

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name PENTHIEVE. EX CASSARD.	Official Number	Nationality and Port of Registry FRENCH NANTES.	Gross Tonnage 1599	Date of Build 1920 2 ms.	Port of Survey
Moulded Dimensions: Length 253.75 Breadth 37.50 Depth 20.50					Date of Survey 17.3.48
Moulded displacement at moulded draught = 85 per cent. of moulded depth 3565 tons					Surveyor's Signature
Coefficient of fineness for use with Tables .753					Particulars of Classification +100 A1.

DEPTH FOR FREEBOARD (D). Moulded depth 20.50 Stringer plate04 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 20.54	DEPTH CORRECTION. (a) Where D is greater than Table depth (D-Table depth) R = $20.54 - 16.91 = 3.63$ $3.63 \times 1.952 = +7.09$ (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) 37.50 Standard Round of Beam = $\frac{B \times 12}{50} = 9.0$ Ship's Round of Beam = 9.50 Difference .50 Restricted to Correction = $\frac{\text{Diff.}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.50}{4} \times .5409 = -.07$
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	27.00	27.00	7.0	✓	27.00
„ overhang					
R.Q.D. enclosed					
„ overhang					
Bridge enclosed	63.50	63.50	7.0	✓	63.50
„ overhang aft					
„ overhang forward					
Fore enclosed	26.00	26.00	7.0	✓	26.00
„ overhang					
Trunk aft					
„ forward					
Tonnage opening aft					
„ „ forward					
Total	116.50	116.50			116.50

Standard Height of Superstructure **6.04**
 „ „ R.Q.D.
 Deduction for complete superstructure **31.375**
 Percentage covered $\frac{S}{L} =$
 $\frac{S_1}{L} =$ **45.91**
 $\frac{E}{L} =$
 Percentage from Table, Line **Tanker** : - **36.91** ✓
 (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 = **31.375 × .3691 = 11.58** ✓

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	35.37	1		35.37	46.00	46.00	1		46.00
$\frac{1}{2}$ L from A.P.	15.74	4		62.96	18.17	18.17	4		72.68
$\frac{3}{4}$ L „	3.89	2		7.78	4.54	4.54	2		9.08
Amidships	-	4		-	-	-	4		-
$\frac{1}{2}$ L from F.P.	7.78	2		15.56	8.98	8.98	2		17.96
$\frac{1}{4}$ L „	31.48	4		125.92	35.94	35.94	4		143.76
F.P.	70.75	1		70.75	82.50	82.50	1		82.50
Total				318.35					371.98

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{153.63}{18} \left(.75 - \frac{2295}{5205} \right) = -1.55$ ✓
 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 = Ft.
 Summer freeboard =
 Moulded draught (d) =

Deduction for Tropical freeboard and addition for

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

Addition for Winter North Atlantic Freeboard (if required) =

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
 =

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction	7.09	-
Deduction for superstructures	-	11.58
Sheer correction	-	1.55
Round of Beam correction	-	.07
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc.	-	-
	7.09	3.20

Summer Freeboard = **27.78**

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

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

Tropical Fresh Water Freeboard
 Fresh Water „ „
 Tropical „ „
 Winter „ „
 Winter North Atlantic „ „