

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name **COPINSAY**
R. A. S. C.

Official Number **152**
Registered

Nationality and Port of Registry
BRITISH.

Gross Tonnage **445**

Date of Build **1941**

Port of Survey **TORQUAY AT DEVONPORT.**

Date of Survey **SEPTEMBER 1947**

Surveyor's Signature *Alec M. Jenkins*

Particulars of Classification **100 A.I.**

Moulded Dimensions: Length **152.00** Breadth **27.42** Depth **15.0**
98 x length on W.L. *27.50*

Moulded displacement at moulded draught = 85 per cent. of moulded depth **935 TONS** tons

Coefficient of fineness for use with Tables **.68 (.616 actual)**

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth	15.00	(a) Where D is greater than Table depth (D-Table depth) R =		Moulded Breadth (B)	27.5
Stringer plate	.026	(15.11 - 10.13) 1.167 = + 5.82"		Standard Round of Beam = $\frac{B \times 12}{50}$	6.5860
2 1/2" Sheathing on exposed deck	.081	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Ship's Round of Beam	7"
$T \left(\frac{L-S}{L} \right) = \frac{2.5 \times 59}{12 \times 152}$				Difference	+ .420
Depth for Freeboard (D) =	15.11	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	$\frac{.420}{4} \times .8339 = .08339$

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					
Fore enclosed	25.25	25.25	6'-6"	✓	25.25
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	25.25	25.25			25.25

Standard Height of Superstructure **6'-0" 8-5**

" " R.Q.D. **21.2"**

Deduction for complete superstructure **21.2"**

Percentage covered $\frac{S}{L} =$ **16.61**

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

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

Percentage from Table, Line A. **8.305**

(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 = **21.2 x .08305 = -1.74"**

SHEER CORRECTION. VESSEL OF NORMAL DESIGN MEAN DRAFT LOADED 11'-2 3/4" TRIM BY STERN 3'-1 1/2"							
Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	25.20	1	25.20	67"	43.25	1	25.20
1/4 L from A.P.	11.215	4	44.86	39"	23.17	4	44.86
1/2 L	2.77	2	5.54	15"	7.08	2	5.54
Amidships	-	4	-	0"	-	4	-
3/4 L from F.P.	5.54	2	11.08	-6"	1.92	2	3.84
1/4 L	22.43	4	89.72	0"	15.83	4	63.32
F.P.	50.40	1	50.40	17"	40.75	1	40.75
Total			226.80				183.51

Mean actual sheer aft = **Excess**

Mean standard sheer aft =

Mean actual sheer forward = **Deficient**

Mean standard sheer forward =

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

" " aft of " = **sheer**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{43.29}{18} (.75 - .08305) = +1.60"$

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

Deduction for Tropical Freeboard.		Deduction for Fresh Water.		TABULAR FREEBOARD corrected for Flush Deck (if required)	
Addition for Winter and Winter North Atlantic Freeboard.		Displacement in salt water at summer load water line		Correction for coefficient	
Depth to Freeboard Deck = 15.03		$\Delta =$ 774 TONS.		Depth Correction	5.82
Summer freeboard = 2.23		Tons per inch immersion at summer load water line		Deduction for superstructures	1.74
Moulded draught (d) = 12.80		T = 8.27 TONS.		Sheer correction	1.60
Deduction for Tropical freeboard and addition for		Deduction = $\frac{\Delta}{40 T}$ inches		Round of Beam correction	.96
Winter freeboard = $\frac{d}{4}$ inches = 3.20 = 3 1/4		= 3 1/4"		Correction for Thickness of Deck amidships	6.34
Addition for Winter North Atlantic Freeboard (if required) = 5 1/4				Other corrections, scantlings, etc. 6" below sill of lowest scuttle.	2.79
				Summer Freeboard = 26.756	

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

Tropical Fresh Water Line above Centre of Disc	3 1/4"
Fresh Water Line	3 1/4"
Tropical Line	2 1/4"
Winter Line below	2 1/4"
Winter North Atlantic Line	2 1/4"

Tropical Fresh Water Freeboard	2'-2 3/4"
Fresh Water	1'-11 1/2"
Tropical	1'-11 1/2"
Winter	2'-2 3/4"
Winter North Atlantic	2'-2 3/4"

Copinsay.

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.

Alex. M. Jenkins.
September 1947.

		Correction for trim			
Sheer 1-					
AP	67	+	23.75	=	43.25
$\frac{1}{6}$	39	-	15.83	=	23.17
$\frac{2}{6}$	15	-	7.92	=	7.08
⊙	0				
$\frac{2}{6}$	- 6	+	7.92	=	1.92
$\frac{1}{6}$	0	+	15.83	=	15.83
FP	17	+	23.75	=	40.75

Trade of ship ✓

Names of sister ships ✓

Builder's name and yard number *COCHRANE & SONS LTD SELBY.*

Owners *THE WAR OFFICE ROYAL ARMY SERVICE CORPS.*

Fee £

MLD



© 2020

Lloyd's Register
Foundation