

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER, TUG.)

ENVOY.
37229.

17 NOV 1944

| | | | | | |
|---|----------------------|---|--|-------------------------------|---|
| Ship's Name "ENFORCER" | Official Number ✓ | Nationality and Port of Registry BRITISH ✓ | Gross Tonnage 762. | Date of Build 1944. | Port of Survey Hull. |
| Moulded Dimensions: Length 160'0" Breadth 34'6" Depth 16'6" | | | | | Date of Survey During construction |
| Moulded displacement at moulded draught = 85 per cent. of moulded depth 1240 tons Coefficient of fineness for use with Tables .68 (.56 actual) T = 10.2 | | | | | Surveyor's Signature J. Macleod |
| Depth for Freeboard (D). Moulded depth ... 16'5" Stringer plate3603 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = \text{NONE}$ Depth for Freeboard (D) = 16.53 | | | | | Particulars of Classification *100 A-1. FOR TOWING SERVICES. (CONTEMPLATED) |
| Depth correction. (a) Where D is greater than Table depth (D - Table depth) R = $(16.53 - 10.67) \times 1.23 = +7.21$ 5.86 (b) Where D is less than Table depth (if allowed) (Table depth - D) R = ✓ If restricted by superstructures ✓ | | | Round of Beam correction. Moulded Breadth (B) 34'5" Standard Round of Beam = $\frac{B \times 12}{50} =$ 8.28 Ship's Round of Beam = 10' Difference 1.72" Restricted to ✓ Correction = $\frac{\text{Diff}^{\circ}}{4} \times (1 - \frac{S_1}{L}) = \frac{1.72}{4} (1 - \frac{42.71}{57.29}) = -.25$ | | |

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) | |
|-------------------------|-------------------------|--|-------------|-------------------|----------------------|---|
| Poop enclosed ... | | | | | | Standard Height of Superstructure 6.0 |
| .. overhang ... | | | | | | " " R.Q.D. ✓ |
| R.Q.D. enclosed ... | | | | | | Deduction for complete superstructure 22.00 |
| .. overhang ... | | | | | | Percentage covered $\frac{S}{L} = \frac{42.71}{100}$ |
| Bridge enclosed ... | | | | | | " " $\frac{S_1}{L} = \frac{42.71}{100}$ |
| .. overhang aft ... | | | | | | " " $\frac{E}{L} = \frac{42.71}{100}$ |
| .. overhang forward ... | | | | | | Percentage from Table, Line A. 25.80 |
| Fore enclosed ... | 68'4" | 68.33 | 7'3" | ✓ | 68.33 | (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 = 22.00 × 25.80 = -5.68 |
| .. forward ... | | | | | | |
| Total ... | 68.33 | 68.33 | | | 68.33 | |

SHEERS FROM LINE PARALLEL TO SERVICE W.L.

SHEER CORRECTION.

| Station | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product |
|---------------------|-------------------|---|---|---------------|-----------------|--------------------|---|---|---------------|
| A.P. ... | 26.00 | 1 | | 26.00 | 42.00 | 42.00 | 1 | | 42.00 |
| 1/4 L from A.P. ... | 11.57 | 4 | | 46.28 | 20.00 | 20.00 | 4 | | 80.00 |
| 3/4 L .. | 2.86 | 2 | | 5.72 | 5.00 | 5.00 | 2 | | 10.00 |
| Amidships ... | - | 4 | | - | - | - | 4 | | - |
| 3/4 L from F.P. ... | 5.72 | 2 | | 11.44 | 9.00 | 9.00 | 2 | | 18.00 |
| 1/4 L .. | 23.14 | 4 | | 92.56 | 34.00 | 34.00 | 4 | | 136.00 |
| F.P. ... | 52.00 | 1 | | 52.00 | 71.00 | 71.00 | 1 | | 71.00 |
| Total ... | | | | 234.00 | | | | | 357.00 |

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{123}{18} \left(\frac{75-235}{5365} \right) = -3.67$
 If limited on account of midship superstructure. $\frac{4.33}{32} \times 3.67 = -.50$

If limited to maximum allowance of 1 1/2 ins. per 100 ft. ✓

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

Depth to Freeboard Deck = **16.53**
Summer freeboard = **1.48**
Moulded draught (d) = **15.05**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **3.76 = 3 3/4"**Addition for Winter North Atlantic Freeboard (if required) = **3 3/4" + 2" = 5 3/4"**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 1381$

Tons per inch immersion at summer load water line

 $T = 10.52$ Deduction = $\frac{\Delta}{40T}$ inches= $\frac{1381}{40 \times 10.52} = 3.28 = 3 1/4"$ MLD DRAFT. **14'2"** Ex. DSP. **1293** T.P.I. **10.3****13'2"** **1170** **10.0****12'4"** **1052** **9.7**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient **NIL.**

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

| | + | - |
|--|-------------|-------------|
| Depth Correction | 7.21 | - |
| Deduction for superstructures | - | 5.68 |
| Sheer correction | - | .50 |
| Round of Beam correction | - | .25 |
| Correction for Thickness of Deck amidships | - | - |
| Other corrections, scantlings, etc. | - | - |
| | 7.21 | 6.43 |

Summer Freeboard = **17.68**SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck:

Tropical Fresh Water Line above Centre of Disc ...

Fresh Water Line " " ...

Tropical Line " " ...

Winter Line below " " ...

Winter North Atlantic Line " " ...

Tropical Fresh Water Freeboard ...

Fresh Water " " ...

Tropical " " ...

Winter " " ...

Winter North Atlantic " " ...

1' 5 3/4"

0' 10 3/4"

1' 2 1/2"

1' 2"

1' 9 1/2"

1' 11 1/2"

828.
20.11.44

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.

Trade of ship FOR TOWING SERVICES.

Names of sister ships "ENIGMA" - "ENTICER"

Builder's name and yard number COCHRANE & SONS LTD. YARD NO 1288.

Owners THE ADMIRALTY.

Fee £ TO BE CHARGED WITH FIRST ENTRY.



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Foundation