

*Amended for reduction in
pumping draught*

LLOYD'S REGISTER OF SHIPPING

SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, ~~SAILING SHIP, TANKER~~)

For LONDON OFFICE ONLY

Received

Index No.

Govt. Copy

Owners C11

Ship's Name ACAPULCO	Official Number	Nationality and Port of Registry Mexican	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length 549.50 Breadth 71.75 Depth 42.25					Date of Survey 6.12.61
Freeboard Length					Surveyor's Signature
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) 29880 tons					Particulars of Classification +100A18h DK with freeboard
Coefficient of fineness for use with Tables .739					

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... 42.25	(a) Where D is greater than Table depth D-Table depth) R = (42.30 - 36.635)3 = +16.99"	Moulded Breadth (B) 71.75'
Stringer plate04	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = 5.665	Standard Round of Beam = $\frac{B \times 12}{50} = 17.22"$
Wood Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = \frac{.21 \times 24}{549.5} = .01$	If restricted by superstructures	Ship's Round of Beam = 6.00
Depth for Freeboard (D) = 42.30		Difference = 11.22
		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S}{L} \right) = \frac{11.22^2}{4} \times .0620 = +1.17"$

DEDUCTION FOR SUPERSTRUCTURES.					Standard Height of Superstructure 7.5'	
Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)	R.Q.D.	
Poop enclosed ...						
" overhang ...						
R.Q.D. enclosed ...	434.25	434.25	8.5	-	434.25	
" overhang ...						
Bridge enclosed ...						
" overhang aft ...						
" overhang forward ...	2.50	1.25	8.5	-	1.25	
Fore enclosed Quar ...	66.03	66.03			66.03	
" overhang ...	17.42	8.71			8.71	
Trunk aft ...						
" forward ...						
Tonnage opening aft ...						
" forward ...						
Total ...	525.20	575.24			515.24	

Percentage covered $\frac{S}{L} = 95.56$

" $\frac{S_i}{L} = 93.80$

" $\frac{E}{L} = 93.80$

Percentage from Table, Line A. **92.37**

(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 = **42 x .9237 = -38.80"**

SHEER CORRECTION.							
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	Product
A.P. ...	64.95	1		64.95	60.00	60.00	60.00
1/4 L from A.P. ...	28.90	4		115.60	27.00	27.00	108.00
1/2 L ...	7.145	2		14.29	7.00	7.00	14.00
Amidships ...	0	4		0	0	0	0
3/4 L from F.P. ...	14.29	2		28.58	14.00	14.00	28.00
1/4 L ...	57.80	4		231.20	56.00	56.00	224.00
F.P. ...	129.90	1		129.90	125.5	125.00	125.00
Total ...				584.52			559.00

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{25.52}{18} \left(.75 - \frac{.222}{2 \times 549.5} \right) = +.39$

If limited on account of midship superstructure.

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 = **7.12**

" aft of " = **7.12**

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD
<p>Addition for Winter and Winter North Atlantic Freeboard.</p> <p>Depth to Freeboard Deck = 42.29</p> <p>Summer freeboard = 15.49</p> <p>Moulded draught (d) = 26.80</p> <p>Keel allowance =</p> <p>Extreme draught =</p> <p>Deduction for Tropical freeboard and addition for =</p> <p>Winter freeboard = $\frac{d}{4}$ inches =</p> <p>Addition for Winter North Atlantic Freeboard (if required) =</p>	<p>Displacement in salt water at summer load water line</p> <p>$\Delta =$</p> <p>Tons per inch immersion at summer load water line</p> <p>T =</p> <p>Deduction = $\frac{\Delta}{40 T}$ inches</p> <p>$\frac{d}{4} = 6.7$</p> <p>$= 6\frac{3}{4}"$</p>	<p>Correction for coefficient .739 + .68 = 1.419 / 1.36</p> <p>Depth Correction ... 16.49</p> <p>Deduction for superstructures ... 38.80</p> <p>Sheer correction39</p> <p>Round of Beam correction17</p> <p>Correction for Thickness of Deck amidships12</p> <p>Other corrections, scantlings, etc. to ... 86.95</p> <p>Summer Freeboard = 185.88</p>

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-			
Tropical Fresh Water Line above Centre of Disc	6 3/4"	Tropical Fresh Water Freeboard	14' - 11 1/8"
Fresh Water Line	6 3/4"	Fresh Water	14' - 11 1/8"
Tropical Line	NIL	Tropical	15' - 5 7/8"
Winter Line below	NIL	Winter	15' - 5 7/8"
Winter North Atlantic Line	NIL	Winter North Atlantic	15' - 5 7/8"