

No 9000

Preliminary Report

Rpt. C.11.

Index. No.  
(For London Office only.)Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.

12 SEP 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Pop, Bridge & Tackle  
OSCAR BORJESSON

(Type of Superstructures.)

Ship's Name N° FALSTERBO Nationality and Port of Registry Swedish Official Number 7286 Gross Tonnage 4085 Date of Build 1925-9

Moulded Dimensions: Length 350'0" Breadth 50'6" Depth 28'

Moulded displacement at moulded draught = 85 per cent. of moulded depth 9465 tons

Coefficient of fineness for use with Tables .484

Port of Survey Göteborg

Date of Survey 7th Sep 1932

Name of Surveyor H. J. J. J. J.

Particulars of Classification 100.A.1

S.S. Cat. No 1-30

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... .. <u>28'00"</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(28.03 - 23.33) 2.692 = 12.65</u>	Moulded Breadth (B) <u>50'5"</u>
Stringer plate <u>(.38)</u> ... .. <u>.03</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 12.12$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <u>12.5"</u>
Depth for Freeboard (D) = <u>28.03</u>		Difference <u>excess</u> <u>.38</u>
		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times (1 - \frac{S_1}{L}) = \frac{.38^2}{4} \times .4773 = 6.05$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)	
Pop enclosed ... ..	<u>30.67</u>	<u>30.67</u>	<u>8'5"</u>	-	<u>30.67</u>	Standard Height of Superstructure <u>4.00</u>
" overhang ... ..	<u>2.25</u>	<u>.12</u>	-	-	<u>.12</u>	" " R.Q.D. <u>-</u>
R.Q.D. enclosed ... ..	<u>-</u>	<u>-</u>	-	-	<u>-</u>	Deduction for complete superstructure <u>38.67</u>
" overhang ... ..	<u>-</u>	<u>-</u>	-	-	<u>-</u>	Percentage covered $\frac{S}{L} = 52.78$
Bridge enclosed ... ..	<u>114.83</u>	<u>114.83</u>	<u>8'5"</u>	-	<u>114.83</u>	" " $\frac{S_1}{L} = 52.27$
" overhang aft ... ..	<u>2.25</u>	<u>1.69</u>	-	-	<u>1.69</u>	" " $\frac{E}{L} = 52.27$
" overhang forward ... ..	<u>2.25</u>	<u>1.12</u>	-	-	<u>1.12</u>	Percentage from Table, Line A.
Deck enclosed ... ..	<u>31.75</u>	<u>31.75</u>	<u>8'5"</u>	-	<u>31.75</u>	(corrected for absence of forecastle (if required))
" overhang ... ..	<u>2.75</u>	<u>2.75</u>	-	-	<u>2.75</u>	Percentage from Table, Line B.
Trunk aft ... ..	<u>-</u>	<u>-</u>	-	-	<u>-</u>	(corrected for absence of forecastle (if required))
" forward ... ..	<u>-</u>	<u>-</u>	-	-	<u>-</u>	Interpolation for bridge less than 2L (if required)
Tonnage opening aft ... ..	<u>-</u>	<u>-</u>	-	-	<u>-</u>	Deduction = <u>.3827 x 38.67 = 14.80</u>
" forward ... ..	<u>-</u>	<u>-</u>	-	-	<u>-</u>	
Total ... ..	<u>184.75</u>	<u>182.93</u>			<u>182.93</u>	

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ... ..	<u>45.00</u>	1		<u>45.00</u>	<u>45"</u>	<u>45.00</u>	1		<u>45.00</u>	Mean actual sheer aft = <u>.75</u>
$\frac{1}{2}$ L from A.P. ... ..	<u>20.02</u>	4		<u>80.08</u>	<u>19.68</u>	<u>19.25</u>	4		<u>77.00</u>	Mean actual sheer forward = <u>excess</u>
$\frac{3}{8}$ L " ... ..	<u>4.95</u>	2		<u>9.90</u>	<u>4"</u>	<u>3.30</u>	2		<u>6.60</u>	Mean standard sheer forward
Amidships ... ..	<u>-</u>	4		<u>-</u>	<u>Nil</u>	<u>-</u>	4		<u>-</u>	Length of enclosed superstructure forward of amidships = <u>.10</u>
$\frac{3}{8}$ L from F.P. ... ..	<u>9.90</u>	2		<u>19.80</u>	<u>10.75</u>	<u>11.30</u>	2		<u>22.60</u>	" " aft of " = <u>.10</u>
$\frac{1}{2}$ L " ... ..	<u>40.05</u>	4		<u>160.20</u>	<u>43.5</u>	<u>44.25</u>	4		<u>177.00</u>	
F.P. ... ..	<u>90.00</u>	1		<u>90.00</u>	<u>102"</u>	<u>102.00</u>	1		<u>102.00</u>	
Total ... ..				<u>404.98</u>					<u>430.20</u>	

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left( \frac{75 - S}{2L} \right) = \frac{25.22}{18} \left( \frac{.75 - .2639}{.5} \right) = 6.68$$

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 = 28.03 Ft.

Summer freeboard = 4.84

Moulded draught (d) = 23.19

## Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = 5.80

## Addition for Winter North Atlantic Freeboard (if required) =

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

$$\Delta = 9246$$

Tons per inch immersion at summer load water line

$$T = 36.42$$

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

$$= 6.35$$

## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{.787 + .68}{1.36} : \frac{1.467}{1.36}$ 

	+	-
Depth Correction ... ..	<u>12.65</u>	
Deduction for superstructures ... ..		<u>14.80</u>
Sheer correction ... ..		<u>.68</u>
Round of Beam correction ... ..		<u>.05</u>
Correction for Thickness of Deck amidships ... ..		
Other corrections, scantlings, etc. ... ..		

12.65 15.53 (-) 2.88

Summer Freeboard = 58.06

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Steel, Deck:— 58.06 = 1445 mm.

Tropical Fresh Water Line above Centre of Disc ... ..	<u>308</u> mm
Fresh Water Line " " ... ..	<u>161</u> mm
Tropical Line " " ... ..	<u>144</u> mm
Winter Line( below " " ... ..	<u>144</u> mm

Tropical Fresh Water Freeboard ... ..	<u>1164</u> mm
Fresh Water " " ... ..	<u>1314</u> mm
Tropical " " ... ..	<u>1328</u> mm
Winter " " ... ..	<u>1622</u> mm

25 OCT 1932

002206-002214-0065 1/2

3 NOV 1932

MARKING FORM

RECEIVED 124 OCT 1932

## PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HIGHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS												
Freeboard Deck						Bridge Deck						
Description of Hatchway			...	...	...	N <sup>os</sup> 1 & 5	N <sup>os</sup> 2 & 4	N <sup>o</sup> 3	N <sup>o</sup> 3			
Dimensions of Hatchway			...	...	...	24'-9" x 18'	27'-6" x 18'	20'-3" x 18'	20'-3" x 18'			
COAMINGS	{	Height above Deck	...			34"	44"	9"	34"			
		Thickness	Sides	...		44"	44"	44"	44"			
		Stiffeners	...	...		44"	44"	44"	44"			
		Brackets, Stays	...	...	5'-7" x 3" x .40"	✓	5'-7" x 3" x .40"	20/4"				
HATCH BEAMS	{	Number	...	...	5	5	3	3				
		Spacing	...	...	4'-1 1/2"	4'-6"	ab. 5'-1"	ab. 5'-1"				
		Scantling and Sketch	...	...								
		Angles:-	...	...	4" x 3" x .44"	4" x 3" x .44"	4" x 3" x .44"	4" x 3" x .44"				
		Web:-	...	...	14" x .36"	15" x .36"	16" x .36"	16" x .36"				
Bearing Surface	...	...	3"	3"	3"	3"						
FORE AND AFTERS	{	Number	...	...								
		Spacing	...	...								
		Unsupported Lengths	...	...								
		Scantling* and Sketch	...	...								
Bearing Surface	...	...										
HATCH COVERS	{	Material	...	...	Wood.	Wood	Wood.					
		Thickness	...	...	2 1/2"	2 1/2"	2 1/2"					
		How fitted	...	...	F. 8 A.	F. 8 A.	F. 8 A.					
		Bearing Surface	...	...	3"	3"	3"					
Spacing of Cleats			...	...	...	2	2	2				
Number of Tarpaulins			...	...	...							

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

Are battens and wedges efficient and in good condition?

Are tarpaulins in good condition and in accordance with rule requirements? *2*

Are lashings provided in accordance with rule requirements?

Particulars of fiddley, funnel and ventilator coamings :—

Motorship - No fiddle openings.

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

Particulars of Companionways :—

Crew berthed aft in poop.

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

Particulars not available

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

Particulars not available.

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

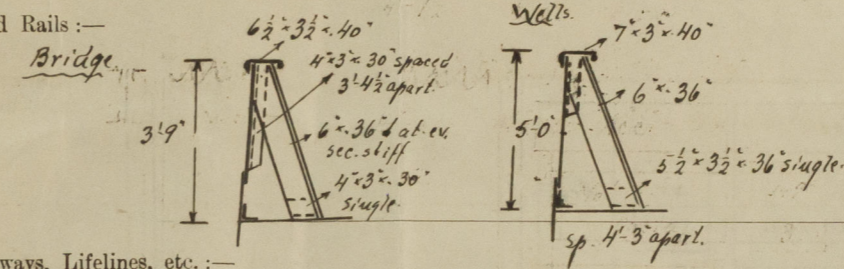
Particulars of Scuppers and Sanitary Discharge Pipes :—

Particulars not available.

Particulars of Side Scuttles :—

Particulars not available

Particulars of Guard Rails :—



Particulars for prop + /'cb not  
available.

Particulars of Gangways, Lifelines, etc. :—

Particulars not available.

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 ... ..		5'0"	5'4" x 20½"	3.	23 ft	
Forward Well ... ..		5'0"	5'4" x 20½"	3	23 ft	

State position of each freeing port ... .. } After Well:—  
 (F. and A. position and height above deck edge) } Forward Well:—  
 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.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	24" x 44"	40"	8" x 3" x 50"	22"	legs top & butt.	None	✓	8'6"
Raised Quarter Deck Bulkhead	23" ✓		107" ✓					
Bridge, After Bulkhead	Vert. pl.	28"	4 1/2" x 2 1/2" x 40"	30"	Takes bound. bars.	8'3" x 3'1 1/2"	None	8'6"
Bridge, Forward Bulkhead	25 1/2" x 46"	40"	9" x 3" x 52"		legs top & butt.	4'1" x 3'1 1/2"	23 3/8"	8'6"
Forecastle Bulkhead	Vert. pl.	28"	4 1/2" x 2 1/2" x 30"	24 1/2"	Takes bound. bars.	8'3" x 3'1 1/2"	None	8'6"
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓							
Exposed Machinery Casings on Superstructure Decks	None	28"	4" x 2 1/2" x 30"	27"	Breht. of top & carried. bel. deck.	not available		8'0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	None	28"	4" x 2 1/2" x 30"	27"	Carried above below deck.	None	✓	8'6"
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	...	...	Opening fitted with class II closing appliances.					
Bridge, Forward Bulkhead	...	...	" " " class I " " "					
Forecastle Bulkhead	...	...	" " " II " " "					
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	...	...	✓					
Exposed Machinery Casings on Superstructure Decks	...	...	Openings fitted with hinged steel doors.					
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	...	...	No openings.					
Deckhouses on Flush Deck Ships	...	...	✓					

The diagram shows a hand-drawn plan view of a ship's deck layout, divided into two main sections: the Superstructure Deck (top) and the Freeboard Deck (bottom). The ship's hull is represented by a curved line on the left and a pointed bow on the right.

**Superstructure Deck:**

- On the left side, there are three rectangular blocks labeled "Acc." (Accumulator).
- In the center, there is a rectangular block labeled "Motor casing" with "Nº 3" written next to it.
- To the right of the motor casing, there is another rectangular block labeled "Acc.".
- Dimensions for the Superstructure Deck are indicated by dashed lines and arrows:
  - From the left edge to the first "Acc." block:  $10'8"$  and  $3"$ .
  - Between the first and second "Acc." blocks:  $2'3"$ .
  - Between the second "Acc." block and the "Motor casing":  $114'10"$ .
  - Between the "Motor casing" and the third "Acc." block:  $2'3"$ .
  - From the third "Acc." block to the bow:  $2'9"$  and  $31'9"$ .

**Freeboard Deck:**

- On the left side, there is a rectangular block labeled "Crew." with "Nº 5" written next to it.
- In the center, there is a rectangular block labeled "Motor casing" with "Nº 3" written next to it.
- To the right of the motor casing, there are two rectangular blocks labeled "Nº 2" and "Nº 1" respectively.
- On the far right, near the bow, there is a rectangular block labeled "Stores".
- Dimensions for the Freeboard Deck are indicated by dashed lines and arrows:
  - From the left edge to the "Crew." block:  $10'8"$  and  $3"$ .
  - Between the "Crew." block and the "Motor casing":  $2'3"$ .
  - Between the "Motor casing" and the "Nº 2" block:  $2'3"$ .
  - Between the "Nº 2" block and the "Nº 1" block:  $2'9"$  and  $31'9"$ .

Timber. Deck. Cargo. Freeboards. not. to. be. assigned.

23.80 =	9510	36.3
21.00 =	0300	35.4
<hr/>		
2.80 ✓ =	1210	1.3
2.19 ✓ =	946 ✓	1.02
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23.19 ✓ =	9246 ✓	36.40

Received by me.