

LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name ATHELFOAM	Official Number	Nationality and Port of Registry BRITISH LIVERPOOL	Gross Tonnage	Date of Build	Port of Survey MIDDLESBROUGH
Moulded Dimensions: Length 431' Breadth 61'-0" Depth 31'-0"					Date of Survey Whiles building
Moulded displacement at moulded draught = 85 per cent. of moulded depth 15300 tons					Surveyor's Signature J. D. RUFUS
Coefficient of fineness for use with Tables .773					Particulars of Classification +180A1 C.P.113

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth ...	31.00	(a) Where D is greater than Table depth		Moulded Breadth (B)	61.00'
Stringer plate07	(b) Where D is less than Table depth (if allowed)	(31.07 - 28.75) 3 = 7.02"	Standard Round of Beam = $\frac{B \times 12}{50}$	= 14.64"
Sheathing on exposed deck	—	(Table depth - D) R =	2.34	Ship's Round of Beam	= 14.75"
$T \left(\frac{L-S}{L} \right) =$	—	If restricted by superstructures	—	Difference	.11"
Depth for Freeboard (D) =	31.07			Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	= $\frac{.11}{4} \times .5653 = -.02'$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed Cgwin	108.17	108.17	8.0	—	108.17
" overhang	.33	.16			.16
R.Q.D. enclosed					
" overhang					
Bridge enclosed Cgwin	35.09	35.09	8.0	—	35.09
" overhang aft	4.58	3.44			3.44
" overhang forward	1.83	.91			.91
F'cle enclosed	35.17	35.17	8.0	—	35.17
" overhang	4.00	4.00			4.00
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	189.17	186.94			186.94

Standard Height of Superstructure **7.5'**

" " R.Q.D. **—**

Deduction for complete superstructure **42.00"**

Percentage covered $\frac{S}{L} =$ **43.89**

" " $\frac{S_1}{L} =$ **43.37**

" " $\frac{E}{L} =$ **—**

Percentage from Table, Line **Tanker** **34.37**

(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 = **42.00 x .3437 = -14.43"**

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	53.10	1	53.10	54.21	54.25	1	54.25
$\frac{1}{2}$ L from A.P. ...	23.63	4	94.52	23.48	23.48	4	93.92
$\frac{3}{4}$ L " ...	5.84	2	11.68	5.75	5.75	2	11.50
Amidships ...	—	4	—	—	—	4	—
$\frac{3}{4}$ L from F.P. ...	11.68	2	23.36	11.21	11.21	2	22.42
$\frac{1}{2}$ L " ...	47.26	4	189.04	48.65	48.65	4	194.60
F.P. ...	106.21	1	106.20	108.20	108.20	1	108.20
Total ...			477.90				484.69

Mean actual sheer aft **> 1**

Mean standard sheer aft **> 1**

Mean actual sheer forward **> 1**

Mean standard sheer forward **> 1**

Length of enclosed superstructure forward of amidships = **Tanker**

" " aft of " = **Tanker**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{6.79 (.75 - .2195)}{18} = -.20$

If limited on account of midship superstructure. **5305** 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 = **31.07**

Summer freeboard = **5.60**

Moulded draught (d) = **25.47**

Keel allowance = **—**

Extreme draught = **—**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **6.37 - 6.4**

Addition for Winter North Atlantic Freeboard (if required) = **6.37 + 4.31 = 10.68 - 10.84"**

Deduction for Fresh Water.

Displacement in salt water at summer load water line **14779**

$\Delta =$ **14779**

Tons per inch immersion at summer load water line **54.20**

T = **54.20**

Deduction = $\frac{\Delta}{40 T}$ inches = **6.82 = 6.34"**

TABULAR FREEBOARD corrected for Fresh Water (if required)

Correction for coefficient **.773 + .68 = 1.453 / 1.36**

	+	-
Depth Correction	7.02	—
Deduction for superstructures	—	14.43
Sheer correction	—	.20
Round of Beam correction	—	.02
Correction for Thickness of Deck amidships	—	—
Other corrections, scantlings, etc.	—	—
Summer Freeboard =	7.02 - 14.65	-7.63

70.16

74.96

6.11.51

67.33

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

Tropical Fresh Water Line above Centre of Disc	13"
Fresh Water Line	6.34"
Tropical Line	6.34"
Winter Line below	6.34"
Winter North Atlantic Line	10.34"

Tropical Fresh Water Freeboard	5'-7.14"
Fresh Water	4'-6.4"
Tropical	5'-0.2"
Winter	6'-1.2"
Winter North Atlantic	6'-6.1"

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.

port at side 105.00
 $\frac{2}{3} \times 4.75$ 3.17
108.17

O/H = 3.50
- 3.17
33

bridge 31.92
 $\frac{2}{3} \times 4.75$ 3.17
35.09 = Equiv

O/H = 5.00
- 3.17
1.83

Trade of ship _____

Names of sister ships _____

Builder's name and yard number _____

Owners _____

Fee £ _____



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Foundation