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LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER)

Ship's Name "BEDFORD"	Official Number 185919	Nationality and Port of Registry British London	Gross Tonnage 12700 12578	Date of Build 1953	Port of Survey Greenock
Moulded Dimensions: Length 527.0 Breadth 73.75 Depth 37.5					Date of Survey While Building 1952/3
Freeboard Length 627.0					Surveyor's Signature John Barnett
Moulded displacement at moulded draught = 85 per cent. of moulded depth 27077 tons					Particulars of Classification +100A1
Coefficient of fineness for use with Tables .765					Carrying Petroleum in Bulk.

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth ...	37.5	(a) Where D is greater than Table depth (D-Table depth) R = (37.58-35.13) x 3 2.45 = +7.35		Moulded Breadth (B)	73.75
Stringer plate93	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$	17.7
Wood Sheathing on exposed deck				Ship's Round of Beam	18 1/2
$T \left(\frac{L-S}{L} \right) =$		If restricted by superstructures		Difference	.8
Depth for Freeboard (D) =	37.58			Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	= $\frac{.8}{4} \times .5892 = -.118$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	117.5	121.5	8.0	-	121.5
" overhang	123.5		8.0	-	
R.Q.D. enclosed	121.5				
" overhang					
Bridge enclosed	39.75	42.73	7.5	-	42.73
" overhang	46.0		7.5	-	
" overhang forward	42.73				
F'cle enclosed	52.25	52.25	7.5	-	52.25
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	216.48	216.48			216.48

Standard Height of Superstructure **7'-6"**

" " R.Q.D. _____

Deduction for complete superstructure **42"**

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

" " $\frac{S_1}{L} =$ **41.08**

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

Percentage from Table, Line A. **TANKER** **32.08**

(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 = **.3208 x 42.00 = 13.47**

Bridge side 1/2" inboard from ship's side.

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	62.70	1		62.70	63	63	1		63
1/4 L from A.P. ...	27.90	4		111.60	28	28	4		112
1/2 L " ...	6.90	2		13.80	7	7	2		14
Amidships ...	0	4		0	0	0	4		0
3/4 L from F.P. ...	13.79	2		27.58	14	14	2		28
1/4 L " ...	55.81	4		223.24	56	56	4		224
F.P. ...	125.40	1		125.40	126	126	1		126
Total ...				564.32					567

Mean actual sheer aft =

Mean standard sheer aft =

Excess.

Mean actual sheer forward =

Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =

" " aft of " =

Tanked.

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{2.68}{18} \left(.75 - .2054 \right) = -.08$

If limited on account of midship superstructure.

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.

Depth to Freeboard Deck = **37.58**

Summer freeboard = **8.08**

Moulded draught (d) = **29.50**

Keel allowance =

Extreme draught =

Deduction for Tropical freeboard and addition for =

Winter freeboard = $\frac{d}{4}$ inches = **7.38 = 7 1/2**

Addition for Winter North Atlantic Freeboard (if required) = **7.38 + 5.27 = 12.65 = 12 1/2**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 30.0 \times 25.41 = 762.3$

Tons per inch immersion at summer load water line

$T = 30 \times 78.58 = 2357.4$

Deduction = $\frac{\Delta}{40 T}$ inches

= **7.98**

= **8"**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.765 + .68}{1.36} = 1.445$

Depth Correction ... **7.35**

Deduction for superstructures ... **13.47**

Sheer correction ... **.08**

Round of Beam correction ... **.12**

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. computed

12.25 Summ. moulded draught

129.6"

+	-
7.35	
13.47	
.08	
.12	
3.82	
11.17	13.67
	- 2.50

Summer Freeboard = **97.00"**

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

Tropical Fresh Water Line above Centre of Disc	1' - 3 1/2"	15 1/2"	Tropical Fresh Water Freeboard	6' - 9 1/2"
Fresh Water Line	8"		Fresh Water	7' - 5 1/2"
Tropical Line	7 1/2"		Tropical	7' - 5 1/2"
Winter Line below	7 1/2"		Winter	8' - 8 1/2"
Winter North Atlantic Line	1' - 0 3/4"	12 3/4"	Winter North Atlantic	9' - 1 3/4"

Bedford.

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.

The following plans forwarded with this report. Please return

- ① Midship Section
- ② Profile & Decks.

Poop

$$\begin{aligned} \text{Length of Poop at ship side} &= 117.5' \\ + \frac{2}{3} \times 6 &= \frac{4}{121.5'} \\ \text{Equivalent length} &= \end{aligned}$$

Bridge

$$\begin{aligned} \text{Length at side} &= 39.75' \\ + \frac{2}{3}(6.25) &= \frac{4.17'}{43.92} \end{aligned}$$

$$\begin{aligned} \text{Equivalent length} &= 43.92 \times \frac{71.75}{73.75} \\ &= \underline{42.73'} \end{aligned}$$

Trade of ship

International

Names of sister ships

✓

Quint

Builder's name and yard number

Lithgows yard no. 1070.

Owners

Blairford Shipping Co Ltd.

Fee £

50

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List of plans forwarded for reference. (See "Instructions to Surveyors, Part 4, 1950," paragraph 11.)



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