

Rpt. C.11 (Comp.).
DARINA. 36040.
CEDARDALE 35987.

GLASGOW REPORT No 6724 97
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Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
"DONACILLA"	167349	BRITISH. LONDON.	8113	1939.	Glasgow.
Moulded Dimensions: Length { 461.0 ✓ To C of Stock. Breadth 59.08 ✓ Depth 34.0 ✓					Date of Survey while building
Moulded displacement at moulded draught = 85 per cent. of moulded depth 17732 ✓ tons					Surveyor's Signature R. Dunsmuir
Coefficient of fineness for use with Tables .488					Particulars of Classification + 100 A1 Carrying petroleum in bulk (contemplated).

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 34.00	(a) Where D is greater than Table depth (D - Table depth) R = (34.00 - 30.43) 3 = + 10.02"	Moulded Breadth (B) = 59.08'
Stringer plate 0.80"07	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 14.18"$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = Nil.$	If restricted by superstructures ✓	Ship's Round of Beam = 14.34"
Depth for Freeboard (D) = 34.07		Difference excess = .54"
		Restricted to
		Correction = $\frac{Diff}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.54}{4} \times .5826 = -.08"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ... SIDE ...	96.06	96.06	7'-6"	✓	96.06
" overhang ... CENTRE	93.65				
R.Q.D. enclosed	46.37				
" overhang	44.62	46.37	7'-6"	✓	46.37
Bridge enclosed ... SIDE ...	47.25				
" overhang aft	2.62	1.96	"	✓	1.96
" overhang forward					
F'cle enclosed ...	48.04	48.04	7'-6"	✓	48.04
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total ...	193.09	192.43			192.43

Standard Height of Superstructure	7.50'
" " R.Q.D.	✓
Deduction for complete superstructure	42.00'
Percentage covered $\frac{S}{L} =$	41.88
" " $\frac{S_1}{L} =$	41.44
" " $\frac{E}{L} =$	41.44
Percentage from Table, Line A. Tanker =	32.44
(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 =	42.00 x .3244 = 13.75'

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	56.10	1		56.10	56.5	56.50	1		56.50
1/4 L from A.P. ...	24.96	4		99.84	25.25	25.25	4		101.00
1/2 L " ...	6.17	2		12.34	5.25	5.25	2		10.50
Amidships ...	-	4		-	0	-	4		-
3/4 L from F.P. ...	12.34	2		24.68	11.87	11.87	2		23.74
1/4 L " ...	49.92	4		199.68	49.25	49.25	4		197.00
F.P. ...	112.20	1		112.20	113.25	113.25	1		113.25
Total ...				504.84					501.99

Mean actual sheer aft	= Deficient.
Mean standard sheer aft	
Mean actual sheer forward	= Deficient.
Mean standard sheer forward	
Length of enclosed superstructure forward of amidships =	
" " aft of " =	Deficient sheer.

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{2.85}{18} (.45 - .2094) = + .09"$
If limited on account of midship superstructure ✓

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 $\frac{.488 + .68}{1.36} = \frac{1.168}{1.36}$
Depth to Freeboard Deck = 34.07	Δ = 16.488	Depth Correction ... 10.02
Summer freeboard = 6.41	Tons per inch immersion at summer load water line	Deduction for superstructures ... 13.75
Moulded draught (d) = 27.36	T = 56.25	Sheer correction09
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.84 = 6 3/4"	Deduction = $\frac{\Delta}{40 T}$ inches = 4.46" = 4 1/2"	Round of Beam correction08
Addition for Winter North Atlantic Freeboard (if required) = 6.84 + 4.61 = 11.45 = 11 1/2"	Full Dr ⁷ Disp (S.N.) T.P.1	Correction for Thickness of Deck amidships ...
	27'-6" 16788 56.25	Other corrections, scantlings, etc. ...
		10.11 13.83 - 3.72"
		Summer Freeboard = 80.42"

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

Tropical Fresh Water Line above Centre of Disc ...	14 1/4"	Tropical Fresh Water Freeboard ...	5'-6 1/4"
Fresh Water Line " " ...	4 1/2"	Fresh Water " " ...	6'-1"
Tropical Line " " ...	6 3/4"	Tropical " " ...	6'-1 3/4"
Winter Line below " " ...	6 3/4"	Winter " " ...	4'-3 3/4"
Winter North Atlantic Line " " ...	11 1/2"	Winter North Atlantic " " ...	4'-8"

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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.

POOP EQUIVALENT BULKHEAD.

$$\begin{aligned} \text{Length at centre} &= 97.24' \\ \text{" " side} &= 93.65' \\ &\underline{3.62' \times \frac{2}{3} = 2.41} \\ &+ 93.65 \\ &\underline{\underline{96.06}} \end{aligned}$$

BRIDGE FRONT EQUIVALENT BULKHEAD.

$$\begin{aligned} \text{Length at centre} &= 47.25' \\ \text{" " side} &= 44.62' \\ &\underline{2.63 \times \frac{2}{3} = 1.75} \\ &+ 44.62 \\ &\underline{\underline{46.37}} \end{aligned}$$

Trade of ship International Trade

Names of sister ships "CEDARDALE" & "DARINA"

Builder's name and yard number Blythwood Shipbuilding Company Ltd Nº 57

Owners Anglo-Saxon Petroleum Co. Ltd

Est Fee £ 19 0 0

Freeboard request attached.



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Foundation