

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

Ship's Name: MANDARIN STAR, FAWKNER PARK. Official Number: HONGKONG. Nationality and Port of Registry: HONGKONG. Gross Tonnage: . Date of Build: . Port of Survey: Saint John N.B. Date of Survey: During Construction. Surveyor's Signature: R.H. Scott. Particulars of Classification: +100A1 (Contemplated).

Moulded Dimensions: Length 310.44, Breadth 46.33, Depth 25.16. Moulded displacement at moulded draught = 85 per cent. of moulded depth tons. Coefficient of fineness for use with Tables.

Depth for Freeboard (D). Moulded depth, Stringer plate, Sheathing on exposed deck T((L-S)/L) = . Depth for Freeboard (D) = .

Depth correction. (a) Where D is greater than Table depth (D-Table depth) R = +10.72. (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), Standard Round of Beam = B x 12 / 50 = . Ship's Round of Beam = . Difference, Restricted to, Correction = Diff/4 x (1-S/L) = +.02.

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)
Poop enclosed	31.21		7.75		
.. overhang	2.00				
R.Q.D. enclosed					
.. overhang					
Bridge enclosed	76.00		9.0		
.. overhang aft	4.00				
.. overhang forward	2.00				
F'cle enclosed	31.23		7.0		
.. overhang					
Trunk aft					
.. forward					
Tonnage opening aft					
.. forward					
Total					

Standard Height of Superstructure 6.604. R.Q.D. 36.03. Deduction for complete superstructure. Percentage covered S/L = . S_i/L = . E/L = 46.20. Percentage from Table, Line A. (corrected for absence of forecastle (if required)). Percentage from Table, Line B. Timber 66.87. (corrected for absence of forecastle (if required)). Interpolation for bridge less than .2L (if required). Deduction = 36.03 x .6687 = -24.09.

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.		1				1	
1/4 L from A.P.		4				4	
1/2 L		2				2	
Amidships		4				4	
3/4 L from F.P.		2				2	
1/4 L		4				4	
F.P.		1				1	
Total							

Correction = Difference between sums of products / 18 ((.75-S)/.2L) = +6.26. 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 = L. aft of = . If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 25.19 Ft. Summer freeboard = 3.48. Moulded draught (d) = 21.71. Deduction for Tropical freeboard and addition for Winter freeboard = d inches = 5.43 = 5 1/2. Addition for Winter North Atlantic Freeboard (if required) = d/3 = 7.24 = 7 1/4.

Deduction for Fresh Water. Displacement in salt water at summer load water line Δ = 6850. Tons per inch immersion at summer load water line T = 29.18. Deduction = Δ/40T inches = 5.87 = 5 3/4.

TABULAR FREEBOARD corrected for Flush Deck (if required). Correction for coefficient. Depth Correction 10.72. Deduction for superstructures 24.09. Sheer correction 6.26. Round of Beam correction .02. Correction for Thickness of Deck amidships. Other corrections, scantlings, etc. 17.00 24.09 -7.09. Summer Freeboard = 41.66.

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:			
TIMBER	Tropical Fresh Water Line above Centre of Disc	23 1/2"	Tropical Fresh Water Freeboard
"	Fresh Water Line	18"	" Fresh Water
"	Tropical Line	17 3/4"	" Tropical
"	Winter Line	5"	" Winter
"	Winter North Atlantic Line	7 1/4"	" Winter North Atlantic
"	Summer line above	12 1/4"	

21 MAR 1944