

8 APR 1953

Index No. 42928
(For London Office only.)

Rpt No 23444

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name SAMSON.	Official Number	Nationality and Port of Registry BRITISH.	Gross Tonnage 988 APPROX. 854.66	Date of Build 1953.	Port of Survey ABERDEEN.
Moulded Dimensions: Length 165'-0" Breadth 35'-0" Depth 18'-6 7/8"					Date of Survey WHILST BUILDING.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 1547 x .995 tons (APPROX.)					Surveyor's Signature E. J. MacLellan
Coefficient of fineness for use with Tables .68 (actual .594)					Particulars of Classification +100A1 FOR TOWING SERVICES.

DEPTH FOR FREEBOARD (D). Moulded depth ... 18.57 Stringer plate3203 Sheathing on exposed deck 2 1/2" $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 18.60	DEPTH CORRECTION. (a) Where D is greater than Table depth $(D - \text{Table depth}) / R =$ $(18.60 - 11.00) / 7.68 = +9.64$ (b) Where D is less than Table depth (if allowed) $(\text{Table depth} - D) / R =$ If restricted by superstructures ✓	ROUND OF BEAM CORRECTION. Moulded Breadth (B) 35'-0" Standard Round of Beam = $\frac{B \times 12}{50} =$ 8.4 Ship's Round of Beam = 8 1/2 Difference +0.10 Restricted to 23 Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{0.10}{4} \times 4318 = -.01$
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	✓				
" overhang ...	✓				
R.Q.D. enclosed ...	✓				
" overhang ...	✓				
Bridge enclosed ...	✓				
" overhang aft ...	✓				
" overhang forward ...	92.84				
F'cle enclosed 2 1/2" ...	92.84	92.84	7'-0"	✓	92.84
" overhang ...	1.86	0.83			0.83
Trunk aft ...	✓				
" forward ...	✓				
Tonnage opening aft ...	✓				
" " forward ...	✓				
Total ...	94.50	93.67			93.67

Standard Height of Superstructure **6'-0"**
 " " R.Q.D. ✓
 Deduction for complete superstructure **22.50"**
 Percentage covered $\frac{S}{L} =$ **57.27**
 $\frac{S_1}{L} =$ } **56.77**
 $\frac{E}{L} =$ }
 Percentage from Table, Line A. **41.48**
 (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 = **22.50 x .4148 = -9.33"**

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	26.50	1	26.50	46 1/8	28.125	1	28.13
1/4 L from A.P. ...	11.79	4	47.16	24 1/8	12.125	4	48.50
1/2 L " ...	2.915	2	5.83	12 1/8	6.125	2	12.25
Amidships ...	✓	4	✓	0	✓	4	✓
3/4 L from F.P. ...	5.83	2	11.66	0 7/8	6.875	2	13.75
1/4 L " ...	23.59	4	94.36	15 3/8	27.375	4	109.50
F.P. ...	53.00	1	53.00	44 1/4	62.25	1	62.25
Total ...			238.51				274.38

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{35.87 \times (.75 - .2864)}{18} = -0.92$
 If limited on account of midship superstructure. $0.92 \times \frac{16.27}{2} = -0.75$

Mean actual sheer aft
 Mean standard sheer aft = } **EXCESS**
 Mean actual sheer forward
 Mean standard sheer forward = }
 Length of enclosed superstructure forward of amidships = **.50**
 " " aft of " = **.0627**

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Ft.
 Depth to Freeboard Deck = **18.60**
 Summer freeboard = **2.94**
 Moulded draught (d) = **15.66**
 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = **3.92 = 4"**
 Addition for Winter North Atlantic Freeboard (if required) = **4 + 2 = 6"**

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta =$ **1533**
 Tons per inch immersion at summer load water line
 $T =$ **11.08**
 Deduction = $\frac{\Delta}{40 T}$ inches
 $=$ **3.46**
 $=$ **3 1/2"**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	NIL	
	+	-
Depth Correction ...	9.64	✓
Deduction for superstructures ...	✓	9.33
Sheer correction ...	✓	0.75
Round of Beam correction ...	✓	0.01
Correction for Thickness of Deck amidships ...	✓	
Other corrections, scantlings, etc. and ...	17.85	✓
RESTRICTED FOR H.F. OF SILL OF LOWEST SIDE SCUTTLE.	27.24	10.09
Summer Freeboard =	35.25	40

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

Tropical Fresh Water Line above Centre of Disc ... **7 1/4**
 Fresh Water Line " " ... **3 1/2**
 Tropical Line " " ... **3 1/4** **RESTRICTED**
 Winter Line below " " ... **4**
 Winter North Atlantic Line " " ... **6**

Tropical Fresh Water Freeboard **2'-11"**
 Fresh Water " **2'-3 3/4"**
 Tropical " **2'-7 1/2"**
 Winter " **2'-5 1/4"**
 Winter North Atlantic " **3'-3"**
3'-5"

Samson.

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.

	DRAFT MOULDED.	EXT. DISP.	T.P.I.
	14	1314	10.52
	15	1443	10.84
15.68	16	1575	11.20
	17	1710	11.60.

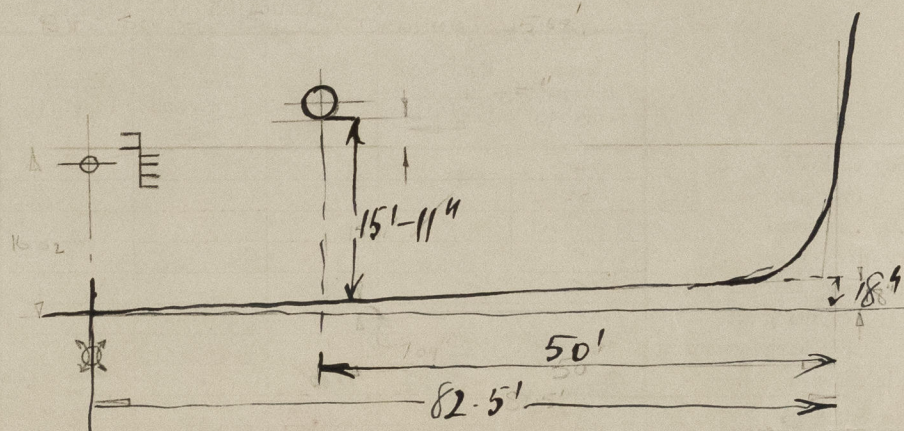
Length at side = 94.50

$$\text{Less } \frac{14.5 \times 4}{35} = \frac{1.66}{92.84}$$

$$O/H = 1.66.$$

SHEERS 36"
KEEL RAKED 18" F.D.A.

46.125	- 18	=	28.125	✓
24.125	- 12	=	12.125	✓
12.125	- 6	=	6.125	✓
0.875	+ 6	=	6.875	✓
15.375	+ 12	=	27.375	✓
44.25	+ 18	=	62.25	✓



$$\frac{18'' \times 32.5'}{82.5} = 7.09''$$

Fill along keel = 16' 6.09"

amidships

Bedrock

Max mid summer
at tropical

$$\frac{6''}{16' - 0.09''}$$

42928

Trade of ship TUG.

Names of sister ships (Similar to tug "CAPABLE" & "CAPABLE")

Builder's name and yard number MESSRS A. HALL & CO YARD NO 741.

Owners ADMIRALTY.

Fee £ to be charged with F.E.



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Foundation