

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name GRONLAND TRUMAN	Official Number 9100	Nationality and Port of Registry NORWAY SWEDISH HAUGESUND GRAVARNE	Gross Tonnage 253	Date of Build 1905	Port of Survey GRAVARNE
Moulded Dimensions: Length 120.00 Breadth 21.58 Depth 12.50					Date of Survey 29.12.50
Moulded displacement at moulded draught = 85 per cent. of moulded depth					Surveyor's Signature
Coefficient of fineness for use with Tables Curve .68					Particulars of Classification + 100 A1 Motor Trawler

DEPTH FOR FREEBOARD (D). Moulded depth ... 12.50 Stringer plate 3.203 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = \frac{2.64}{12} \times .302 = .07$ Depth for Freeboard (D) = 12.60	DEPTH CORRECTION. (a) Where D is greater than Table depth (D-Table depth) R = $(12.60-8.00) .923 = +4.25$ (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) 21.58 Standard Round of Beam = $\frac{B \times 12}{50} = 5.16$ Ship's Round of Beam = 2.60 Difference 2.56 Restricted to Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{2.56}{4} \times .332 = .21$
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DEDUCTION FOR SUPERSTRUCTURES.					
	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed					
" overhang					
R.Q.D. enclosed	64.50	64.50	12.3	118/3.33	24.29
" overhang			-8.4		
Bridge enclosed			14.16		
" overhang aft					
" overhang forward					
F'cle enclosed	19.25	15.63	5.07	5.07/6.0	13.21
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	83.75	80.13			37.50

Standard Height of Superstructure	6.00
" " R.Q.D.	3.133
Deduction for complete superstructure	18.00
Percentage covered $\frac{S}{L} =$	69.80
" $\frac{S_1}{L} =$	66.77
" $\frac{E}{L} =$	31.25
Percentage from Table, Line A.	16.06
(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 = $18.00 \times .1606 =$	-2.89

SHEER CORRECTION.							
Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	22.00	1	22.00	-3.15	-3.15	1	-3.15
$\frac{1}{2}L$ from A.P.	9.79	4	39.16	-14.57	-14.57	4	-58.28
$\frac{3}{4}L$ "	2.42	2	4.84	-10.63	-10.63	2	-21.26
Amidships		4				4	
$\frac{1}{4}L$ from F.P.	4.84	2	9.68	22.24	4.84	2	9.68
$\frac{1}{2}L$ "	19.58	4	78.32	54.50	19.58	4	78.32
F.P.	44.00	1	44.00	100.50	44.00	1	44.00
Total			198.00				49.31

Mean actual sheer aft = **Defiant**
 Mean standard sheer aft =
 Mean actual sheer forward = **Even**
 Mean standard sheer forward =
 Length of enclosed superstructure forward of amidships =
 " " aft of " =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{148.69(75 - .3490)}{18} = +3.31$
 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 = 13.75 Summer freeboard = 2.56 Moulded draught (d) = 11.19 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 2.80 Addition for Winter North Atlantic Freeboard (if required) = 4.80	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 = 2.28	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient NIL Depth Correction ... 4.25 Deduction for superstructures ... 3.31 Sheer correction ... 2.1 Round of Beam correction ... 13.80 Correction for Thickness of Deck amidships ... 2.57 Other corrections, scantlings, etc. ... Summer Freeboard = 30.68
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line. Wood, Steel, Deck :-			
Tropical Fresh Water Line above Centre of Disc	12.9	Tropical Fresh Water Freeboard	7.80
Fresh Water Line	5.8	Fresh Water	7.22
Tropical Line	7.1	Tropical	7.09
Winter Line below	7.1	Winter	8.51
Winter North Atlantic Line	12.2	Winter North Atlantic	9.02

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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.

$\frac{1}{10} = 12.00$

$$\begin{array}{rcl} \text{Length of keelson} & = & 19.25 \\ \hline 12.00 & \times 1 & = 12.00 \\ 7.25 & \times \frac{1}{2} & = 3.63 \\ \hline & & 15.63 \end{array}$$

Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £



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Foundation