

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name **M.V. CRISTA** Official Number **166611** Nationality and Port of Registry **BRITISH LONDON** Gross Tonnage **2590** Date of Build **1938/12**

Port of Survey **ROTTERDAM**

Date of Survey **NOVEMBER 1938**

Surveyor's Signature *J. van der Kolk*

Particulars of Classification **100.A.1**  
CLASS CONTEMPLATED

Moulded Dimensions: Length **305.75** Breadth **41.75** Depth **25.052**

Moulded displacement at moulded draught = 85 per cent. of moulded depth **584.4** **582.4** tons

Coefficient of fineness for use with Tables **750**

Depth for Freeboard (D).		Depth correction.		Round of Beam correction.	
Moulded depth	25.052	(a) Where D is greater than Table depth (D - Table depth) R =	(25.10 - 20.38) 2.352 = + 11.10"	Moulded Breadth (B)	41.75
Stringer plate	0.04	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	4.72	Standard Round of Beam = $\frac{B \times 12}{50}$	10.02
Sheathing on exposed deck	SEE SKETCH			Ship's Round of Beam	10.50 = 0.87
T $\left(\frac{L-S}{L}\right) = 21 \times \frac{16.38}{305.75}$	0.01	If restricted by superstructures		Difference	48 excess
Depth for Freeboard (D) =	25.10			Restricted to	
				Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L}\right)$	$= \frac{48}{4} \times 5932 = -07"$

## DEDUCTION FOR SUPERSTRUCTURES.

SEE SKETCH

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Peep enclosed	54.88	54.88	7.50		54.88
overhang AFT					
R.Q.D. enclosed					
overhang					
Bridge enclosed	30.12	30.12	7.50		30.12
overhang aft					
overhang forward					
File enclosed	39.38	39.38	7.50		39.38
overhang					
Trunk aft					
forward					
Tonnage opening aft					
forward					
Total	124.38	124.38			124.38

Standard Height of Superstructure **6.56**

" " R.Q.D. **35.72**

Deduction for complete superstructure

Percentage covered  $\frac{S}{L} = 40.68$

" "  $\frac{S_1}{L} = 40.68$

" "  $\frac{E}{L} = 40.68$

Percentage from Table, Line A.  
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. **28.07**  
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction =  $35.72 \times 28.07 = -10.03$

MOULDED DRAUGHT	EXTERNAL DISPLACEMENT	TONS / INCH.
22'	6084	26.6
21'	5758	26.3
20'	5448	26.0

TONS SALT WATER.

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	40.58	1	40.58	39.88	39.88	1	39.88		39.88
$\frac{1}{2}L$ from A.P.	18.055	4	72.22	15.375	15.375	4	61.50		61.50
$\frac{3}{4}L$ "	4.46	2	8.92	1.125	1.125	2	2.25		2.25
Amidships		4				4			
$\frac{3}{4}L$ from F.P.	8.93	2	17.86	9.375	9.375	2	18.75		18.75
$\frac{1}{2}L$ "	36.11	4	144.44	34.875	34.875	4	139.50		139.50
F.P.	81.15	1	81.15	80.38	80.38	1	80.38		80.38
Total				342.26			342.26		

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 = *sheer deficient.*

" " aft of " =

Correction =  $\frac{\text{Difference between products}}{18} \left(75 - \frac{S}{2L}\right) = \frac{22.71 \times 75 - 2034}{18} = +70"$

If limited on account of midship structure.

If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **25.09**

Summer freeboard = **4.06**

Moulded draught (d) = **21.03**

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = **5.26 = 5 1/4"**

Addition for Winter North Atlantic Freeboard (if required) = **7 1/4"**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 5768$

Tons per inch immersion at summer load water line

T = **26.32**

Deduction =  $\frac{\Delta}{40 T}$  inches = **5.48**

= **5 1/2"**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{750 + 68}{1.36} = \frac{1.43}{1.36}$

	+	-
Depth Correction	11.10	
Deduction for superstructures		10.03
Sheer correction	70	
Round of Beam correction		07
Correction for Thickness of Deck amidships		12
Other corrections, scantlings, etc.		
	11.80	10.22

Summer Freeboard = **48.73**

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

Tropical Fresh Water Line above Centre of Disc	10 3/4"
Fresh Water Line	5 1/2"
Tropical Line	5 1/4"
Winter Line below	5 1/4"
Winter North Atlantic Line	7 1/4"

Tropical Fresh Water Freeboard	3 1/2"
Fresh Water	3 1/2"
Tropical	3 1/2"
Winter	4 1/2"
Winter North Atlantic	4 1/2"



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.

I REFER TO YOUR M. LETTER OF THE 14<sup>th</sup> JUNE 1937 REGARDING A PROVISIONAL FREEBOARD ASSIGNMENT.

omit

Trade of ship..... OCEAN GOING TRADE.

Names of sister ships..... ✓

Builder's name and yard number..... MESSRS "WERF GUSTO" SCHIEDAM..... YARD N° 726

Owners..... "THE ANGLO SAXON PETROLEUM COMPANY LD." LONDON.

Fee *J* £156,00.



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Foundation

*Crista.*