

22 JAN 1954

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name T.S. SURVEY VESSEL "PATHFINDER"	Official Number	Nationality and Port of Registry BRITISH NIGERIAN. LAGOS.	Gross Tonnage 544.	Date of Build 1954	COWES Port of Survey (SOUTHAMPTON.) Date of Survey DURING BUILDING Surveyor's Signature E. H. H. H. Particulars of Classification +100A1 "FOR NIGERIAN COASTING SERVICES."
Moulded Dimensions: Length 161'-11 1/2" Breadth 27'-7 1/4" EXTREME 27'-5 3/4" MLD Depth 12'-0 8/8" ✓ Moulded displacement at moulded draught = 85 per cent. of moulded depth (AT 10'-2 1/2") 837 tons Coefficient of fineness for use with Tables .692 .67 (TO LENGTH AT 10'-2 1/2" WL)					

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth 12'-0 6/8"	(a) Where D is greater than Table depth (D-Table depth) R = (12'-2 1/4" - 10'-0 6/8") 1.160 = + 2.53" ✓	Moulded Breadth (B) 27.5 ✓ Standard Round of Beam = $\frac{B \times 12}{50} =$ 6.6 ✓ Ship's Round of Beam = 7 ✓ Difference .40 ✓
Stringer plate03	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Restricted to
Sheathing on exposed deck 2 1/2"	If restricted by superstructures ✓	Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L}\right) =$.40 x .9475 = .09 ✓
$T \left(\frac{L-S}{L} \right) = \frac{2.5}{12} \times .9475 =$.20		
Depth for Freeboard (D) = 12'-2 1/4"		

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)
Poop enclosed	7.94	7.94	7'-6"	✓	7.94
" overhang FORMING BRIDGE	7'-7 1/8"		7'-6"		
R.Q.D. enclosed	(INCLUDING 1-9 1/2 Bow.)				
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
F'ele enclosed					
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	7.94	7.94			7.94

Standard Height of Superstructure	6.00 ✓
" " R.Q.D.	✓
Deduction for complete superstructure	21.09 ✓
Percentage covered $\frac{S}{L} =$	5.25 ✓
" " $\frac{S_i}{L} =$	
" " $\frac{E}{L} =$	
Percentage from Table, Line A. 2.63 - 5.00 = NIL	
(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 =	NIL ✓

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	25.09	1		25.09	29.000	29.00	1		29.00
1/2 L from A.P.	11.16	4		44.64	11.437	11.44	4		45.76
1/4 L "	2.76	2		5.52	2.062	2.06	2		4.12
Amidships	0	4		0	0	0	4		0
3/4 L from F.P.	5.52	2		11.04	8.312	8.31	2		16.62
1/2 L "	22.33	4		89.32	28.250	28.25	4		113.00
F.P.	50.18	1		50.18	52.000	52.00	1		52.00
Total	50.266			225.19					260.50

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{34.91}{18} \times \left(\frac{.75 - .0263}{.7237} \right) = -1.40"$ ✓
 If limited on account of midship superstructure. **YES NIL** ✓

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **12.25** ✓
 Summer freeboard = **2.25** ✓
 Moulded draught (d) = **10.00** ✓

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **2.50 = 2 1/2"** ✓

Addition for Winter North Atlantic Freeboard (if required) = **NOT ASSIGNED.**

Deduction for Fresh Water.

Displacement in salt water at summer load water line **10'-0" MLD.**

$\Delta =$ **8.17** ✓
 Tons per inch immersion at summer load water line
T = 8.35

Deduction = $\frac{\Delta}{40 T}$ inches
= 2.45 = 2 1/2" ✓
(TP 10'-2 1/2" = 8.42)

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.692 \times .68}{1.36} = 1.372$

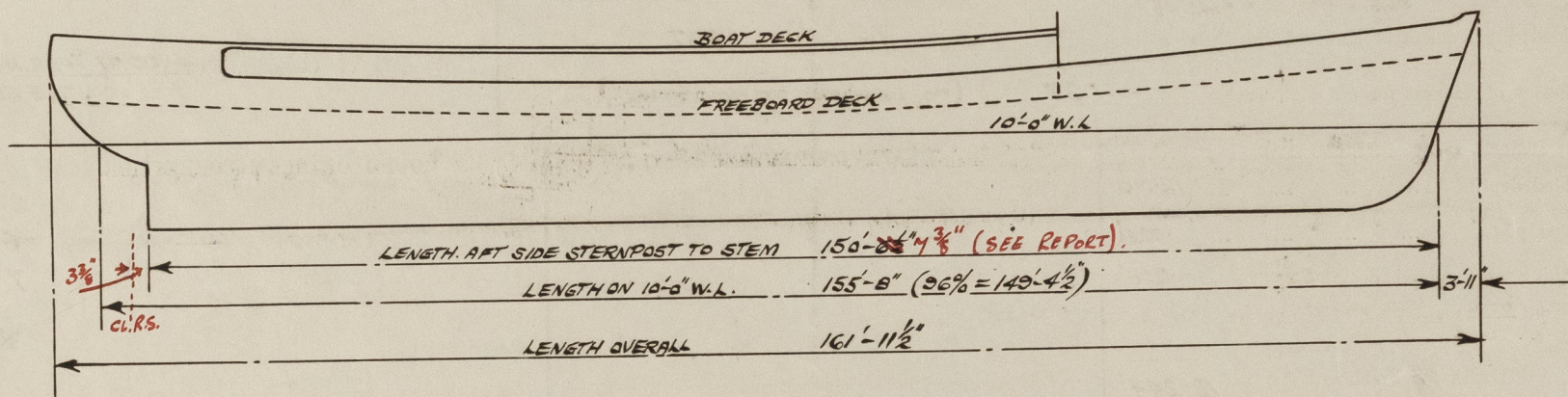
	+	-
Depth Correction	2.53 ✓	
Deduction for superstructures	✓	✓
Sheer correction	✓	✓
Round of Beam correction	✓	.09
Correction for Thickness of Deck amidships10	✓
Other corrections, scantlings, etc. TO	7.60	✓
CORRESPOND WITH SUMMER MLD DRAUGHT OF 10'-0"	10.23	.09
Summer Freeboard =	27.00 ✓	

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

Tropical Fresh Water Line above Centre of Disc	4"
Fresh Water Line	2 1/2"
Tropical Line	1 1/2" LIMITED
Winter Line below	NOT ASSIGNED
Winter North Atlantic Line	NOT ASSIGNED

Tropical Fresh Water Freeboard	2.3 ✓
Fresh Water	1.1 ✓
Tropical	2.0 ✓
Winter	2.1 1/2" LIMITED (SIDE SCUTTLE)
Winter North Atlantic	NOT ASSIGNED

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 SURVEY VESSEL. FOR NIGERIAN COASTAL SERVICES.

Names of sister ships NONE.

Builder's name and yard number J. SAMUEL WHITE & CO LTD . 1975.

Owners CROWN AGENTS FOR THE COLONIES.

Fee £ 18' : 0 : 0