

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.—STEAM SHIPS.

PARTICULARS RELATING TO ALL STEAM SHIPS ~~WITH FLUSH DECKED, OR WITH TOP GALLANT FORECASTLES, SHORT POOPS AND BRIDGE HOUSES DISCONNECTED, OR WITH TOP GALLANT FORECASTLES HAVING LONG POOPS, OR RAISED QUARTER DECKS CONNECTED WITH BRIDGE HOUSES, OR OTHERWISE.~~

Port of Survey Falmouth  
Date of Survey 15+16 Sept 1932  
Name of Surveyor

Ship's Name.	Port of Registry and Nationality.	Official Number.	Gross Tonnage.	Date of Build.	Particulars of Classification.
<del>HERBJÖRN</del> <del>SANDEFJORD</del> Number in Register Book	Moss Norwegian		8038	1929/2	+100 A.1 Carrying Petroleum in Bulk

Registered dimensions from Ship's Register.	LENGTH.	BREADTH.	DEPTH.	UNDER DECK TONNAGE.
Length on LOADLINE.	441.1	59.2	35.4	7242.27
CORRECTED DIMENSIONS.	440	59.11	35.04	7463.37

Moulded Depth as measured..... 35'-0"  
less wood DK - str. 3 1/2"  
Addition for Keel below base line 34'-8 1/2" to use  
for draught record..... inches.

NOTE.—If the depth is measured when vessel is afloat, the details of measurement should be reported.

CORRECTION FOR LENGTH.  
Length of Ship on Loadline..... 440.0  
Length in Table ..... 416.5  
Difference ..... 23.5  
Correction for 10ft., Table A. .... 1.7 Table C. .8  
× Difference divided by 10 ..... +3.99 (if required.) 1.88  
If 1/10ths length covered divide by 2

35'-0"  
1'-2 3/4"  
36'-2 3/4"  
9 1/2"  
35'-5 1/4"  
35.44

Co-efficient of fineness..... .819  
Any modification necessary } Shallow from  
[Para. 4 (a) to (e)]\* } highest  
Co-efficient as corrected ..... .82 lowest  
in tables. 34.0  
54.0

Sheer { Stem..... 72"  
at { Sternpost 36.50 } ÷ 2 = ...Mean 36.20.0  
.56

Sheer at 1/2 of the length from { Stem 28.25  
Sternpost 10.0 } ÷ 2 = ...Mean  
Gradual mean Sheer plotted 9.84  
Standard mean Sheer [Table, Para. 18] 32.40 Correction  
Difference..... 22.56 ÷ 4 = +5.64"

§ If limited as Para. 18 (f) .....  
Flat Sheer amidships.

Rise in Sheer { At front of bridge house..... ✓  
from amidships [Para. 18 (e)] { At after end of forecastle ..... ✓

Fall in Sheer }  
Para. 18 (d) } ÷ 2 =  
Length uncovered ..... ✓ Correction

### ALLOWANCE FOR DECK ERECTIONS:—

Freeboard, Table C..... 78.04  
Correction for Length, if required (Para. 12, 13, and 14) ..... +1.88  
79.92  
Freeboard by Table A, corrected for shear, and for length, if required (Para. 11, 12, 13, and 14) } 121.03  
Difference ..... 41.11  
Percentage as below..... 19.26%  
7.92

Correction for R. Q. Dk. if engine and boiler openings not covered by bridge house (Para. 11) ..... ✓  
Allowance for Deck Erections ..... -7.92

	Length.	Length allowed.	Height.
Forecastle.....	<u>36.75</u>	<u>36.75</u>	<u>8'-0"</u>
Bridge House .....			
† Raised Qr. Dk.....			<u>8'-0"</u>
Poop.....	<u>95.67</u>	<u>95.67</u>	
Total .....		<u>132.42</u>	<u>= .301</u>
Length of Ship .....		<u>440</u>	
Corresponding percentage { (Para. 11, 12, 13, and 14) }		<u>19.26%</u>	

CORRECTION FOR IRON DECK.  
Proportion covered, if less than 1/10ths length covered .....  
Thickness of usual wood deck, less stringer .....  
Allowed in mld Depth

CORRECTION FOR ROUND OF BEAM. NOTE.—The round of beam should be reported on the full breadth of vessel at the gunwale.  
Breadth at Gunwale amidships..... 59.0  
Round of Beam ..... 14.76  
Normal round..... 14.75  
Difference ..... ÷ 2 = ..... ✓  
Proportion of Deck uncovered (Para. 19) .....

Freeboard, Table A	<u>117.04</u>	<u>117.04</u>
Correction for Sheer	<u>+5.64</u>	<u>122.68</u>
Correction for Length	<u>3.99</u>	<u>126.67</u>
Allowance for Deck Erections	<u>-7.92</u>	<u>118.75</u>
Correction for Round of Beam.....		✓
Correction for fall in Sheer (if any).....		✓
Correction for Steel Deck (if required) .....		✓
Additions for non-compliance with provisions of Para. 11 (d) and (e) †		
Other Corrections (if any) .....		<u>118.75</u>

Winter Freeboard ..... 9'-10 3/4"  
Summer Freeboard (6.65) = 6 1/4" 9'-4 1/2"  
Indian Summer Freeboard ..... 8'-10 1/4"  
~~N.A. Winter Freeboard~~ ..... ✓

Correction necessary because clearside amidships, measured in accordance with the Statute is not taken at the intersection of the wood or steel deck with side.

Winter Freeboard from deck line .....  
Summer " " " " .....  
Indian Summer " " " " .....  
N.A. Winter " " " " .....

assigned SUMMER FREEBOARD amidships from Centre of

by honk Veritas

6 DEC 1932

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

Disc to top of Deck Line, ~~13"~~, Steel, Deck:—

13" = 330 m/m Tropical Fresh Water Freeboard ...  
6 1/2" = 165 m/m Fresh Water " "  
6 1/2" = 165 m/m Tropical " "  
6" = 152 m/m Winter " "  
✓ Winter North Atlantic " "

9'-4" = 2845 m/m  
8'-3" = 2515 m/m  
8'-9 1/2" = 2680 m/m  
8'-9 1/2" = 2680 m/m  
9'-10" = 2997 m/m



Do all the Frames extend to the top height in the Poop? \_\_\_\_\_ Raised Quarter Deck? \_\_\_\_\_ Bridge House? \_\_\_\_\_ Forecastle? \_\_\_\_\_  
To what height do the Reverse Frames extend? \_\_\_\_\_  
Has the Poop or Raised Quarter Deck an efficient Iron Bulkhead at the fore end? \_\_\_\_\_  
Give particulars of the means for closing the openings in Bulkhead \_\_\_\_\_  
Is the Poop or Raised Quarter Deck connected with the Bridge House? \_\_\_\_\_ Has the Bridge House an efficient Bulkhead at the fore end? \_\_\_\_\_  
Give particulars of the means for closing the openings in Bulkhead \_\_\_\_\_  
What is the thickness of the Bridge Front plating? \_\_\_\_\_ and Coaming plate? \_\_\_\_\_  
Give scantlings and spacing of the Stiffeners \_\_\_\_\_  
Are bracket plates fitted at each end of the Stiffeners? \_\_\_\_\_ Are hor'l. brackets fitted connecting Bridge Bulk'd. with Bulwarks? \_\_\_\_\_  
Has the Bridge House an efficient Iron Bulkhead at the after end? \_\_\_\_\_  
How are the openings closed? \_\_\_\_\_  
Is the Forecastle at least as high as the main or top-gallant rail? \_\_\_\_\_ Has the Forecastle an efficient Iron or Wood Bulk'd. at after end? \_\_\_\_\_  
Are the Engine and Boiler openings covered by a Bridge, Poop, Raised Quarter Deck, or enclosed by a Strong Iron or Steel Deckhouse? \_\_\_\_\_  
If the openings are not so protected are the exposed parts of the Casings efficiently constructed? \_\_\_\_\_  
Give thickness of plating; scantlings and spacing of Stiffeners \_\_\_\_\_  
What is the height of the exposed Casings? \_\_\_\_\_ Are suitable means provided for closing all openings in them in bad weather? \_\_\_\_\_  
Are the Weather Deck Hatchways efficiently constructed and at least equal to the requirements of the Rules? Give particulars below:—

Position.	Size.								
COAMING.	Height above top of DECK								
Thickness	Sides								
	Ends								
SHIFTING BEAMS OR WEIR PLATES.	Number								
	Section and Scantlings								
	Material								
* FORE AND AFTERS.	Number								
	Section and Scantlings								
	Material								
HATCHES Thickness									
Remarks									

\* The depth of Fore and Afters should be stated from the underside of the hatches in all cases.

(If the sill of the lowest side scuttle will be less than 6 inches above the Indian Summer Load Line if assigned under the tables, state vertical distance from top of keel to lower edge of lowest side scuttle.)

The following information is to be given in all Cases of vessels dealt with under Paras. 11, 12 (under 15 feet Moulded depth) and under Shelter Deck Rules.  
What is the thickness of the Bridge Sheerstrake? \_\_\_\_\_ Strake between Main and Bridge Sheerstrakes? \_\_\_\_\_

Delete the words { The Crew are, are not, berthed in the bridge house.  
that do not apply { The arrangements to enable them to get backwards and forwards from their quarters are, are not satisfactory.

Length of Bulwarks in well \_\_\_\_\_ Sq. ft.  
Area of Freecing Ports required by Para. 11 (e) each side of vessel = \_\_\_\_\_

Ft.	Tenths.	No.		Sq. ft.
x	x		Freeing Ports (each side of vessel)	=
x	x			

Total deficiency or excess = \_\_\_\_\_ Sq. ft.

Show hereon line of Floors or Tank Top with position of any Breaks in same; also height of Peak Tank tops, &c., &c.

State any special features in the construction of the Vessel \_\_\_\_\_

Builder's name and yard number \_\_\_\_\_

Names of sister vessels \_\_\_\_\_

Owners \_\_\_\_\_

Address \_\_\_\_\_

Fee £ \_\_\_\_\_

Received by me \_\_\_\_\_

Rpt. C.11.

# Lloyd's Register of Shipping. SURVEYS FOR FREEBOARD.

20 SEP 1932

Index. No. 34236  
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker  
having Poop and Forecastle.  
(Type of Superstructures.)  
Ship's Name HERBJÖRN Nationality and Port of Registry NORWEGIAN MOSS Gross Tonnage 8038 Date of Build 1929-2  
Moulded Dimensions: Length 440.0 Breadth 59.0 Depth 36.0  
Moulded displacement at moulded draught = 85 per cent. of moulded depth 1774.0 tons  
Coefficient of fineness for use with Tables .804  
Port of Survey Falmouth  
Date of Survey 15/9/32. 16/9/32.  
Name of Surveyor R. C. Hoffitt  
Particulars of Classification +100A1  
Carrying Petroleum in bulk

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... 35.0	(a) Where D is greater than Table depth (D - Table depth) R = (35.07 - 29.33) 3 = +17.22"	Moulded Breadth (B) 59.0 Standard Round of Beam = $\frac{B \times 12}{50} = 14.16$ Ship's Round of Beam = 14.76 Difference .60 Restricted to Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{.60}{4} \times .699 = -.10$
Stringer plate ... .06.07	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	
Depth for Freeboard (D) = 35.07		

## DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... 95.8"	95.67	8.0"	✓	95.67
overhang ...				
R.Q.D. enclosed ...				
overhang ...				
Bridge enclosed ...				
overhang aft ...				
overhang forward ...				
P'cle enclosed ... 36.9"	36.75	8.0"	✓	36.75
overhang ...				
Trunk aft ...				
forward ...				
Tonnage opening aft ...				
forward ...				
Total ... 132.42	132.42			132.42

Standard Height of Superstructure 7.50  
" " R.Q.D. ✓  
Deduction for complete superstructure 42.0  
Percentage covered  $\frac{S}{L} = 30.10\%$   
" "  $\frac{S_1}{L} = 30.10\%$   
" "  $\frac{E}{L} = 30.10\%$   
Percentage from Table, Line A.  
(corrected for absence of forecastle (if required)) ✓  
Percentage from Table, Line B. TANKER 21.10%  
(corrected for absence of forecastle (if required)) ✓  
Interpolation for bridge-less than 2L (if required) ✓  
Deduction = 42.0 x .211 = - 8.86"

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	54.00	1		54.00	35.2	36.50	36.50	1	36.50
1/4 L from A.P. ...	24.03	4		96.12	7	48.0	48.0	4	192.0
1/2 L " ...	5.94	2		11.88	1.5	0	0	2	0
Amidships ...	✓	4		✓	0	0	0	4	0
3/4 L from F.P. ...	11.88	2		23.76	5	0	0	2	0
1/4 L " ...	48.06	4		192.24	21	18.00	18.00	4	72.00
F.P. ...	108.00	1		108.00	71.5	72.00	72.00	1	72.00
Total ...				486.00					199.70

Mean actual sheer aft = Deficient  
Mean standard sheer aft =  
Mean actual sheer forward = Deficient  
Mean standard sheer forward =  
Length of enclosed superstructure forward of amidships = } Tanker  
" " aft of " = }  
Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - S}{2L} \right) = \frac{286.30}{18} \times (.75 - .1505) = + 9.53$   
If limited to maximum allowance of 1 1/2 ins. per 100 ft. ✓

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Fresh Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient $\frac{804 + 68}{1.36} = \frac{1484}{1.36}$
Depth to Freeboard Deck = 35.07	$\Delta = 16060$	Depth Correction ... 17.22 ✓
Summer freeboard = 8.08	Tons per inch immersion at summer load water line	Deduction for superstructures ... 8.86 ✓
Moulded draught (d) = 26.99	T = 53.77	Sheer correction ... 9.53 ✓
Deduction for Tropical freeboard and addition for Winter freeboard = 6.75 = 6 3/4	Deduction = $\frac{\Delta}{40T}$ inches = 7.47	Round of Beam correction ... .10 ✓
Addition for Winter North Atlantic Freeboard (if required) = 4.4 = 4 1/2	required) = 17 1/2 = 17 1/2	Correction for Thickness of Deck amidships ... ✓
		Other corrections, scantlings, etc. ... ✓
		Summer Freeboard = 96.90

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-	
Tropical Fresh Water Line above Centre of Disc ... 14 1/4 = 36 1/4	Tropical Fresh Water Freeboard ... 6 - 16 3/4 = 21 03
Fresh Water Line " " ... 7 1/2 = 19 0	Fresh Water " " ... 7 - 5 1/2 = 22 74
Tropical Line " " ... 6 3/4 = 17 15 7/8	Tropical " " ... 7 - 6 1/4 = 22 93
Winter Line below " " ... 6 3/4 = 17 15 7/8	Winter " " ... 8 - 7 3/4 = 26 35
Winter North Atlantic Line " " ... 11 1/4 = 28 5	Winter North Atlantic " " ... 9 - 0 1/4 = 27 49

See Rpt. 11, dated 1909, Lloyd's Register  
8/3/39  
Bda assigned