

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name AT. "ATTILA" RIO DEVA	Official Number	Nationality and Port of Registry PANAMANIAN PANAMA.	Gross Tonnage	Date of Build 1930 11	Port of Survey Genoa.
Moulded Dimensions: Length 460.0' Breadth 59.75' Depth 33.58' <i>to centre of rudder stock.</i>					Date of Survey Feb, 1954
Moulded displacement at moulded draught = 85 per cent. of moulded depth.....tons					Surveyor's Signature <i>J. Sutherland</i> <i>Choutan</i>
Coefficient of fineness for use with Tables..... 464 <i>RESERVED</i>					Particulars of Classification +100A.1. <i>"Carrying petroleum in bulk"</i>

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth	33.58'	(a) Where D is greater than Table depth (D-Table depth) R = (33.64-30.67) 3' = 8.91'		Moulded Breadth (B)	59.75'
Stringer plate	72" 0.06'	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = 2.97'		Standard Round of Beam = $\frac{B \times 12}{50}$	14.34'
Sheathing on exposed deck				Ship's Round of Beam	14.95'
$T \left(\frac{L-S}{L} \right) =$				Difference	0.61'
Depth for Freeboard (D) =	33.64'	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}^\circ}{4} \times \left(1 - \frac{S}{L} \right)$	$\frac{61}{4} \times \frac{6171}{4} = -0.09$

DEDUCTION FOR SUPERSTRUCTURES.					
	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	108.40'	108.40'	7'-6"		108.40'
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed	28.86'	28.86'	7'-8"		28.86'
" overhang aft					
" overhang forward					
F'cle enclosed	38.87'	38.87'	7'-6"		38.87'
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	176.13'	176.13'			176.13'

Standard Height of Superstructure 7.50' ✓
" " R.Q.D. ✓
Deduction for complete superstructure 42.00' ✓
Percentage covered $\frac{S}{L} =$ } 38.29' ✓
" " $\frac{S_1}{L} =$ }
" " $\frac{E}{L} =$ }
Percentage from Table, Line A. TANKER. 29.29' ✓
(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 = 42.00 x .2929 = -12.30' ✓

SHEER CORRECTION.							
Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P.	56.00	1	56.00	53.35	53.35	1	53.35
$\frac{1}{8}L$ from A.P.	24.92	4	99.68	24.0	24.00	4	96.00
$\frac{2}{8}L$ "	6.16	2	12.32	6.32	6.32	2	12.64
Amidships		4				4	
$\frac{3}{8}L$ from F.P.	12.32	2	24.64	13.00	13.00	2	26.00
$\frac{4}{8}L$ "	49.84	4	199.36	44.08	44.08	4	176.32
F.P.	112.00	1	112.00	91.95	91.95	1	91.95
Total			504.00				456.26

Mean actual sheer aft = Deficient ✓
Mean standard sheer aft =
Mean actual sheer forward = Deficient ✓
Mean standard sheer forward =
Length of enclosed superstructure forward of amidships = } Tanker.
" " aft of " = }
Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{47.74}{18} \left(.75 - \frac{19.5}{176} \right) = 1.48" \checkmark$
If limited on account of midship superstructure. 5585' If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard.		Deduction for Fresh Water.		TANKER.	
Addition for Winter and Winter North Atlantic Freeboard.		Displacement in salt water at summer load water line		TABULAR FREEBOARD corrected for Flush Deck (if required)	
Ft.		$\Delta =$		Correction for coefficient	74.70' ✓
Depth to Freeboard Deck =	33.64' ✓	Tons per inch immersion at summer load water line			82.50' ✓
Summer freeboard =	6.71' ✓	T =		Depth Correction	8.91' ✓
Moulded draught (d) =	26.93' ✓	Deduction = $\frac{\Delta}{40 T}$ inches		Deduction for superstructures	12.30' ✓
Deduction for Tropical freeboard and addition for		=		Sheer correction	1.48' ✓
Winter freeboard = $\frac{d}{4}$ inches =	6.73' ✓ 171			Round of Beam correction	.09' ✓
Addition for Winter North Atlantic Freeboard (if required) =	6.73 + 4.60 = 11.33' ✓ 288			Correction for Thickness of Deck amidships	
				Other corrections, scantlings, etc.	
				10.39' 12.39' - 2.00' ✓	
				Summer Freeboard =	80.50' = 2045

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-			
NORWEGIAN	Tropical Fresh Water Line above Centre of Disc	356' ✓	Tropical Fresh Water Freeboard
FREEBOARDS	Fresh Water Line	191' ✓	Fresh Water
REASSIGNED	Tropical Line	165' ✓	Tropical
	Winter Line below	165' ✓	Winter
	Winter North Atlantic Line	279' ✓	Winter North Atlantic

2045' ✓
1689' ✓
1354' ✓
1880' ✓
2210' ✓
2324' ✓

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £ *(will be sent)*

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Foundation