

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name "EMPIRE ADVENTURE" EX 'ANDREA'	Official Number 145165	Nationality and Port of Registry BRITISH London	Gross Tonnage 5152 5145.49	Date of Build 1921-2	Port of Survey North Shields
Moulded Dimensions: Length 374 377 33' Breadth 51'00' Depth 34'12'					Date of Survey 20 June 1st to 2nd July 1940
Moulded displacement at moulded draught = 85 per cent. of moulded depth not available tons					Surveyor's Signature J.H. Gibbs
Coefficient of fineness for use with Tables .78 assumed					Particulars of Classification I (+100A1) + Reclassification conformable

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 34'12"	(a) Where D is greater than Table depth (D - Table depth) R = (34.16 - 24.95) × 2.879 = +26.51	Moulded Breadth (B) 51'0"
Stringer plate04	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 12.24$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = 12.5"
Depth for Freeboard (D) = 34.16		Difference .26
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.26}{4} \times .115 = -.01$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward	33.14	33.14	7'12"	7.243	32.58
Fore enclosed SEE SKETCH	21.25				
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward					
Total ...	33.14	33.14			32.58

Standard Height of Superstructure **7.243**

" " R.Q.D. **40.29**

Deduction for complete superstructure **40.29**

Percentage covered $\frac{S}{L} = 8.85$

" " $\frac{S_1}{L} = 8.85$

" " $\frac{E}{L} = 8.70$

Percentage from Table, Line A. **4.35**

(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 = **40.29 × 0.0435 = -1.76**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	47.43	1		47.43	44.0	44.0	1		44.0
$\frac{1}{2}$ L from A.P. ...	21.11	4		84.44	18.5	18.5	4		74.0
$\frac{2}{3}$ L " ...	5.22	2		10.44	4.3	4.3	2		8.6
Amidships ...	-	4		-	-	-	4		-
$\frac{2}{3}$ L from F.P. ...	10.44	2		20.88	10.5	10.5	2		21.0
$\frac{1}{2}$ L " ...	42.22	4		168.88	43.2	43.2	4		172.8
F.P. ...	94.87	1		94.87	96.0	96.0	1		96.0
Total ...				426.94					416.4

Mean actual sheer aft = **Deficient**

Mean standard sheer aft

Mean actual sheer forward = **excess**

Mean standard sheer forward

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

" aft of " = **Nil**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{10.54}{18} (.75 - .0442) = +.41$

If limited on account of midship superstructure.

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

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient
Depth to Freeboard Deck = 34.16	$\Delta = \text{not available}$	$\frac{63.70 + 1.73}{1.36} = \frac{65.43}{1.36} = 48.11$
Summer freeboard = 9.33	Tons per inch immersion at summer load water line	Depth Correction ... 26.51
Moulded draught (d) = 24.83	$T = \frac{25.0 \times 38.7}{38.5} = 25.8$	Deduction for superstructures ... -1.76
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.21 = 6 1/4	Deduction = $\frac{\Delta}{40 T}$ inches	Sheer correction41
Addition for Winter North Atlantic Freeboard (if required) =	6 1/2	Round of Beam correction01
		Correction for Thickness of Deck amidships ...
		Other corrections, scantlings, etc. ... 27.67
		Summer Freeboard = 94.33

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

Tropical Fresh Water Line above Centre of Disc ... 12 3/4	Tropical Fresh Water Freeboard ... 9' - 4"
Fresh Water Line " " ... 6 1/2	Fresh Water " " ... 8' - 2 1/4
Tropical Line " " ... 6 1/4	Tropical " " ... 8' - 9 1/2
Winter Line below " " ... 6 1/4	Winter " " ... 8' - 9 3/4
Winter North Atlantic Line " " ...	Winter North Atlantic " " ... 9' - 10 1/4

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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 of Survey <i>London</i>	Date of Build <i>1938</i>	Gross Tonnage <i>36.25</i>	Nationality and Port of Registry <i>British</i>	Ship's Name <i>Enterprise</i> Class <i>Merchant</i>
Moulded Depth <i>27.33</i>				
Depth of hold <i>4.25</i>				

File.

$$\begin{array}{r}
 36.25 \checkmark \\
 - 4.25 \checkmark \\
 \hline
 32.00 \checkmark \\
 \\
 2 \times 4.25 \times 5.5 = \frac{1.14}{33.14} \checkmark \\
 \hline
 40.83 \checkmark
 \end{array}$$

Trade of ship _____

Names of sister ships _____

Builder's name and yard number *Northumberland S.B. Co. Ltd.*

Owners *Ministry of Shipping (to be managed by W. Runciman & Co. Ltd.)*

Fee *£16.0.0.*

APPLIED FOR: *3 JUL 1940*