

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name S. S. DUNDEE.	Official Number 144713.	Nationality and Port of Registry BRITISH DUNDEE.	Gross Tonnage	Date of Build 1934 2.Ms.	Port of Survey
Moulded Dimensions: Length 281.00' Breadth 42.00' Depth 25.50'					Date of Survey 10.9.47.
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons					Surveyor's Signature
Coefficient of fineness for use with Tables .68 ESTIMATED.					Particulars of Classification * 100 A1 with freeboard.

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth 25.50	(a) Where D is greater than Table depth (D-Table depth) R = (25.53 - 18.73) 2.162 = +14.70" 6.80	Moulded Breadth (B) 42.00'
Stringer plate03	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = ✓	Standard Round of Beam = $\frac{B \times 12}{50} = 10.08$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures ✓	Ship's Round of Beam = 6.00
Depth for Freeboard (D) = 25.53.		Difference Deficient 4.08
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{4.08}{4} \times \left(1 - \frac{25}{56.2} \right) = +.85"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed						Standard Height of Superstructure 6.31
" overhang						" " R.Q.D. ✓
R.Q.D. enclosed						Deduction for complete superstructure 34.07
" overhang						Percentage covered $\frac{S}{L} =$
Bridge enclosed 25.00	25.00		7.5	✓	25.00	" " $\frac{S_1}{L} =$ 11.98
" overhang aft						" " $\frac{E}{L} =$
" overhang forward						Percentage from Table, Line A. 8.49
F'cle enclosed 22.71	22.71		7.5	✓	22.71	(corrected for absence of forecastle (if required))
" overhang						Percentage from Table, Line B. 10.77
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than .2L (if required) 8.49 + (2.28 x $\frac{25}{56.2}$) = 9.50
Tonnage opening aft						Deduction = 34.07 x .095 = 3.24.
" " forward						
Total 47.71	47.71				47.71	

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	38.10	1	38.10	30.00	30.00	1	30.00
$\frac{1}{2}L$ from A.P.	16.95	4	67.80	13.35	13.35	4	53.40
$\frac{3}{8}L$ "	4.20	2	8.40	3.30	3.30	2	6.60
Amidships	-	4	-	-	-	4	-
$\frac{3}{8}L$ from F.P.	8.40	2	16.80	7.92	7.92	2	15.84
$\frac{1}{2}L$ "	33.90	4	135.60	32.04	32.04	4	128.16
F.P.	76.20	1	76.20	72.00	72.00	1	72.00
Total			342.90				306.00

Mean actual sheer aft = **Deficient**
Mean standard sheer aft = **Deficient**

Mean actual sheer forward = **Deficient**
Mean standard sheer forward = **Deficient**

Length of enclosed superstructure forward of amidships = **Deficient, sheer.**
" " aft of " = **Deficient, sheer.**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{36.90}{18} \left(.75 - \frac{0849}{56.2} \right) = +1.36.$
If limited on account of midship superstructure. **.6651** If limited to maximum allowance of 1½ ins. per 100 ft. ✓

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required) 38.93
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient NIL.
Depth to Freeboard Deck = 25.53.	Δ =	Depth Correction 14.70
Summer freeboard = _____	Tons per inch immersion at summer load water line	Deduction for superstructures - 3.24
Moulded draught (d) = _____	T =	Sheer correction 1.36
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = _____	Deduction = $\frac{\Delta}{40 T}$ inches = _____	Round of Beam correction85
Addition for Winter North Atlantic Freeboard (if required) = _____		Correction for Thickness of Deck amidships
		Other corrections, scantlings, etc.
		3.24
		Summer Freeboard = _____

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