

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER)

Index No. 37832
(For London Office only).

15 DEC 1944

(C.S.S. with Tonnage Opening)
at present closed w.p.

Ship's Name RIVER LODDON.	Official Number	Nationality and Port of Registry <i>British</i>	Gross Tonnage	Date of Build	Port of Survey MELBOURNE
Moulded Dimensions: Length 425.75 Breadth 56.5 Depth 27.5					Date of Survey <i>While building</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth 11720 tons					Surveyor's Signature B. P. Fielden
Coefficient of fineness for use with Tables .729					Particulars of Classification 7 100 A.1. <i>with freeboard</i>

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth 27.5	(a) Where D is greater than Table depth (D—Table depth) R =	Moulded Breadth (B) 56.5
Stringer plate .43		Standard Round of Beam = $\frac{B \times 12}{50} = 13.56$
Sheathing on exposed deck	(b) Where D is less than Table depth (if allowed) (Table depth—D) R =	Ship's Round of Beam = 3.00
$T \left(\frac{L-S}{L} \right) =$		Difference 10.56
Depth for Freeboard (D) = 27.54	(28.38 - 27.54) 3 = -2.52 If restricted by superstructures	Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{10.56}{4} \times \frac{.0055}{.4} = +.01$

DEDUCTION FOR SUPERSTRUCTURES

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	32.42	32.42			32.42
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
F'cle enclosed	388.67	388.67	9.0	✓	388.67
" overhang					
Trunk aft					
" forward					
Tonnage opening aft	4.66	2.33			2.33
" " forward					
Total	425.75	423.42			423.42

Standard Height of Superstructure **7.5**

" " R.Q.D.

Deduction for complete superstructure **42**

Percentage covered $\frac{S}{L} = 100.0$

" " $\frac{S_1}{L} = 99.45$

" " $\frac{E}{L} = 99.45$

Percentage from Table, Line A. **99.32**
(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 = **42 x 99.32 = -41.71**

SHEER CORRECTION

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	52.575	1		52.575	51.76	69.75	1		69.75
$\frac{1}{2}$ L from A.P.	23.39	4		93.56	23.875	31.15	4		124.60
$\frac{2}{3}$ L "	5.78	2		11.56	7.25	7.67	2		15.34
Amidships	0	4		0	0	0	4		0
$\frac{2}{3}$ L from F.P.	11.58	2		23.14	12.125	13.49	2		26.98
$\frac{1}{2}$ L "	46.78	4		187.12	46.625	54.56	4		218.24
F.P.	105.15	1		105.15	104.625	122.62	1		122.62
Total				473.88		418			577.53

Actual height of superstructures = 9.00 ft.

Standard " = 7.5

1.5 = 18"

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{104.35}{18} \times .25 = -1.45$

If limited on account of midship superstructure.

If limited to maximum allowance of 1½ ins. per 100 ft.

Deduction for Tropical Freeboard Addition for Winter and Winter North Atlantic Freeboard Depth to Freeboard Deck = 27.54 Summer freeboard = 3.07 Moulded draught (d) = 24.47 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.12 Addition for Winter North Atlantic Freeboard (if required) =	Deduction for Fresh Water Displacement in salt water at Summer load water line 24.63 $\Delta = 124.85$ Tons per inch immersion at Summer load water line $T = 48.14$ Deduction = $\frac{\Delta}{40T}$ inches = 6.49 = 6½"	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{1.409}{1.36} = 1.037$ Depth Correction Deduction for superstructures Sheer correction Round of Beam correction Correction for Thickness of Deck amidships Other corrections, scantlings, etc. Summer Freeboard = 36.85	79.58 82.52 82.52 6.6.46
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc	12½"
Fresh Water Line	6½"
Tropical Line	6"
Winter Line below	6"
Winter North Atlantic Line	✓

Tropical Fresh Water Freeboard	2' - 0¼"
Fresh Water	2' - 6¼"
Tropical	2' - 6¾"
Winter	3' - 6¾"
Winter North Atlantic	✓

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 International and/or Australian Coastal.

Names of sister ships RIVER CLARENCE, RIVER BURDEKIN, RIVER GLENELLG, RIVER DERWENT.

Builder's name and yard number Commonwealth Naval Dockyard, Williamstown, YARD N° 29.

Owners Commonwealth of Australia (Department of Supply & Shipping).

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Foundation