



Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

 Index. No. 43863
 (For London Office only.)
(COMPUTATION FOR ~~STEAMER, SAILING SHIP~~ TANKER.)

Ship's Name A S L A U G T O R M	Official Number ---	Nationality and Port of Registry Danish Copenhagen	Gross Tonnage 10270 About 10350	Date of Build 1952 12	Port of Survey Uddevalla
Moulded Dimensions: Length 152.400 M. Breadth 19.506 M. Depth 11.660 Metres					Date of Survey Whilst building
Freeboard Length 152.600 Metres to Centre Line of Rudder Stock					Surveyor's Signature <i>James F. ...</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth 23080 M³					Particulars of Classification +100A1
Coefficient of fineness for use with Tables .78					Carrying Petroleum in bulk

Depth for Freeboard (D). Moulded depth 11,660 Stringer plate 21 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 11,680.6	Depth correction. (a) Where D is greater than Table depth (D—Table depth) R = 8.33 (11.681 - 10.173) 30 = +377 mm (b) Where D is less than Table depth (if allowed) (Table depth—D) R = 1508 If restricted by superstructures	Round of Beam correction. Moulded Breadth (B) 19.506 Standard Round of Beam = $\frac{B \times 12}{50} =$ 390 Ship's Round of Beam = 400 mm. Difference 10. Restricted to Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{10 \times 5630}{4} = -1 \text{ mm.}$
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
POOP enclosed <i>See sketch</i>	35.181	35.181	2440	—	35.181
» overhang					
R.Q.D. enclosed					
» overhang					
BRIDGE enclosed <i>See sketch</i>	13.605	13.605	2745	—	13.605
» overhang aft					
» overhang forward					
F'cle enclosed	17.895	17.895	2440	—	17.895
» overhang					
Trunk aft					
» forward					
Tonnage opening aft					
» forward					
Total	66.681	66.681			66.681

Standard Height of Superstructure **2.29 M.**

» » R.Q.D. —

Deduction for complete superstructure **1067 mm.**

$$\left. \begin{aligned} \text{Percentage covered } \frac{S}{L} &= \\ \text{» } \frac{S_1}{L} &= \\ \text{» } \frac{E}{L} &= \end{aligned} \right\} 43.70$$

Percentage from Table, Line A. **TANKER. 34.70**
(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 = **1067 x 34.70 = -370 mm.**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	1525	1		1525	1112	1112	1		1112
1/6 L from A.P.	678	4		2712	106	106	4		424
2/6 L »	169	2		338	0	0	2		0
Amidships	0	4		0	0	0	4		0
2/6 L from F.P.	339	2		678	35	35	2		70
1/6 L »	1355	4		5420	641	641	4		2564
F.P.	3050	1		3050	2000	2000	1		2000
Total				13123					6170

$$\left. \begin{aligned} \text{Mean actual sheer aft} &= \\ \text{Mean standard sheer aft} &= \end{aligned} \right\} \text{DEFICIENT.}$$

$$\left. \begin{aligned} \text{Mean actual sheer forward} &= \\ \text{Mean standard sheer forward} &= \end{aligned} \right\}$$

$$\left. \begin{aligned} \text{Length of enclosed superstructure forward of amidships} &= \\ \text{» » aft of »} &= \end{aligned} \right\} \text{TANKER.}$$

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(75 - \frac{S}{2L} \right) = \frac{7553 (-75 - 2185)}{18 \cdot 5315} = +283 \text{ mm.}$$

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.

$$\begin{aligned} \text{Depth to Freeboard Deck} &= 11.681 \text{ M.} \\ \text{Summer freeboard} &= 2.620 \\ \text{Moulded draught (d)} &= 9.051 \end{aligned}$$

Deduction for Tropical freeboard and addition for

$$\text{Winter freeboard} = \frac{d}{48} \text{ inches} = 189 \text{ mm} = 190 \text{ mm}$$

$$\text{Addition for Winter North Atlantic Freeboard (if required)} = 189 + 127 = 316 \text{ mm} = 315 \text{ mm}$$

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$$\Delta = 20960 \text{ M}^3$$

Tons per inch immersion at summer load water line

$$T = 64.03 \text{ M}^3 / 25 \text{ mm}$$

$$\text{Deduction} = \frac{\Delta}{40 T} \text{ inches} = 205 \text{ mm.}$$

TABULAR FREEBOARD corrected for Flush Deck (if required)

$$\text{Correction for coefficient} = \frac{78 + 68}{1.36} = 1.46 / 1.36$$

	+	-
Depth Correction	377	—
Deduction for superstructures	—	370
Sheer correction	223	—
Round of Beam correction	—	1
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	600	371

$$\text{Summer Freeboard} = 2620$$

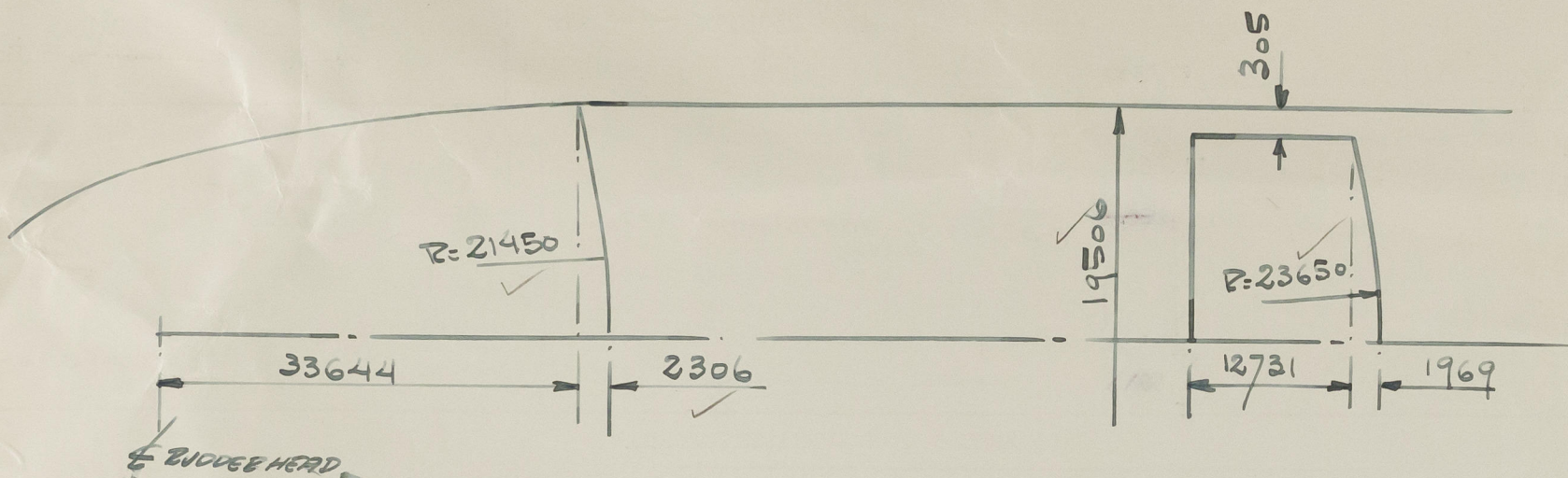
SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~WOOD~~ Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc	395
Fresh Water Line » »	205
Tropical Line » »	190
Winter Line below » »	190
Winter North Atlantic Line » »	315

Tropical Fresh Water Freeboard	2225
Fresh Water »	2415
Tropical »	2430
Winter »	2810
Winter North Atlantic »	2935

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.

	Displacement in salt water in tons à 1016 kgs.	M ³ /25 mm.
75 % of moulded depth	20330 ✓	63.6 ✓
85 % " " "	23400 ✓	65.2 ✓
95 % " " "	26520 ✓	66.8 ✓
100 % " " "	28090 ✓	67.5 ✓



Poop.

$$\begin{aligned} \text{LENGTH @ SIDE} &= 33.644 \\ + \frac{2}{3} \times 2306 &= 1.537 \\ \hline 35.181 &= \text{EQUIV. LENGTH.} \end{aligned}$$

BRIDGE

$$\begin{aligned} \text{LENGTH @ SIDE} &= 12.731 \\ + \frac{2}{3} \times 1969 &= 1.313 \\ \hline 14.044 &= \text{EQUIV. LENGTH.} \end{aligned}$$

$$\begin{aligned} 19.506 \\ 610 \\ \hline 18.896 \end{aligned}$$

430'4

Trade of ship International, Tanker

Names of ~~other~~ ^{similar} ships M/T "Astrid Elisabeth", Same Builders Yard No.124

Builder's name and yard number Uddevallavarvet Aktiebolag, Uddevalla, Yard No.126

Owners D/S Torm A/S, Copenhagen

Fee Kr. -----



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