

Preliminary V. Amended  
length of 31.575

# LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

## SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER)

For LONDON OFFICE ONLY

Received \_\_\_\_\_  
Index No. \_\_\_\_\_  
Govt. Copy \_\_\_\_\_  
Owners C11 \_\_\_\_\_

Ship's Name <b>AURIS</b>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length <b>492.5</b> Breadth <b>57.0</b> Depth <b>34.0</b> Freeboard Length <b>492.5</b> Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) _____ tons Coefficient of fineness for use with Tables <b>.803 ESTD.</b>					Date of Survey <b>8.12.56</b> Surveyor's Signature <b>[Signature]</b> Particulars of Classification _____

<b>DEPTH FOR FREEBOARD (D).</b> Moulded depth ... <b>34.00</b> Stringer plate ... <b>.06</b> Wood Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <b>34.06</b>	<b>DEPTH CORRECTION.</b> (a) Where D is greater than Table depth (D-Table depth) R = <b>34.06 - 32.84 = 3.66</b> (b) Where D is less than Table depth (if allowed) (Table depth-D) R = If restricted by superstructures	<b>ROUND OF BEAM CORRECTION.</b> Moulded Breadth (B) <b>57.00</b> Standard Round of Beam = $\frac{B \times 12}{50} =$ <b>14.16</b> Ship's Round of Beam = <b>14.38</b> Difference <b>.22</b> Restricted to Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S}{L} \right) =$ <b>.22 \times .5962 = .131</b> <b>.03</b>
--	--	--

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S)	Height	Height Correction	Effective Length (E)
Poop enclosed <b>E.T.V.</b>	96.19	96.19	8.0		96.19
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed <b>E.T.V.</b>	47.17	47.17	7.5		47.17
" overhang aft	10.00	7.50			7.50
" overhang forward					
Fore enclosed	48.00	48.00	7.5		48.00
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	201.36	198.86			198.86

Standard Height of Superstructure **7.50**  
 " " R.Q.D. **✓**  
 Deduction for complete superstructure **42.00**  
 Percentage covered  $\frac{S}{L} =$  **40.89**  
 " "  $\frac{S_1}{L} =$   
 " "  $\frac{S_2}{L} =$  **40.38**  
 Percentage from Table, Line A. Tanker **31.38**  
 (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 \times .3138 = 13.18**

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	59.25	1			52.0	62.00	1		62.00
$\frac{1}{2}$ L from A.P. ...	26.37	4			22.0	22.09	4		88.36
$\frac{3}{4}$ L " ...	6.52	2			4.75	4.75	2		9.50
Amidships ...	0	4	0	0	0	0	4	0	0
$\frac{3}{4}$ L from F.P. ...	13.04	2			9.5	9.50	2		19.00
$\frac{1}{2}$ L " ...	52.73	4			44.75	44.75	4		179.00
F.P. ...	118.50	1			112.50	112.50	1		112.50
Total				533.25					470.36

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{62.89}{18} \left( .75 - \frac{204.4}{492.5} \right) = + 1.91$   
 If limited on account of midship superstructure. If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100ft.

Deduction for Tropical Freeboard.  
 Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **34.06**  
 Summer freeboard = **7.15**  
 Moulded draught (d) = **26.91**  
 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

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient **.803 + .68 = 1.483**  
**7.36**

Depth Correction ... **3.66**  
 Deduction for superstructures ... **13.18**  
 Sheer correction ... **1.91**  
 Round of Beam correction ... **.03**  
 Correction for Thickness of Deck amidships ...  
 Other corrections, scantlings, etc. ...

**5.57** **13.21** - **7.64**  
 Summer Freeboard = **85.81**

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

Tropical Fresh Water Line above Centre of Disc	...	Tropical Fresh Water Freeboard	...
Fresh Water Line	...	Fresh Water	...
Tropical Line	...	Tropical	...
Winter Line below	...	Winter	...
Winter North Atlantic Line	...	Winter North Atlantic	...



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.

$$\text{poop length at side} = 93.69' \checkmark$$

$$\frac{1}{6} = \frac{492.5}{6} = 82.08 \checkmark$$

$$\text{Shore draft} = (8.50' - 7.6') + \frac{56}{100} = 62''$$

$$\frac{1}{6} = 6 \left( \frac{11.61^2}{93.69} \right) + 22.0 =$$

$$= .09 \checkmark + 22.0 \checkmark = 22.09 \checkmark$$

93.69

82.08

11.61

EST. Block

$$\Delta T .850 = 17737 \checkmark + .995 \times \frac{59 \times 31.5 \times 34 \times .85}{35} \checkmark$$

$$17737 + 1527 \checkmark$$

$$= 19,264 \checkmark$$

$$CB = \frac{19264 \times 35 \checkmark}{492.5 \times 59 \times 34 \times .85} = .803 \checkmark$$

Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £

List of plans forwarded for reference. (See "Instructions to Surveyors, Part 4, 1950," paragraph 11.)