

LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name SUMMITAN	Official Number 180378	Nationality and Port of Registry BRITISH. SINGAPORE	Gross Tonnage 522	Date of Build	Port of Survey
Moulded Dimensions: Length 140'-4³/₈" Breadth 27'-0" Depth 18'-0"				Date of Survey 14/3/53	
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) 1323. tons				Surveyor's Signature	
Coefficient of fineness for use with Tables .7984				Particulars of Classification B.S.* EAST INDIAN ARCHIPELAGO SERVICE.	

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth 18.00	(a) Where D is greater than Table depth (D-Table depth) R = (18.02 - 9.36) 1.08 = +9.35"	Moulded Breadth (B) 27.00
Stringer plate02	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = 8.66	Standard Round of Beam = $\frac{B \times 12}{50} =$ 6.48
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam 6" STRAIGHT = 7.29 (EQUIV.)
Depth for Freeboard (D) = 18.02		Difference .81
		Restricted to
		Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.81}{4} \times .8842 = -.18"$

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 OPEN ...	32.5	16.25	7'-0"	-	16.25
" overhang aft					
" overhang forward ...					
F'cle enclosed					
" overhang					
Trunk aft					
" forward					
Tonnage opening aft ...					
" " forward ...					
Total	32.5	16.25			16.25

Standard Height of Superstructure	6.00'
" " R.Q.D.	-
Deduction for complete superstructure	20.04
Percentage covered $\frac{S}{L} =$	23.16
" " $\frac{S_1}{L} =$	11.58
" " $\frac{E}{L} =$	
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)	167
Deduction = $20.04 \times .0167 =$.33"

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	24.04	1	24.04			1	
$\frac{1}{4}$ L from A.P. ...	10.70	4	42.80			4	
$\frac{3}{8}$ L " ...	2.64	2	5.28			2	
Amidships	0	4	0			4	
$\frac{3}{8}$ L from F.P. ...	5.29	2	10.58			2	
$\frac{1}{4}$ L " ...	21.39	4	85.56			4	
F.P.	48.07	1	48.07			1	
Total			216.33				

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{216.33 (.75 - .1158)}{18} = +7.62"$

If limited on account of midship superstructure. **.6342**

Mean actual sheer aft	}	DEFICIENT.
Mean standard sheer aft		
Mean actual sheer forward	}	DEFICIENT SHEERS.
Mean standard sheer forward		
Length of enclosed superstructure forward of amidships = $\frac{L}{L}$		
" " aft of " =		

Deduction for Tropical Freeboard.	
Addition for Winter and Winter North Atlantic Freeboard.	
Depth to Freeboard Deck = 18.02	
Summer freeboard = 8.04	
Moulded draught (d) = 9.98	
Keel allowance = #	
Extreme draught =	
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	
= 547 2¹/₂"	

TABULAR FREEBOARD corrected for Flush Deck (if required)	14.25
Correction for coefficient $\frac{.798 + .68}{1.36} =$ 1478/1.36	15.49
Depth Correction	9.35
Deduction for superstructures33
Sheer correction	7.62
Round of Beam correction18
Correction for Thickness of Deck amidships ...	
Other corrections, scantlings etc. ...	64.55
Summer Freeboard = 96.50	

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

Tropical Fresh Water Line above Centre of Disc	2 1/2
Fresh Water Line " "	2 1/2
Tropical Line " "	NIL
Winter Line below " "	NIL
Winter North Atlantic Line " "	NOT ASSIGNED

Tropical Fresh Water Freeboard	7'-10"
Fresh Water " "	7'-10"
Tropical " "	8'-0 1/2"
Winter " "	NOT ASSIGNED
Winter North Atlantic " "	NOT ASSIGNED