =$ *12.82*
 Ship's Round of Beam = *13"*
 Difference *.18*
 Restricted to
 Correction = $\frac{\text{Diff.}}{4} \times \left(1 - \frac{S_1}{L} \right) =$ *.12 (1 - .9917) = .012*

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<i>26.83'</i>	<i>26.83</i>	<i>8'</i>	<i>/</i>	<i>26.83</i>
" overhang ...	<i>4.25'</i>	<i>2.12</i>			<i>2.12</i>
R.Q.D. enclosed ...	<i>/</i>				
" overhang ...	<i>/</i>				
Bridge enclosed ...	<i>349.66'</i>	<i>349.66</i>	<i>8'</i>	<i>/</i>	<i>349.66</i>
" overhang aft ...	<i>None</i>				
" overhang forward ...	<i>/</i>				
F'cle enclosed ...	<i>/</i>				
" overhang ...	<i>/</i>				
Trunk aft ...	<i>/</i>				
" forward ...	<i>/</i>				
Tonnage opening aft ...	<i>4.17'</i>	<i>3.15</i>			<i>3.15</i>
" forward ...	<i>/</i>				
Total ...	<i>384.91</i>	<i>381.76</i>			<i>381.76</i>

Standard Height of Superstructure *7.35'*" " R.Q.D. */*Deduction for complete superstructure *40.99*Percentage covered $\frac{S}{L} =$ *100.00*" $\frac{S_1}{L} =$ *99.17*" $\frac{E}{L} =$ *99.17*Percentage from Table, Line A. *98.97*
(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 = *40.99 x .9897 = -40.57*

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>48.49</i>	<i>1</i>		<i>48.49</i>	<i>53"</i>	<i>+7.8"</i>	<i>1</i>		<i>60.80</i>
1/2 L from A.P. ...	<i>21.58</i>	<i>4</i>		<i>86.32</i>	<i>26.13'</i>	<i>27.06</i>	<i>4</i>		<i>108.24</i>
2/3 L " ...	<i>5.34</i>	<i>2</i>		<i>10.68</i>	<i>5.27'</i>	<i>6.69</i>	<i>2</i>		<i>13.38</i>
Amidships ...	<i>/</i>	<i>4</i>		<i>/</i>	<i>0</i>		<i>4</i>		<i>/</i>
2/3 L from F.P. ...	<i>10.67</i>	<i>2</i>		<i>21.34</i>	<i>12.68'</i>	<i>14.06</i>	<i>2</i>		<i>28.12</i>
1/2 L " ...	<i>43.15</i>	<i>4</i>		<i>172.60</i>	<i>50.85'</i>	<i>56.87</i>	<i>4</i>		<i>227.48</i>
F.P. ...	<i>96.98</i>	<i>1</i>		<i>96.98</i>	<i>120"</i>	<i>127.80</i>	<i>1</i>		<i>127.80</i>
Total ...				<i>436.41</i>					<i>565.82</i>

 Mean actual sheer aft = *Excess*
 Mean standard sheer aft = *Excess*

 Mean actual sheer forward = *Excess*
 Mean standard sheer forward = *Excess*

 Length of enclosed superstructure forward of amidships = *CS.S.*
 " " aft of " = *CS.S.*

 Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ *$\frac{129.41}{18} (.75 - .50) = -1.80$*

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 = *26.10*
 Summer freeboard = *2.54*
 Moulded draught (d) = *23.56*

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = *5.89 = 150%*Addition for Winter North Atlantic Freeboard (if required) = */*

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ *10850*

Tons per inch immersion at summer load water line

 $T =$ *40.78*Deduction = $\frac{\Delta}{40 T}$ inches $=$ *6.66* $=$ *169%*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{.777 \times 680}{1.36} = \frac{1.457}{1.36}$

	+	-
Depth Correction ...	<i>1.30</i>	<i>-</i>
Deduction for superstructures ...	<i>-</i>	<i>40.57</i>
Sheer correction ...	<i>-</i>	<i>1.80</i>
Round of Beam correction ...	<i>-</i>	<i>-</i>
Correction for Thickness of Deck amidships ...	<i>-</i>	<i>-</i>
Other corrections, scantlings, etc. ...	<i>-</i>	<i>-</i>
	<i>1.30</i>	<i>42.37</i>

Summer Freeboard = *30.57*

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

Tropical Fresh Water Line above Centre of Disc ...	<i>319 7/8</i>	Tropical Fresh Water Freeboard ...	<i>4.57</i>
Fresh Water Line " " ...	<i>169</i>	Fresh Water " " ...	<i>6.07</i>
Tropical Line " " ...	<i>150</i>	Tropical " " ...	<i>6.26</i>
Winter Line below " " ...	<i>150</i>	Winter " " ...	<i>9.26</i>
Winter North Atlantic Line " " ...	<i>/</i>	Winter North Atlantic " " ...	<i>/</i>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Superstructure Deck									
Description of Hatchway	N ^o 1, 2, 4, 5	N ^o 3.	Tonnage Opening	Coal Hatch	Hatch aft. of Tonnage	Coal Hatch on Fiddle Top	N ^o 1, 2, 4, 5	N ^o 3.	2 nd Deck
Dimensions of Hatchway	25'6" x 16'	10'7" x 16'	4'2" x 16'	10'3" x 2'11"	4' x 6'	4'3" x 14'	25'6" x 16'	10'7" x 16'	
COAMINGS	Height above Deck	32"	7"	32"	32"	12"	32"	32"	
	Thickness	50"	46"	40"	40"	34"	44"	44"	
	Sides	40"	46"	40"	40"	34"	44"	44"	
	Stiffeners	None	None	None	None	None	None	None	
HATCH BEAMS	Number	4	None	None	None	None	4	None	
	Spacing	ab. 5'1"	None	None	None	None	ab. 5'1"	None	
	Scantling and Sketch	3" x 3" x 40"	None	None	None	None	3" x 3" x 40"	None	
	Web	22" x 34"	fitted	fitted	fitted	fitted	22" x 34"	fitted	
Steel FORE AND AFTERS	Number	3	None	None	None	None	3	None	
	Spacing	4'	None	None	None	None	4'	None	
	Unsupport Lengths	10'2 1/2"	None	None	None	None	10'2 1/2"	None	
	Scantling and Sketch	8" x 3" x 48"	None	None	None	None	8" x 3" x 48"	None	
HATCH COVERS	Material	Wood	Wood	Efficient	Wood	Wood	Wood	Wood	
	Thickness	3"	2 1/2"	Temporary	2 1/2"	3"	2 1/2"	2 1/2"	
	How fitted	F & A	Atkush	Covers & Closing	F & A	F & A	F & A	Atkush	
	Bearing Surface	3 1/4"	3"	24"	20"	23"	24"	24"	
Spacing of Cleats	24"	24"	24"	24"	20"	23"	24"	24"	
Number of Tarpaulins	2	2	2	2	2	2	2	2	

*Are wood fore and afters steel shod at all bearing surfaces? *None fitted!*
 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!*

Particulars of fiddle, funnel and ventilator coamings:—

Fiddle openings can be closed by hinged steel covers.

Funnel & masts on top of fiddle casing in good condition.

Particulars of Flush Bunker Scuttles:— *None fitted.*

Particulars of Companionways:—

Forward to crew's quarter. 4'4" x 5' x 6'7", substantially constructed of steel, steel door 4'4" x 3'10" cap of being manipulated from both sides, sill 20°.

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

Forward of deckhouse: 4 off 17 diam 48" x 36" coam.
Between deckhouses: 2 - 17" - 48" x 36"
Aft of deckhouse: 4 - 8" - 16" x 25"
Wood plugs & canvas covers supplied.

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

Air pipes provided with swan necks, opening of same 5" tall above deck. Efficient closing appliances fitted.

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

Nordic

Particulars of Scuppers and Sanitary Discharge Pipes:—

Scuppers from 2nd deck led overboard & fitted with screw plugs.

Sanitary Discharge pipes fitted with N.R. Valves.

Particulars of Side Scuttles:—

Side lights through ship's sides are provided with perm. attached hinged deadlights.

Particulars of Guard Rails:—

Open rails throughout. Three horizontal rods 9" staunchions 42" high spaced 5' apart.

Particulars of Gangways, Lifelines, etc.:—

None fitted.

Channels on after BH a tunnel well to be riveted
OR

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 <i>Tonnage Well</i>	8'5"	8'	22" x 20 1/2"	1	3.13 B	
Forward Well	✓					

State position of each freeing port (F. and A. position and height above deck edge) } After Well:— bridge bhd 25" x 5'11" 7"
 } Forward Well:—
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— *Hinged plate shutter.*
 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	Vert. pl.	30"	4 3/4" x 3" x 28" alt 4 flange	23 1/2"	None	None		8'
Raised Quarter Deck Bulkhead	✓							
Bridge, After Bulkhead	Vert. pl.	30"	4 3/4" x 3" x 28" alt 4 flange	23 1/2"	None	7'5" x 4'	None	8'
Bridge, Forward Bulkhead	✓							
Forecastle Bulkhead	✓							
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓							
Exposed Machinery Casings on Superstructure Decks	22" x 32"	32"	3 1/2" x 3" x 34"	4'3"	None	4'4" x 1'11"	19"	7'9"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	18" x 34"	32"	3 1/2" x 3" x 34"	4'2"	Top: Com. to beam Bolt: None	None	✓	8'
Deckhouses on Flush Deck Ships	✓							

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

Poop Bulkhead	No openings
Raised Quarter Deck Bulkhead	✓
Bridge, After Bulkhead	Wood boards in riveted channels for full height of opening
Bridge, Forward Bulkhead	✓
Forecastle Bulkhead	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓
Exposed Machinery Casings on Superstructure Decks	Hinged steel door capable of being manipulated from both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	No openings
Deckhouses on Flush Deck Ships	✓

[illegible]

T = Trium hatch, 24"-25", 9" bulb-augr coaming, 2 $\frac{1}{2}$ " wood covers, 2" bearing surface, cleats spaced 18" apart, 2 tarp.
H.C = Coal hatch, 4'2" x 3'0", 12 $\frac{1}{2}$ " x .34" coaming, 2 $\frac{1}{2}$ " " , 2" " " " " " 17" , 2"
C.H = Circular coal hatch, 36" diam, 9" bulb augr coam, 2 $\frac{1}{2}$ " " , 2" " " " " " 21" , 2".

Woods heathing only in way of crew's quarter forward.

This vessel has been surveyed afloat whilst discharging her cargo.

Received by me