

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, ~~SAILING SHIP~~, TANKER.)

Ship's Name EMINENT	Official Number	Nationality and Port of Registry BELGIAN ANTWERP	Gross Tonnage 499.73	Date of Build 1939	Port of Survey
Moulded Dimensions: Length 46.70 m. Breadth 8.40 m. Depth 3.60 m. <i>To cr. of RUDDER STOCK.</i>					Date of Survey 13.12.39
Moulded displacement at moulded draught = 85 per cent. of moulded depth 837 m³ tons					Surveyor's Signature
Coefficient of fineness for use with Tables .717					Particulars of Classification +100 A1 CLASS CONTEMPLATED.

Depth for Freeboard (D). Moulded depth 3.500 Stringer plate010 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 3.50	Depth correction. (a) Where D is greater than Table depth $(D - \text{Table depth}) R =$ $8.33(3.50 - 3.113) / 1.797 = +39 \text{ m/m}$ (b) Where D is less than Table depth (if allowed) $(\text{Table depth} - D) R =$ If restricted by superstructures ✓	Round of Beam correction. Moulded Breadth (B) 8.40 m Standard Round of Beam = $\frac{B \times 12}{50} = 168 \text{ m/m}$ Ship's Round of Beam = 210 Difference EXCESS = 42 m/m Restricted to Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{42}{4} \times .2356 = -2 \text{ m/m}$
---	--	---

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	12.52	12.52	1860	✓	12.52
„ overhang					
R.Q.D. enclosed	15.95	15.95	1120	✓	15.95
„ overhang					
Bridge enclosed					
„ overhang aft					
„ overhang forward					
File enclosed	7.23	7.23	2130 / 2050	✓	7.23
„ overhang					
Trunk aft					
„ forward					
Tonnage opening aft					
„ „ forward					
Total	35.70	35.70			35.70

Standard Height of Superstructure **1.830 m.**„ „ R.Q.D. **1.020 m.**Deduction for complete superstructure **542 m/m**Percentage covered $\frac{S}{L} = 76.44$ „ „ $\frac{S_1}{L} = 76.44$ „ „ $\frac{E}{L} = 76.44$ Percentage from Table, Line A. **70.92**
(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 = **542 × 70.92 = 384 m/m**

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	643	1	643	1003	1464	1	1464
$\frac{1}{4}L$ from A.P.	286	4	1144	455	651	4	2604
$\frac{2}{4}L$ „	71	2	142	102	161	2	362
Amidships	-	4	-	-	-	4	-
$\frac{3}{4}L$ from F.P.	142	2	284	165	165	2	330
$\frac{1}{4}L$ „	572	4	2288	585	585	4	2340
F.P.	1286	1	1286	1305	1305	1	1305
Total			5787				8405

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$
 If limited on account of midship superstructure. ✓

Mean actual sheer aft = **EXCESS**
Mean standard sheer aftMean actual sheer forward = **EXCESS**
Mean standard sheer forwardLength of enclosed superstructure forward of amidships = **.11**
L„ „ aft of „ = **.50**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.

RAISED QUARTER
 Depth to Freeboard Deck = **4.630**
 Summer freeboard = **1.140**
 Moulded draught (d) = **3.490**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{48}$ inches = **73 m/m**Addition for Winter North Atlantic Freeboard (if required) = **73 + 50 = 123 m/m**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 1006 \text{ m}^3$
 Tons per inch immersion at summer load water line

T = **3.25**

Deduction = $\frac{\Delta}{40 T}$ inches
 = **77 m/m**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.717 + .68}{1.36} = \frac{1.397}{1.36}$ Depth Correction **39**Deduction for superstructures **384**Sheer correction **53**Round of Beam correction **2**Correction for Thickness of Deck amidships **1120**

Other corrections, scantlings, etc.

Summer Freeboard = **1136 m/m**

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

Tropical Fresh Water Line above Centre of Disc **77 m/m**Fresh Water Line „ „ **77 m/m**Tropical Line „ „ **NIL**Winter Line below „ „ **73 m/m**Winter North Atlantic Line „ „ **123 m/m**Tropical Fresh Water Freeboard **1093**Fresh Water „ „ **1093**Tropical „ „ **1170** (LIMITED)Winter „ „ **1243**Winter North Atlantic „ „ **1293**

20 DEC 1939

W387-0078

Eminent.

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.

$$\begin{aligned}\text{Sheer at Break of Poop} &= 215 \text{ m/m} \\ \text{Excess ht. of Raised Quarter Deck} &= 100 \text{ m/m} \\ \text{Virtual sheer at Break of Poop} &= 315 \text{ m/m}\end{aligned}$$

$$\begin{aligned}\text{Virtual sheer at AP} &= 315 \times \left(\frac{23.35}{10.83}\right)^2 \\ &= 1464 \text{ m/m.}\end{aligned}$$

$$\begin{aligned}\text{Actual ht of Raised Quarter Deck} &= 1120 \text{ m/m} \\ \text{Standard} &= \frac{1020}{100} \text{ m/m}\end{aligned}$$

Trade of ship.....

Names of sister ships.....

Builder's name and yard number.....

Owners.....

Fee £.....



© 2019

Lloyd's Register
Foundation