

# LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <b>LADY RODNEY.</b>	Official Number	Nationality and Port of Registry <b>ALEXANDRIA EGYPT.</b>	Gross Tonnage	Date of Build <b>1929</b>	Port of Survey <b>HALIFAX N.S.</b>
Moulded Dimensions: Length <b>415.0</b> Breadth <b>60.0</b> Depth <b>32.75</b>					Date of Survey <b>3.3.53.</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) <b>13840.</b> tons					Surveyor's Signature <b>Mr. LAURIE.</b>
Coefficient of fineness for use with Tables <b>.699</b>					Particulars of Classification <b>+100 A1 unit FREEBOARD.</b>

**DEPTH FOR FREEBOARD (D).**

Moulded depth ... **32.75**

Stringer plate ... **.34** ... **.03**

Sheathing on exposed deck

$$T \left( \frac{L-S}{L} \right) = 2.75 \left( \frac{415-312}{415} \right) = .68 = .06$$

Depth for Freeboard (D) = **32.84**

**DEPTH CORRECTION.**

(a) Where D is greater than Table depth (D-Table depth) R = **(32.84-27.67) 3 = +15.51**

(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) **60.00**

Standard Round of Beam =  $\frac{B \times 12}{50} =$  **14.40**

Ship's Round of Beam = **12.00**

Difference **2.40**

Restricted to

Correction =  $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{2.4}{4} \left( 1 - \frac{44.27}{415} \right) = +.27$

**DEDUCTION FOR SUPERSTRUCTURES.**

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed	40.29	20.15	7'9"		20.15
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed	233.	174.75	8'6"		174.75
" overhang aft					
" overhang forward					
Fore enclosed	38.71	36.39	7'9"		36.39
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	312.00	231.29			231.29

Standard Height of Superstructure **7'6"**

" " R.Q.D. **42"**

Deduction for complete superstructure **42"**

Percentage covered  $\frac{S}{L} =$  **75.18**

" "  $\frac{S_1}{L} =$  **55.73**

" "  $\frac{E}{L} =$  **55.73**

Percentage from Table, Line A. (corrected for absence of forecastle (if required))

Percentage from Table, Line B. (corrected for absence of forecastle (if required)) **41.73**

Interpolation for bridge less than .2L (if required)

Deduction = **42 + .4173 = -17.53**

**SHEER CORRECTION.**

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	51.5	1	51.5	54	51.5	1	51.5
$\frac{1}{2}$ L from A.P.	22.92	4	91.68	23	22.92	4	91.68
$\frac{2}{3}$ L	5.67	2	11.34	7	5.67	2	11.34
Amidships	-	4	-	0	0	4	0
$\frac{2}{3}$ L from F.P.	11.33	2	22.66	11	11	2	22.00
$\frac{1}{2}$ L	45.84	4	183.36	43	43	4	172.0
F.P.	103.00	1	103.00	96	96	1	96.0
Total			463.54				444.52

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{19.02}{18} \left( .75 - \frac{3169}{415} \right) = +.395$

If limited on account of midship superstructure.

Mean actual sheer aft = **1.05**

Mean standard sheer aft =

Mean actual sheer forward = **.94**

Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =

" " aft of " =

DEFICIENT SHEER.

**Deduction for Tropical Freeboard.**

**Addition for Winter and Winter North Atlantic Freeboard.**

+1° Compensation

Depth to Freeboard Deck = **32.86**

Summer freeboard = **9.98**

Moulded draught (d) = **22.88**

Keel allowance =

Extreme draught =

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches =

Addition for Winter North Atlantic Freeboard (if required) =

**Deduction for Fresh Water.**

Displacement in salt water at summer load water line

$\Delta = 10,932$

Tons per inch immersion at summer load water line

T = **47.52**

Deduction =  $\frac{\Delta}{40 T}$  inches

= **6.75"**

6" is previously assigned to Summer moulded draught of 22'-10 1/2".

**TABULAR FREEBOARD** corrected for Flush Deck (if required)

Correction for coefficient  $\frac{.699 + .68}{1.36} = \frac{1.379}{1.36}$

Depth Correction ... **15.51**

Deduction for superstructures ... **17.53**

Sheer correction ... **.40**

Round of Beam correction ... **.27**

Correction for Thickness of Deck amidships ... **.32**

Other corrections, scantlings, etc. computed ... **43.52**

**60.02 - 17.53 = +42.49**

Summer Freeboard = **119.75**

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

Tropical Fresh Water Line above Centre of Disc	6"
Fresh Water Line	6"
Tropical Line	Nil
Winter Line	Nil
Winter North Atlantic Line	Nil

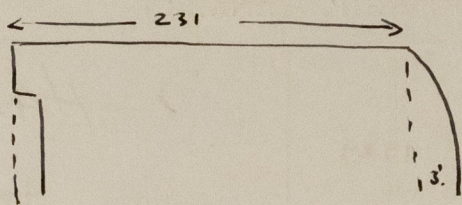
Tropical Fresh Water Freeboard	9' 5 3/4"
Fresh Water	9' 5 3/4"
Tropical	9' 11 3/4"
Winter	9' 11 3/4"
Winter North Atlantic	9' 11 3/4"

9' 11 3/4" ALL SEASONS.



# Lady Rodney.

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.



$$\text{Equivalent Length} = 231 + \frac{2}{3} \times 13 = 233.$$

and bay included as bridge span of 5.

## Shear Aft.

Standard			Actual	
51.5	1	51.5	54	54
22.92	3	68.76	23	69
5.67	3	17.01	7	21
0	1	0	0	0
		137.27		144

$$\frac{\text{Act}}{\text{Stand.}} = \frac{144}{137.27} = 1.05.$$

## Shear Forward.

Standard			Actual	
0	1	0	0	0
11.33	3	33.99	11	33.0
45.84	3	137.52	43	129.0
103.00	1	103.00	96	96.0
		274.51		258.0

$$\frac{\text{Act}}{\text{Stand.}} = \frac{258}{274.51} = .940.$$

Trade of ship

International.

Names of sister ships

Lady Somers.

Builder's name and yard number

Cammell Laird and Co. 944

Owners

Fee £



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