

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name "SPORTS"	Official Number 181754	Nationality and Port of Registry BRITISH LONDON	Gross Tonnage 3311.40	Date of Build 1909 8th MONTH.	Port of Survey NEWCASTLE-ON-TYNE
Moulded Dimensions: Length 318' 8" Breadth 46' 0" Depth 24' 66"					Date of Survey 31st OCT. 1947 & 13th Nov. 1947.
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons					Surveyor's Signature <i>Alfred J. S. Sheffer</i>
Coefficient of fineness for use with Tables .70 assumed.					Particulars of Classification "EXAMINED L.R." (FOR 12 MONTHS)

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... 24.66	(a) Where D is greater than Table depth (D-Table depth) R = (24.70-21.25) 2.457 = +8.46"	Moulded Breadth (B) 46' 0"
Stringer plate50	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = ✓	Standard Round of Beam = $\frac{B \times 12}{50} =$ 11.04"
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ ✓	If restricted by superstructures ✓	Ship's Round of Beam = 12"
Depth for Freeboard (D) = 24.70		Difference .96
		Restricted to ✓
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.96}{4} \times .5144 =$.12"

DEDUCTION FOR SUPERSTRUCTURES.					
	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	26.75'	26.75'	7.25'	✓	26.75'
" overhang ...	✓				
R.Q.D. enclosed ...	✓				
" overhang ...	✓				
Bridge enclosed ...	94.00'	94.00'	7.50'	✓	94.00'
" overhang aft ...	✓				
" overhang forward ...	✓				
Fore enclosed ...	34.00'	34.00'	7.25' + .25' WOOD SHEATHING	✓	34.00'
" overhang ...	✓		= 7.50'		
Trunk aft ...	✓				
" forward ...	✓				
Tonnage opening aft ...	✓				
" " forward ...	✓				
Total ...	154.75'	154.75'			154.75'

Standard Height of Superstructure **6.69'**

" " R.Q.D. **✓**

Deduction for complete superstructure **36.58"**

Percentage covered $\frac{S}{L} =$ **48.56**

" " $\frac{S_1}{L} =$ **48.56**

" " $\frac{E}{L} =$ **48.56**

Percentage from Table, Line A. **✓**

(corrected for absence of forecastle (if required)) **✓**

Percentage from Table, Line B. **34.77**

(corrected for absence of forecastle (if required)) **✓**

Interpolation for bridge less than .2L (if required) **✓**

Deduction = **36.58 × .3477 = 12.72"**

SHEER CORRECTION.							
Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P. ...	41.87	1	41.87	36.38	36.38	1	36.38
1/2 L from A.P. ...	18.63	4	74.52	9.88	9.88	4	39.52
1/2 L " ...	4.605	2	9.21	-0.88	-0.88	2	-1.76
Amidships ...	✓	4	✓	0	✓	4	✓
1/2 L from F.P. ...	9.21	2	18.42	9.63	9.26	2	18.52
1/2 L " ...	37.26	4	149.04	37.13	37.48	4	149.92
F.P. ...	83.73	1	83.73	87.63	84.22	1	84.22
Total ...			376.79				326.80

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{49.99}{18} \left(.75 - \frac{.2428}{1.75} \right) =$ **.5072 = +1.41"**

If limited on account of midship superstructure **✓**

If limited to maximum allowance of 1 1/2 ins. per 100 ft. **✓**

Mean actual sheer aft **63.38**

Mean standard sheer aft **56.8%**

Mean actual sheer forward **Excl.**

Mean standard sheer forward **Excl.**

Length of enclosed superstructure forward of amidships = **Deficient**

" aft of " = **sheer.**

Yard Sheer: **9.21 + 214.43 = 9.26**

37.26 + 113.14 = 37.48

83.73 + " = 84.22

Effective ordinates.

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 .70.68 = 1.38/1.36
Depth to Freeboard Deck = 24.70	$\Delta =$	Depth Correction ... 8.46
Summer freeboard = 3.81	Tons per inch immersion at summer load water line	Deduction for superstructures ... 12.72
Moulded draught (d) = 20.89	T =	Sheer correction ... 1.41
Deduction for Tropical freeboard and addition for	Deduction = $\frac{\Delta}{40 T}$ inches	Round of Beam correction12
Winter freeboard = $\frac{d}{4}$ inches = 5.22 = 5 1/4"	d/4 = 5 1/4"	Correction for Thickness of Deck amidships ... ✓
Addition for Winter North Atlantic Freeboard (if required) = 7 1/4"		Other corrections, scantlings, etc. ... ✓
		9.87 12.84 - 2.97"
		Summer Freeboard = 45.81

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-			
Tropical Fresh Water Line above Centre of Disc ...	10 1/2"	Tropical Fresh Water Freeboard	2' 9 3/4"
Fresh Water Line " " ...	8 1/4"	Fresh Water	2' 11 1/4"
Tropical Line " " ...	5 1/4"	Tropical	3' 4 1/2"
Winter Line below " " ...	5 1/4"	Winter	3' 4 1/2"
Winter North Atlantic Line " " ...	7 1/4"	Winter North Atlantic	4' 1' 5 1/4"

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.

Find Sheer: -

After sheer = 56.8% of Standard. ✓

Sheer Find: -

Standard.			Actual		
9.21	1	9.21	9.63	1	9.63
37.26	3	111.78	37.13	3	111.39
83.73	3	251.19	81.63	3	244.89
		<u>372.18</u>			<u>357.91</u>

$$\left[\frac{56.8 - 50}{75 - 50} = \frac{6.8}{25} \right]$$

Difference = 14.78

∴ Allowed sheer find = 372.18 + (14.78 × 6.8/25) = 376.37

Forward Sheer Standard			Actual		
0	1	-	0	1	-
9.21	3	27.63	9.63	3	28.89
37.26	3	111.78	37.13	3	111.39
83.73	1	83.73	81.63	1	81.63
		<u>223.14</u>			<u>222.91</u>
					<u>223.14</u>
					<u>4.77</u>

$$223.14 + 4.77 \times \frac{6.8}{25} = 223.14 + 1.30 = 224.44$$

Multiply find Standard Sheer minimal by 224.44
223.14

Trade of ship International.

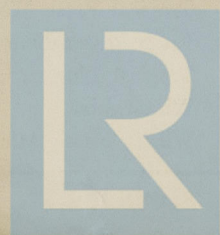
Names of sister ships ✓

Builder's name and yard number NEWPORT NEWS S. & D. D. CO.

Owners MINISTRY OF TRANSPORT.

Fee £ 14 . 0 . 0

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