

30 JAN 1948

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index. No. 39463
(For London Office only).

Mo. 18418.

Ship's Name MESSRS. FURNESS, S. B. CO. YARD NO. 417. M.V. BERGSUND.	Official Number 8979	Nationality and Port of Registry SWEDISH STOCKHOLM.	Gross Tonnage 1322 <i>(Swedish)</i>	Date of Build 1948	Port of Survey MIDDLESBROUGH.
Moulded Dimensions: Length 255.52 ✓ Breadth 39.00 ✓ Depth 22.96 TO SHELTER DECK 15.46 TO MAIN DECK. 9.64 ON L.W.L. = 252.00 ✓ Moulded displacement at moulded draught = 85 per cent. of moulded depth 2492 tons Coefficient of fineness for use with Tables .68 (.666 actual) ✓				Date of Survey WHILST BUILDING 1948.	
Surveyor's Signature <i>E. Lynn.</i>				Particulars of Classification 100 A.1. WITH FREEBOARD.	

Depth for Freeboard (D). Moulded depth 15.46 ... 15.46 Stringer plate .3403 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = \text{NIL}$ Depth for Freeboard (D) = 15.49 ✓	Depth correction. (a) Where D is greater than Table depth (D-Table depth) R = ✓ (b) Where D is less than Table depth (if allowed) (Table depth-D) R = (17.04-15.49) 1.965 = -3.05 ✓ If restricted by superstructures ✓	Round of Beam correction. Moulded Breadth (B) 39.00 Standard Round of Beam = $\frac{B \times 12}{50} = \mathbf{9.36}$ Ship's Round of Beam = 9.37 Difference +.01 Restricted to Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.01}{4} \times .0138 = \text{NIL}$
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
POOP enclosed ... SEE SKETCH	16.55	16.55			16.55	Standard Height of Superstructure 6.06'
" overhang ...	6.13	3.07			3.07	" " R.Q.D. ✓
R.Q.D. enclosed						Deduction for complete superstructure 31.55 ✓
" overhang						Percentage covered $\frac{S}{L} = 100$ ✓
Bridge enclosed ...	228.84	228.84	7.50 MIN. AT AMIDSHIPS.		228.84	" " $\frac{S_1}{L} = 98.62$ ✓
" overhang aft						" " $\frac{E}{L} =$
" overhang forward						Percentage from Table, Line A. 98 ✓ 98.30
F'cle enclosed ...						(corrected for absence of forecastle (if required))
" overhang						Percentage from Table, Line B. ✓
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than 2L (if required) ✓
Tonnage opening aft	4.00	3.53			3.53	Deduction = 31.55 x .9830 = -31.02 ✓
" forward						
Total	255.52	251.99			251.99	

THERE IS A FALL IN SHEER OF 1" AT A POINT, 21'-7 1/2" AFT OF AMIDSHIPS.

SHEER CORRECTION.

Actual sheer deck height = 7.50'
Std " " " = 6.06'

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	35.55	1		35.55	74 3/16"	91.47	1		91.47
1/4 L from A.P. ...	15.82	4		63.28	54 1/2"	40.70	4		162.80
1/2 L " ...	3.91	2		7.82	45"	10.06	2		20.12
Amidships ...	-	4		-	0	-	4		-
3/4 L from F.P. ...	7.82	2		15.64	11 1/8"	10.08	2		20.16
3/4 L " ...	31.64	4		126.56	35 3/8"	40.79	4		163.16
F.P. ...	71.10	1		71.10	74 3/8"	91.66	1		91.66
Total				319.95	17.28				549.37

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{229.42}{18} \times .25 = -3.19"$$

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.

1.66" cant up of
 Depth to Freeboard Deck = **15.63** ✓
 Summer freeboard = **.30** ✓
 Moulded draught (d) = **15.33** ✓

Deduction for Tropical Freeboard and addition for

$$\text{Winter freeboard} = \frac{d}{4} \text{ inches} = \mathbf{3.83} = \mathbf{97 \text{ mm}}$$

Addition for Winter North Atlantic Freeboard (if required) =

$$\mathbf{5.83} = \mathbf{148 \text{ mm}}$$

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$$\Delta = \mathbf{3011.}$$

Tons per inch immersion at summer load water line

$$T = \mathbf{19.66}$$

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

$$= \mathbf{3.83}$$

$$= \mathbf{97 \text{ mm}}$$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

NIL

33.46

33.46

Depth Correction

Deduction for superstructures

Sheer correction

Round of Beam correction

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc.

- 3.05

- 31.02

- 3.19

-

1.66

-

1.66

37.26

-35.60

Summer Freeboard = -2.14

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :- 93 mm 3.66" limited.

Tropical Fresh Water Line above Centre of Disc ... 97 mm

Fresh Water Line " " ... 97 "

Tropical Line " " ... NIL

Winter Line below " " ... 97 mm

Winter North Atlantic Line " " ... 148 "

Tropical Fresh Water Freeboard ... 4 "

Fresh Water " " ... 4 "

Tropical " " ... 93 "

Winter " " ... 130 "

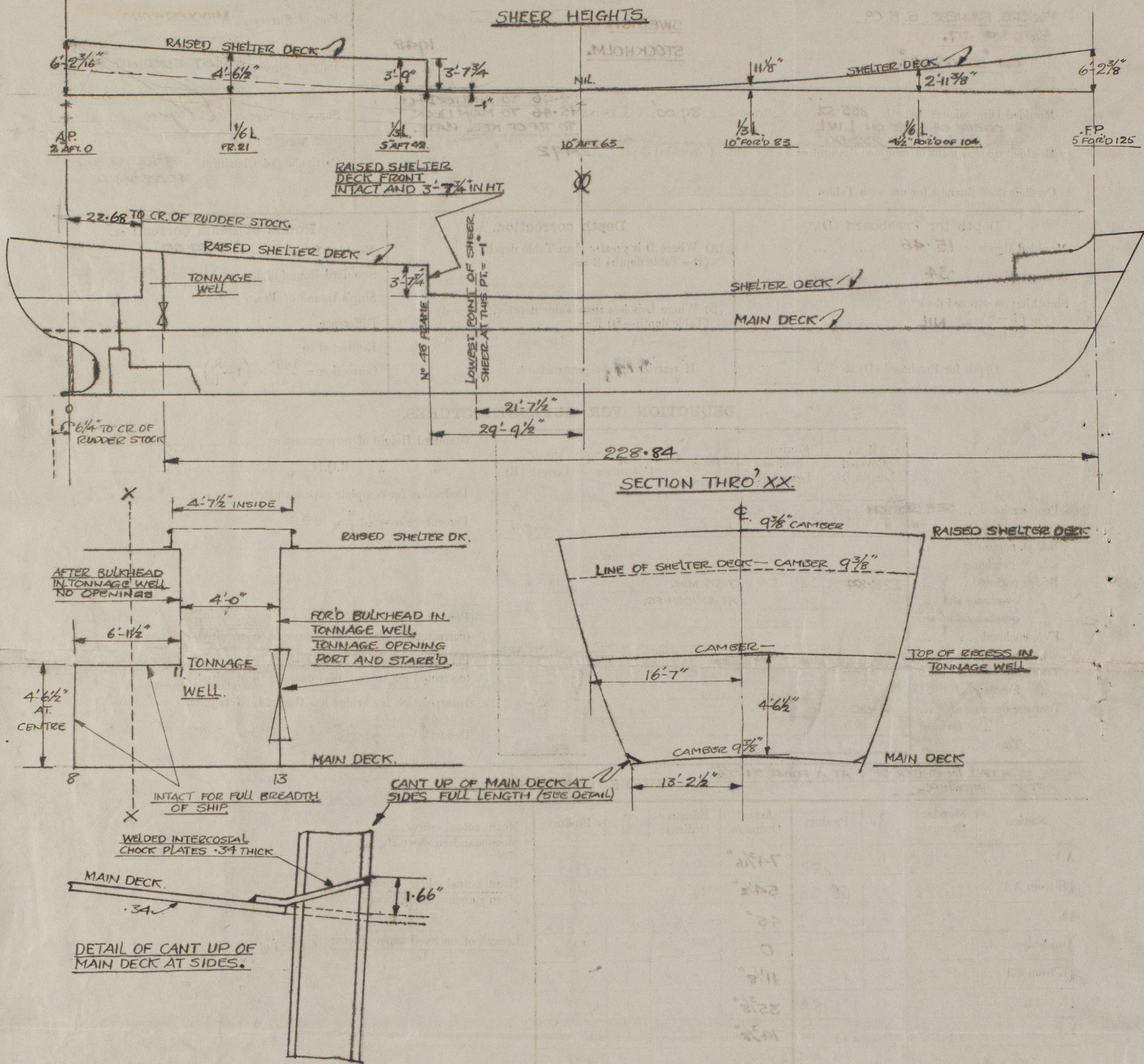
Winter North Atlantic " " ... 241 "

Bergsund

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.

SURVEYOR'S REPORT ON FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER)



Trade of ship GENERAL CARGO.

Names of sister ships ✓

Builder's name and yard number FURNESS S.B. CO. LD. - YARD NO 417.

Owners STOCKHOLM REDERI 1/3 SVEA.

Fee £ WILL BE CHARGED ON FIRST ENTRY REPORT.



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