

# Lloyd's Register of Shipping

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR SAILING SHIP.)

Ship's Name <b>S/s HORNÖ</b> <i>ex Mauritius - 47. ex Dukseffell. ex Horay. ex Rigel. ex Jomfruland</i>	Official Number <b>7691</b>	Nationality and Port of Registry <b>Swedish</b> <i>Härnösand</i>	Gross Tonnage <b>1493</b>	Date of Build <b>1916</b>	Port of Survey <b>Stockholm</b>
Moulded Dimensions: Length <b>244.58'</b> Breadth <b>37.5'</b> Depth <b>17.67' to fbd deck.</b> <i>Fore and aft of rudder post.</i>					Date of Survey <b>March, 1950</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>Not available</b> tons					Surveyor's Signature <b>Regelin</b>
Coefficient of fineness for use with Tables <b>Assume .782</b>					Particulars of Classification <b>100A1</b> <i>International, open sea service.</i>

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth ...	<b>17.67'</b>	(a) Where D is greater than Table depth (D - Table depth) R = <b>+ 2.65"</b>		Moulded Breadth (B)	<b>450"</b>
Stringer plate ...	<b>.48"</b>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <b>✓</b>		Standard Round of Beam = $\frac{B \times 12}{50}$ = <b>9"</b>	
Sheathing on exposed deck <b>None</b>				Ship's Round of Beam on fbd dk = <b>9.375"</b>	
$T \left( \frac{L-S}{L} \right) =$				Difference	<b>.375</b>
Depth for Freeboard (D) = <b>17.71'</b>		If restricted by superstructures <b>✓</b>		Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right)$ = $\frac{.375}{4} \times .2839$ = <b>-.03"</b>	

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
RP-FR 9 Poop enclosed ...	15.95'	15.95	7.0'	✓	15.95
" overhang ...					
FR 9-FR 47 R.Q.D. enclosed ...	72.23'	69.95	4.0'	✓	69.95
" overhang ...	68.83				
FR 47-FR 81 Bridge enclosed ...	65.04'	58.54	7.0'	✓	58.54
" overhang aft ...	4.50	3.38			3.38
" overhang forward ...	1.00	.50			.50
FR 114-FP F'cle enclosed ...	26.83'	26.83	7.5'		26.83
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	182.15	175.15			175.15

Standard Height of Superstructure	<b>6.00'</b>
" " R.Q.D.	<b>3.964'</b>
Deduction for complete superstructure	<b>30.46"</b>
Percentage covered $\frac{S}{L} =$	<b>74.47</b>
" " $\frac{S_1}{L} =$	<b>71.61</b>
" " $\frac{E}{L} =$	<b>64.98</b>
Percentage from Table, Line A. $\times B$	<b>64.98</b>
(corrected for absence of forecastle (if required))	<b>✓</b>
Percentage from Table, Line B.	<b>✓</b>
(corrected for absence of forecastle (if required))	<b>✓</b>
Interpolation for bridge less than .2L (if required)	<b>✓</b>
Deduction = $30.46 \times .6498$	<b>- 19.79"</b>

## SHEER CORRECTION.

Station	Standard Ordinate inch	S M	Product	Actual Ordinate	Effective Ordinate inch	S M	Product
FR 23 1/2 L from A.P. ...	34.46	1	34.46		50	1	50.00
FR 44 2/3 L " ...	15.335	4	61.34	See	19	4	76.00
FR 65 Amidships ...	3.79	2	7.58	Sketch	5	2	10.00
FR 86 3/4 L from F.P. ...	0	4	0	back	0	4	✓
FR 108 1/2 L " ...	7.58	2	15.16	of	9	2	18.00
F.P. ...	30.67	4	122.68	page	40	4	160.00
Total ...	68.902	1	68.90		89	1	89.00
		2	309.48				403.00

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - S}{2L} \right) = \frac{92.86}{18} \left( \frac{.75 - .3724}{.3776} \right) = -1.95"$   
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 = **17.71'**  
Summer freeboard = **1.20**  
Moulded draught (d) = **16.51**

## Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = **4.13" = 105**

## Addition for Winter North Atlantic Freeboard (if

required) = **6.13" = 156**

## 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

= **105**

See back of page (Tonnage scale)

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

Correction for coefficient

Depth Correction ...  
Deduction for superstructures ...  
Sheer correction ...  
Round of Beam correction ...  
Correction for Thickness of Deck amidships ...  
Other corrections, scantlings, etc. ...

	+	-
2.65	✓	
19.79	✓	
1.95	✓	
.03	✓	
2.65	✓	
21.77	✓	

Summer Freeboard = **14.45"**

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

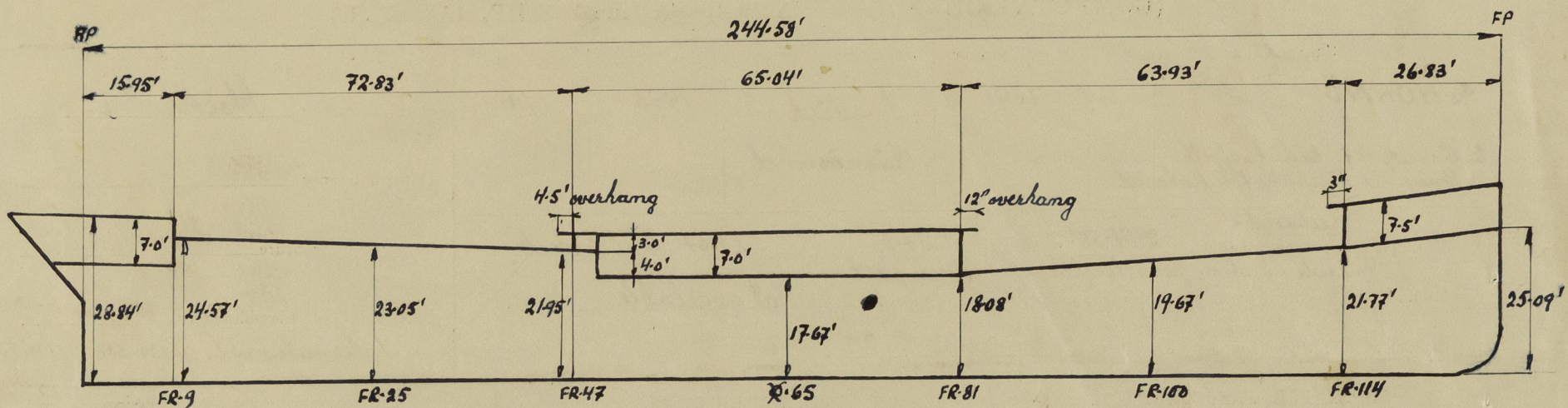
Tropical Fresh Water Line above Centre of Disc **21.0**  
Fresh Water Line " " **105**  
Tropical Line " " **105**  
Winter Line below " " **105**  
Winter North Atlantic Line " " **156**

Tropical Fresh Water Freeboard **367**  
Fresh Water " **157**  
Tropical " **262**  
Winter " **262**  
Winter North Atlantic " **472**  
**523**



HORNO

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.



Above ordinates taken in dry dock and are vertical distances from a reference line parallel to outer surface of keelplates and deck line at sides. It is stated that the vessels draught from aft is generally about 2 feet in excess of the draught forward in loaded condition. Neither Hydrostatic curves or Displacement scales, nor any particulars regarding displacements available. (DW) cargo capacity (incl. bunker and water) is about 2400 eng. tons on summer load water line. Tons per inch immersion is about 18.6 tons.

Freeboard assigned by N.V.

	From deckline	Above or below disc. c.
T	262 mm ✓	105 mm ✓ above
S	367 mm ✓	
V	472 mm ✓	105 mm ✓ below
VNA	523 mm ✓	156 mm ✓ below
Allowance for freshwater 105 mm ✓		

Timber deck cargo assigned by N.V.

	From deck line	Above or below disc. c.
TT	123 mm ✓	108 mm ✓ above
TS	231 mm ✓	
TV	375 mm ✓	144 mm ✓ below
TVNA	523 mm ✓	292 mm ✓ below
Allowance for freshwater 108 mm ✓		

Tonnage scale obtained on board.

Freeboard	Draft in feet	Tons deadweight All told	Tons per inch.
1'-10"	16'-0"	2220	18.6
4'-10"	13'-0"	1550	18.6
	10'-0"	890	18.4
	5'-10"	0	17.4
	15'-0"	1995	
	14'-0"	1775	
	12'-0"	1330	
	11'-0"	1110	
	9'-0"	665	
	8'-0"	455	
	7'-0"	240	
	6'-0"	30	

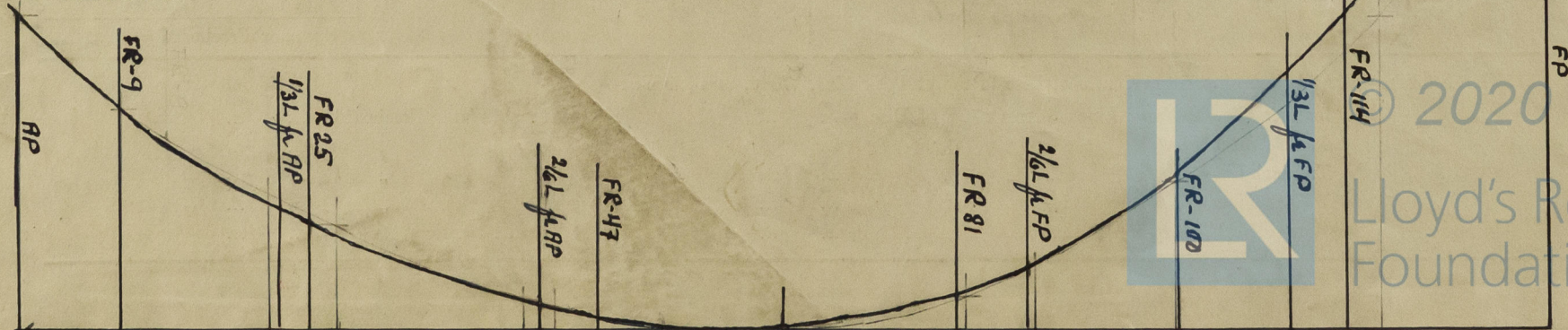
Trade of ship International.

Names of sister ships —

Builder's name and yard number Bergens Mekaniske Verksteder A.S., Bergen. Yard No 192.

Owners Rederi AB Norrland, Manager: A. F. Andersson.

Fee £ 4. 330.—



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