

Basic computation to scantling perkins rule.

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.
(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

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

Empire Clyde
ex. Leonardo da Vinci

Ship's Name	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
				1925	
Moulded Dimensions: Length 429.25 Breadth 52.5 Depth 39.17					Date of Survey 12-4-43
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons					Surveyor's Signature
Coefficient of fineness for use with Tables 0.71 (assumed)					Particulars of Classification 1000 ft with fullon (contingent)

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 39.17	(a) Where D is greater than Table depth (D-Table depth) R = (39.21 - 28.62) x 3 = + 31.77 ✓	Moulded Breadth (B) Standard Round of Beam = $\frac{B \times 12}{50} =$ Ship's Round of Beam = Difference assumed normal
Stringer plate04	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Restricted to
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ ✓	If restricted by superstructures	Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) =$ Nil
Depth for Freeboard (D) = 39.21 ✓		

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 ...					
„ overhang ...					
Bridge enclosed ...					
„ overhang aft ...					
„ overhang forward ...					
F'cle enclosed ...					
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward ...					
Total ...					

Standard Height of Superstructure _____
„ „ R.Q.D. _____
Deduction for complete superstructure _____
Percentage covered $\frac{S}{L} =$ _____
„ „ $\frac{S_1}{L} =$ _____
„ „ $\frac{E}{L} =$ _____
Percentage from Table, Line A.
(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 = Nil ✓

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...		1				1	
$\frac{1}{4}$ L from A.P. ...		4				4	
$\frac{2}{8}$ L „ ...		2				2	
Amidships ...		4				4	
$\frac{2}{8}$ L from F.P. ...		2				2	
$\frac{1}{4}$ L „ ...		4				4	
F.P. ...		1				1	
Total ...							

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

Mean actual sheer aft = _____
Mean standard sheer aft = _____
Mean actual sheer forward = _____
Mean standard sheer forward = _____
Length of enclosed superstructure forward of amidships = _____
„ „ aft of „ = _____
If limited to maximum allowance of 1½ ins. per 100 ft.

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard.	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 $\frac{.71 + .68}{1.36} = \frac{1.39}{1.36}$ Depth Correction ... 31.77 ✓ Deduction for superstructures ... Sheer correction ... Round of Beam correction ... Correction for Thickness of Deck amidships ... Other corrections, scantlings, etc. ... Summer Freeboard = 114.21
Depth to Freeboard Deck = 39.21 Summer freeboard = 9.52 Moulded draught (d) = 29.69 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = Addition for Winter North Atlantic Freeboard (if required) =		80.67 ✓ 82.44 ✓ + 31.77 952

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

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