

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

N^o 32710

Section 36154 Question 35-116

Ship's Name "HERMISTON"	Official Number 165773	Nationality and Port of Registry British Newcastle	Gross Tonnage 4813	Date of Build 1939	Port of Survey Sunderland
Moulded Dimensions: Length 440.00 Breadth 53.67 Depth 26.58					Date of Survey Whilst building
Moulded displacement at moulded draught = 85 per cent. of moulded depth $10450 \times 35 = 10450$ tons					Surveyor's Signature B. Amillan
Coefficient of fineness for use with Tables $140 \times 53.67 \times 26.58 \times .85 = .736$					Particulars of Classification +100A1 with freeboard contemplated

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 26.58	(a) Where D is greater than Table depth (D - Table depth) R = .04	Moulded Breadth (B) 53.67
Stringer plate04	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = (27.33 - 26.62)3 = -2.13	Standard Round of Beam = $\frac{B \times 12}{50} = 12.88$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures ✓	Ship's Round of Beam = 13.50
Depth for Freeboard (D) = 26.62		Difference excess .62
		Restricted to ✓
		Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.62^2}{4} \times \left(1 - \frac{407.5}{440} \right) = .009$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	34.25	34.25	8.00	-	34.25
„ overhang ...	-	-	-	-	-
R.Q.D. enclosed ...	-	-	-	-	-
„ overhang ...	-	-	-	-	-
Bridge enclosed ...	370.75	370.75	8.00	-	370.75
„ overhang aft ...	-	-	-	-	-
„ overhang forward ...	-	-	-	-	-
F'cle enclosed ...	-	-	-	-	-
„ overhang ...	-	-	-	-	-
Trunk aft ...	-	-	-	-	-
„ forward ...	-	-	-	-	-
Tonnage opening aft ...	5.00	2.50	-	-	2.50
„ „ forward ...	-	-	-	-	-
Total ...	440.00	407.50	-	-	407.50

Standard Height of Superstructure **7.50**

„ „ R.Q.D. **✓**

Deduction for complete superstructure **42.00**

Percentage covered $\frac{S}{L} = 100\%$

„ „ $\frac{S_1}{L} = 99.39\%$

„ „ $\frac{E}{L} = 99.39\%$

Percentage from Table, Line A. **99.25**
(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 = $42.00 \times 99.25 = -41.68$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	51.00	1	✓	51.00	74.00	80.00	1	✓	80.00
1/4 L from A.P. ...	22.695	4	✓	90.78	32.50	35.60	4	✓	142.40
1/2 L „ ...	5.61	2	✓	11.22	8.00	8.80	2	✓	17.60
Amidships ...	-	4	✓	-	-	-	4	✓	-
3/4 L from F.P. ...	11.22	2	✓	22.44	13.75	13.20	2	✓	27.42
3/4 L „ ...	45.39	4	✓	181.56	53.50	56.07	4	✓	224.28
F.P. ...	102.00	1	✓	102.00	120.00	126.00	1	✓	126.00
Total ...				459.00	+6				616.68

Actual T.D. Height **8'-0"**

Standard „ **7'-6"**

Diff. **6"**

Mean actual sheer aft = **excess**

Mean standard sheer aft = **excess**

Mean actual sheer forward = **excess**

Mean standard sheer forward = **excess**

Length of enclosed superstructure forward of amidships = **C.S.S**

„ „ aft of „ = **C.S.S**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{159.68}{18} (.75 - .50) = -2.19$

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.

Ft.

Depth to Freeboard Deck = **26.62**

Summer freeboard = **2.64**

Moulded draught (d) = **23.98**

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $\frac{23.98}{4} = 6$

Addition for Winter North Atlantic Freeboard (if required) = **✓**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 11235$

Tons per inch immersion at summer load water line

T = **42.4**

Deduction = $\frac{\Delta}{40T}$ inches = $\frac{11235}{40 \times 42.4} = 6 3/4$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.736 + .68}{1.36} = \frac{1.416}{1.36}$

	+	-
Depth Correction ...	-	2.13
Deduction for superstructures ...	-	41.68
Sheer correction ...	-	2.21
Round of Beam correction ...	-	-
Correction for Thickness of Deck amidships ...	-	-
Other corrections, scantlings, etc. ...	-	-
	46.02	46.00
Summer Freeboard =	31.685	

28/9/39.

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

29 SEP 1939

Tropical Fresh Water Line above Centre of Disc ...	12 3/4	Tropical Fresh Water Freeboard ...	2'-7 3/4
Fresh Water Line „ „ ...	6 3/4	Fresh Water „ „ ...	1'-7
Tropical Line „ „ ...	6	Tropical „ „ ...	2'-1
Winter Line below „ „ ...	6	Winter „ „ ...	2'-1 3/4
Winter North Atlantic Line „ „ ...	-	Winter North Atlantic „ „ ...	3'-1 3/4

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 *Ocean going.*

Names of sister ships *3/5. "Generton" Sld Rpt no 31980.*

Builder's name and yard number *Short Bros. Ltd No 457.*

Owners *R. Chapman & Son*

Fee *15-0-0.*

Can be changed on completion

Hermiston.



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Foundation