

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Erith
31278
(similar)

Ship's Name STAR OF THE REALM (EX. WILLIAM WESTENBURGH)	Official Number 143929	Nationality and Port of Registry BRITISH FALMOUTH	Gross Tonnage 325	Date of Build 1917	Port of Survey YARMOUTH.
Moulded Dimensions: Length 138.33' Breadth 23.625' Depth 13.5'					Date of Survey 25/10/46
Moulded displacement at moulded draught = 85 per cent. of moulded depth tons					Surveyor's Signature <i>CR Macpherson</i>
Coefficient of fineness for use with Tables .68					Particulars of Classification

Depth for Freeboard (D). Moulded depth ... 13.5' Stringer plate31"03 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 13.53	Depth correction. (a) Where D is greater than Table depth (D - Table depth) R = $(13.53 - 9.20) 1.062 = + 4.60$ (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) 23'-7 1/2" Standard Round of Beam = $\frac{B \times 12}{50} =$ 5.67" Ship's Round of Beam = 8" Difference + 2.33" Restricted to Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{2.33^2}{4} \times .4371 =$.26"
---	---	---

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	✓				
" overhang ...	77.67		<i>virtual</i>		
R.Q.D. enclosed ...	78.0"	77.67	1.0"	1.195	28.53
" overhang ...	✓				
Bridge enclosed ...	✓				
" overhang aft ...	✓				
" overhang forward ...	✓				
F'cle enclosed ...	✓				
" overhang ...	✓				
Trunk aft ...	✓				
" forward ...	✓				
Tonnage opening aft ...	✓				
" forward ...	✓				
Total ...	77.67	77.67			28.53

Standard Height of Superstructure **6.0'**
 " " R.Q.D. **3.253'**
 Deduction for complete superstructure **19.8"**
 Percentage covered $\frac{S}{L} =$ **56.29**
 " " $\frac{S_1}{L} =$
 " " $\frac{E}{L} =$ **20.67**
 Percentage from Table, Line A. **10.33**
 (corrected for absence of forecastle (if required)) **5.33**
 Percentage from Table, Line B. ✓
 (corrected for absence of forecastle (if required))
 Interpolation for bridge less than 2L (if required) ✓
 Deduction = **19.8 × .0533 = - 1.06"**

SHEER CORRECTION. **NOTE SHEER TAKEN AS PER SISTER SHIP. "ERITH."**

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	23.80	1	23.80	48.86"	48.86	1	48.86
1/8 L from A.P. ...	10.59	4	42.36	16.30"	16.30	4	65.20
2/8 L " ...	2.62	2	5.24	3.82"	3.82	2	7.64
Amidships ...	-	4	-	0	-	4	-
3/8 L from F.P. ...	5.235	2	10.47	6.22"	6.22	2	12.44
1/8 L " ...	21.18	4	84.72	20.90	20.90	4	83.60
F.P. ...	47.60	1	47.60	55.67	55.67	1	55.67
Total ...			214.19				273.41

Mean actual sheer aft =
 Mean standard sheer aft = } **Excess**
 Mean actual sheer forward =
 Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = } **superstructure less than standard height**
 " " aft of " =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{59.22}{18} \times (.75 - .2814) = - 1.54"$
 If limited on account of midship superstructure. **yes - NIL** **4686** 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.
RAISED QUARTER Ft.
 Depth to ~~Freeboard~~ Deck = **14.78**
 Summer freeboard = **2.69**
 Moulded draught (d) = **12.09**
 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = **3.02" = 3"**
 Addition for Winter North Atlantic Freeboard (if required) = **5"**

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 = $\frac{\Delta}{40T}$ inches = **3"**

TABULAR FREEBOARD corrected for Flush Deck (if required) **13.96**
 Correction for coefficient **NIL** **13.96**

	+	-
Depth Correction ...	4.60	-
Deduction for superstructures ...	-	1.06
Sheer correction ...	-	.26
Round of Beam correction ...	15.00	-
Correction for Thickness of Deck amidships ...	-	-
Other corrections, scantlings, etc. ...	-	-
Summer Freeboard	19.60	1.32

18.28
Summer Freeboard = 32.24

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line

Tropical Fresh Water Line above Centre of Disc ...	6"
Fresh Water Line " " ...	3 1/4"
Tropical Line " " ...	3 1/4"
Winter Line below " " ...	3 1/4"
Winter North Atlantic Line " " ...	5"

Tropical Fresh Water Freeboard ...	2'-8 1/4"
Fresh Water " " ...	2'-2 1/4"
Tropical " " ...	2'-5 1/4"
Winter " " ...	2'-5 1/4"
Winter North Atlantic " " ...	3'-1 1/4"

Star of the Realm.

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.

Raised quarter deck height 1.000' ✓

Sheathing $\sqrt{\frac{3}{12} \times \frac{60.67}{77.67}}$.195 ✓

Virtual height 1.195' ✓

Trade of ship

Deep Sea Salvage

Names of sister ships

ERITH.

Builder's name and yard number

COCHRANE AND SONS LTD. 71° 687

Owners

METCALF

Fee £

6-0-0 (4/2 9 DEC 1946)

W. Mapleson



28/10/2020

Lloyd's Register
Foundation