

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name "HINDLEA" EX "EMPIRE ISLE"	Official Number 167106	Nationality and Port of Registry BRITISH CARDIFF	Gross Tonnage 402 1250	Date of Build 1941 7 MO.	Port of Survey BREMEN
Moulded Dimensions: Length 161.38' Breadth 26.0' Depth 12.57'					Date of Survey SEPT. 1954
Moulded displacement at moulded draught = 85 per cent. of moulded depth 1000 m³ tons					Surveyor's Signature Cl. J. Barry
Coefficient of fineness for use with Tables .788					Particulars of Classification *100 A1

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... 12.57'	(a) Where D is greater than Table depth (D-Table depth) R = (12.60-10.76) 1.241 = 2.28"	Moulded Breadth (B) 26.0
Stringer plate ... 0.03'	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = 1.84"	Standard Round of Beam = $\frac{B \times 12}{50} =$ 6.24
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ X	If restricted by superstructures	Ship's Round of Beam = 6.50
Depth for Freeboard (D) = 12.60'		Difference EXCESS = 0.26
		Restricted to
		Correction = $\frac{\text{Diff}^\circ}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.26}{4} \times .653 = -.04'$

NOTE:

VESSEL LENGTHENED AND UPPERDECK RAISED
AMIDSHIPS BETWEEN THE
EXISTING FORECASTLE AND
POOP FRONT BULKHEADS
BY 1.57 FT.

DEDUCTION FOR SUPERSTRUCTURES.

EXISTING HEIGHT MINUS STEP = 4.57'

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	42.5	42.5	4.57	✓	42.50
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	13.5	13.5	4.43	3.69/6.00	8.22
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	56.0	56.00			50.78

Standard Height of Superstructure	6.00'
" " R.Q.D.	3.409'
Deduction for complete superstructure	22.14
Percentage covered $\frac{S}{L} =$	34.70
" " $\frac{S_1}{L} =$	
" " $\frac{E}{L} =$	31.47
Percentage from Table, Line A.	16.25
(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 =	22.14 x .1625 = 3.60

SHEER CORRECTION.

SEE SKETCH OVERLEAF

NOTE: EXTENDED SHEER INTO EXISTING DECK
ERECTOR'S FORWARD AND AFT. FROM RAISED UPPER DECK.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	26.14	1		26.14	27"	27.00	1		27.00
$\frac{1}{2}L$ from A.P. ...	11.63	4		46.62	7"	7.00	4		28.00
$\frac{2}{3}L$ " ...	2.875	2		5.75	2"	2.00	2		4.00
Amidships ...	✓	4		✓	0	✓	4		✓
$\frac{2}{3}L$ from F.P. ...	5.75	2		11.50	2"	2.00	2		4.00
$\frac{1}{2}L$ " ...	23.26	4		93.04	19"	19.00	4		76.00
F.P. ...	52.28	1		52.28	60"	60.00	1		60.00
Total ...				235.23					199.00

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{36.23}{18} \times \left(.75 - \frac{1735}{5765} \right) = +1.16"$
If limited on account of midship superstructure.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Ft.
Depth to Freeboard Deck = **12.60**
Summer freeboard = **1.52**
Moulded draught (d) = **11.08**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **2.77 = 2 $\frac{3}{4}$**

Addition for Winter North Atlantic Freeboard (if required) =

2 $\frac{3}{4}$ + 2" = 4 $\frac{3}{4}$

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta =$
Tons per inch immersion at summer load water line
T = 8.75

Deduction = $\frac{\Delta}{40 T}$ inches**= $d/4 = 2\frac{3}{4}$**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{788 + 68}{136} = \frac{1468}{136}$

Depth Correction

Deduction for superstructures

Sheer correction

Round of Beam correction

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc.

	17.09
	18.45
+	
-	
2.28	
✓ 3.60	
1.16	
✓ .04	
3.44	
3.64	
- .20	
Summer Freeboard = 18.25	

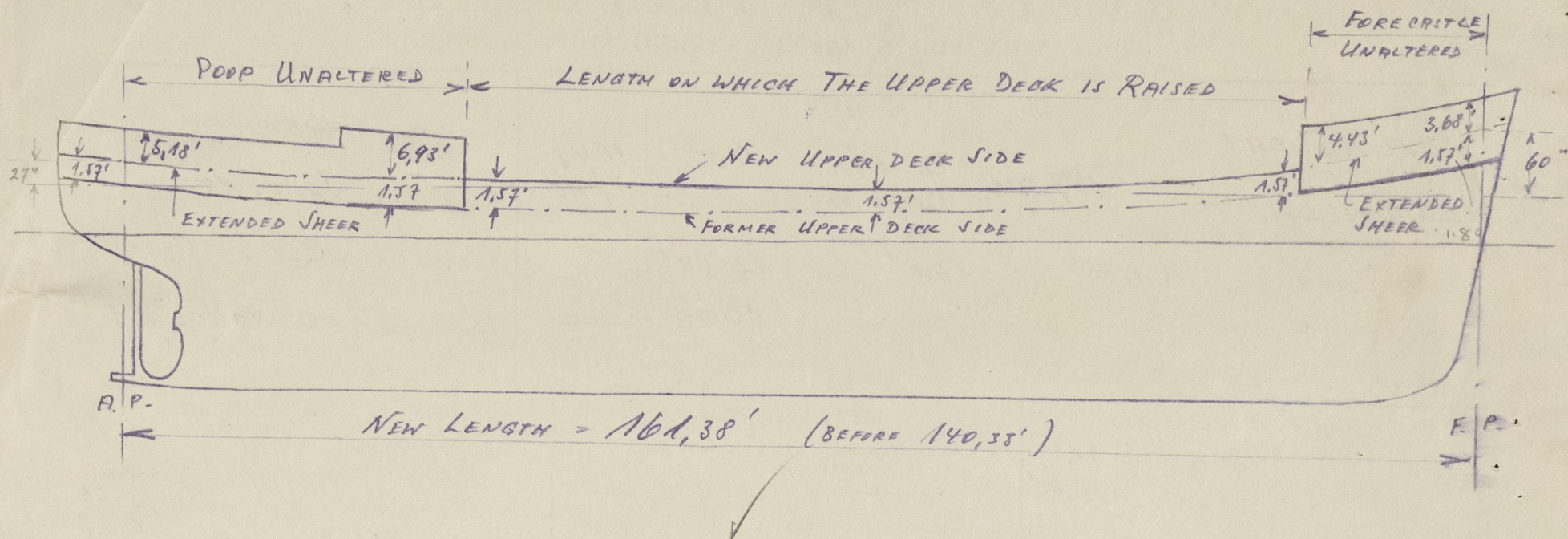
SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc ... **5 $\frac{1}{2}$**
Fresh Water Line " " ... **2 $\frac{3}{4}$**
Tropical Line " " ... **2 $\frac{3}{4}$**
Winter Line below " " ... **2 $\frac{3}{4}$**
Winter North Atlantic Line " " ... **4 $\frac{3}{4}$**

Tropical Fresh Water Freeboard ... **1 $\frac{1}{2}$**
Fresh Water " " ... **1 $\frac{1}{2}$**
Tropical " " ... **1 $\frac{1}{2}$**
Winter " " ... **1 $\frac{1}{2}$**
Winter North Atlantic " " ... **1 $\frac{1}{2}$**

Hindlea.

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 COASTAL TRADE

Names of sister ships NONE

Builder's name and yard number VESSEL NOW LENGTHENED AND UPPERDECK BETWEEN FLE AND POOP RAISED BY MESSRS. ELSFLETHER WERFT A. G. OF ELSFLETH (NEER)

Owners THE HINDLEA SHIPPING COMPANY (MANAGER: J. L. HINDMARSH) CARDIFF.

Fee £ 22 10 0

EXPENSES NIL.



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Foundation