

AMENDED

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 AHERN TRADER	Official Number 146318	Nationality and Port of Registry BRITISH BELFAST	Gross Tonnage 1922-11	Date of Build	Port of Survey
Moulded Dimensions: Length 199'9" Breadth 31'0" Depth 22'33"				Date of Survey 25.6.57	
Freeboard Length				Surveyor's Signature	
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing)				Particulars of Classification +100 A1	
Coefficient of fineness for use with Tables .782 (Est)				shelter deck with job	

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth	22'33"	(a) Where D is greater than Table depth (D-Table depth) R =		Moulded Breadth (B)	31'0"
Stringer plate	.40"	(22'42" - 22'33") = .9"		Standard Round of Beam = $\frac{B \times 12}{50}$	7'44"
Wood Sheathing on exposed deck		(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Ship's Round of Beam	6'00"
$T \left(\frac{L-S}{L} \right) = \frac{58.13 \times 2.5}{199.9} = .06$				Difference	1'44"
Depth for Freeboard (D) =	22'42"	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right)$	$\frac{1.44}{4} \times 1 = +.36"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed						Standard Height of Superstructure
" overhang						" " R.Q.D.
R.Q.D. enclosed						Deduction for complete superstructure
" overhang						Percentage covered $\frac{S}{L} =$
Bridge enclosed						" " $\frac{S_1}{L} =$
" overhang aft						" " $\frac{E}{L} =$
" overhang forward						Percentage from Table, Line A.
Fore enclosed						(corrected for absence of forecastle (if required))
" overhang						Percentage from Table, Line B.
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than .2L (if required)
Tonnage opening aft						Deduction =
" " forward						
Total						

FLUSH DECK

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	29.99	1		29.99	27.5	27.5	1		27.5
$\frac{1}{4}L$ from A.P.	13.34	4		53.36	9.4	9.4	4		37.6
$\frac{3}{4}L$	3.30	2		6.60	1.5	1.5	2		3.0
Amidships	0	4		0	0	0	4		0
$\frac{3}{4}L$ from F.P.	6.60	2		13.20	7.5	7.5	2		15.0
$\frac{1}{4}L$	26.69	4		106.76	25.0	25.0	4		100.0
F.P.	59.98	1		59.98	54.0	54.0	1		54.0
Total				269.89					237.1

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 = } **NIL**
" " aft of " = }

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{32.79}{18} \times .75 = +1.37"$
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 = **22'36"**
Summer freeboard = **7'67"**
Moulded draught (d) = **14'69"**
Keel allowance =
Extreme draught =
Deduction for Tropical freeboard and addition for =
Winter freeboard = $\frac{d}{4}$ inches = **3'67" = 3'4"**
Addition for Winter North Atlantic Freeboard (if required) = **2 + 3 3/4 = 5 3/4"**

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta = 1974$
Tons per inch immersion at summer load water line
 $T = 12$
Deduction = $\frac{\Delta}{40 T}$ inches = **4'11"**
= **4"**

TABULAR FREEBOARD

Corrected for Flush Deck (if required)

Correction for coefficient $\frac{23.08 + 3.00}{1.36} = 1.462$

	+	-
Depth Correction	13.99	
Deduction for superstructures		
Sheer correction	1.37	
Round of Beam correction	.36	
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc. to open shelter deck draught of 14'69 ft. (Summer Moulded)	48.96	
	64.68	
Summer Freeboard =	92.00	

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

4 NOV 1958

Tropical Fresh Water Line above Centre of Disc	4'11"
Fresh Water Line	4'11"
Tropical Line	NIL
Winter Line below	3'4"
Winter North Atlantic Line	5'3/4"

Tropical Fresh Water Freeboard	7'10"
Fresh Water	7'10"
Tropical	7'10"
Winter	7'10"
Winter North Atlantic	8'10"

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.

Block Coefft.

$$C_B \text{ at } 14.83' = .747$$

$$\text{Change in } C_B = \left[.85 - .85 \times \frac{14.83}{22.33} \right] \times .122 = .036$$

$$C_B \text{ at } 22.33' = .782$$

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.)



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Foundation