

12 MAY 1958

Fbd. No. 199

For LONDON OFFICE ONLY

LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER)

Received

Index No.

Govt. Copy

Owners C11

Ship's Name "TOSTERÖ" Official Number Nationality and Port of Registry Swedish Stockholm Gross Tonnage 1938-39 Date of Build Conv. 1957-58 Port of Survey Kiel

ex: "Inge Mærsk" Moulded Dimensions: Length 146.30m Breadth 19.888m Depth 10.922m (to top of keel plate) Surveyor's Signature Ernst Reese

Freeboard Length 146.60m (from centre of rudder stock) Moulded displacement at moulded draught = 85 per cent. of moulded depth 21765 tons SW Particulars of Classification *100A1

Coefficient of fineness for use with Tables .796 .797 Ore Carrier, Carrying Petroleum in Bulk in Wing and Bottom Tanks when no cargo in adjacent compartments

DEPTH FOR FREEBOARD (D). mm

Moulded depth 10.940

Stringer plate 21

~~Doubler on Stringer plate~~ 28

Wood Sheathing on exposed deck

$T \left(\frac{L-S}{L} \right) =$ 10.943

Depth for Freeboard (D) = 10.989

DEPTH CORRECTION.

(a) Where D is greater than Table depth (D-Table depth) R = 8.33 (10.943 - 9.773) 30 = 292 mm

(b) Where D is less than Table depth (if allowed) (Table depth-D) R =

If restricted by superstructures

ROUND OF BEAM CORRECTION.

Moulded Breadth (B) 19.888m

Standard Round of Beam = $\frac{B \times 12}{50} =$ 398mm

Ship's Round of Beam = 400mm

Difference 2

Restricted to

Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{2^2}{4} \times \left(1 - \frac{635}{146.6} \right) = 1.16$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)
Poop enclosed	<u>31.440</u>	<u>30.681</u>	<u>2338</u>	✓	<u>30.681</u>
" overhang	<u>1.059</u>	<u>1.530</u>			<u>1.530</u>
R.Q.D. enclosed					
" overhang					
Bridge enclosed	<u>9.106</u>	<u>9.106</u>	<u>2286</u>	<u>2286/2290</u>	<u>9.090</u>
" overhang aft	<u>2.361</u>	<u>1.771</u>			<u>1.768</u>
" overhang forward					
Fore enclosed	<u>11.388</u>	<u>11.388</u>	<u>2286</u>	<u>2286/2290</u>	<u>11.368</u>
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	<u>54.595</u>	<u>53.476</u>			<u>53.437</u>

Standard Height of Superstructure 2.29m

" " R.Q.D. ✓

Deduction for complete superstructure 10.67mm

Percentage covered $\frac{S}{L} =$ 37.24

" $\frac{S_i}{L} =$ 36.48

" $\frac{E}{L} =$ 36.45

Percentage from Table, Line A. TANKER = 27.45

(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 = 27.45 × 10.67 = 293mm

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<u>1475</u>	1	1475	<u>1205</u>	<u>1205</u>	<u>1205</u>	1	1205	<u>1205</u>
$\frac{1}{4}$ L from A.P.	<u>655</u>	4	2620	<u>250</u>	<u>250</u>	<u>250</u>	4	1000	<u>1000</u>
$\frac{2}{4}$ L	<u>164</u>	2	328	<u>0</u>	<u>0</u>	<u>0</u>	2	0	<u>0</u>
Amidships	<u>0</u>	4	0	<u>0</u>	<u>0</u>	<u>0</u>	4	0	<u>0</u>
$\frac{3}{4}$ L from F.P.	<u>328</u>	2	656	<u>0</u>	<u>0</u>	<u>0</u>	2	0	<u>0</u>
$\frac{1}{4}$ L	<u>1311</u>	4	5244	<u>765</u>	<u>765</u>	<u>765</u>	4	3060	<u>3060</u>
F.P.	<u>2950</u>	1	2950	<u>2545</u>	<u>2545</u>	<u>2545</u>	1	2545	<u>2545</u>
Total			<u>13273</u>					<u>7840</u>	

Mean actual sheer aft =

Mean standard sheer aft =

Mean actual sheer forward =

Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = Tanker

" " aft of " = Def. Mur.

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{5463}{18} \left(\frac{75-1862}{2 \times 146.6} \right) = 1.71$

If limited on account of midship superstructure. ✓

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. ✓

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 10.943

Summer freeboard = 2.457

Moulded draught (d) = 8.486

Keel allowance =

Extreme draught =

Deduction for Tropical freeboard and addition for =

Winter freeboard = $\frac{d}{48} = \frac{8.486}{48} = 0.177$

Addition for Winter North Atlantic Freeboard (if required) = 1.77 + 1.22 = 2.99

Deduction for Fresh Water.

Displacement in salt water at summer load water line 8.5m

$\Delta =$ 19750

Tons per inch immersion at summer load water line

$T =$ 64.95

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

= 1.94

(as before)

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient 1.4721.36

Depth Correction 292

Deduction for superstructures 293

Sheer correction 171

Round of Beam correction ✓

Correction for Thickness of Deck amidships ✓

Other corrections, scantlings, etc. ✓

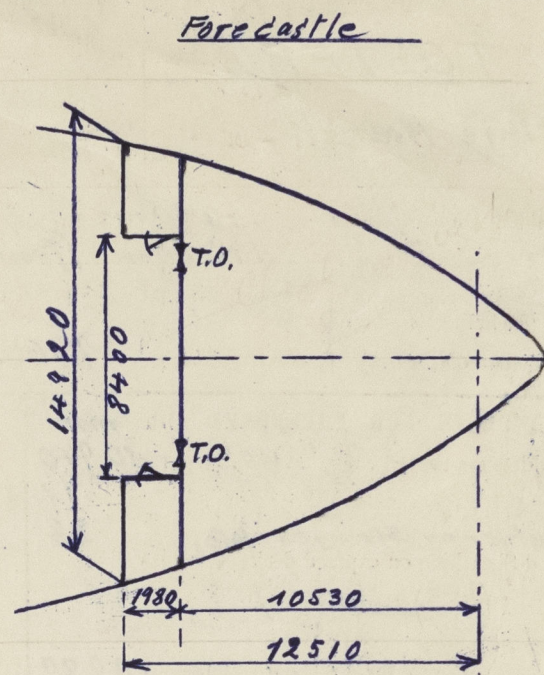
+	-
<u>292</u>	<u>293</u>
<u>171</u>	<u>170</u>
<u>463</u>	<u>293</u>
<u>2457</u>	<u>170</u>

Summer Freeboard = 2457

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

Tropical Fresh Water Line above Centre of Disc	...	<u>371</u>	Tropical Fresh Water Freeboard	...	<u>2086</u>
Fresh Water Line	"	<u>194</u>	Fresh Water	"	<u>2263</u>
Tropical Line	"	<u>177</u>	Tropical	"	<u>2280</u>
Winter Line below	"	<u>177</u>	Winter	"	<u>2634</u>
Winter North Atlantic Line	"	<u>299</u>	Winter North Atlantic	"	<u>2756</u>

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.



Drayht m	Ext. Displacement in tons Saltwater	Immersion tons lindy
8.00	18480	64.11
8.50	19750	64.95
9.00	21030	65.41

$$\rho_H \text{ aft} = \underline{2.361} \quad \checkmark$$

Yoncastle
length at side = 12510 ✓
- $\frac{1980 \times 8.400}{14 \cdot 820}$ = $\frac{1 \cdot 122}{11 \cdot 388}$ ✓
Liquid = 11.388 ✓

International

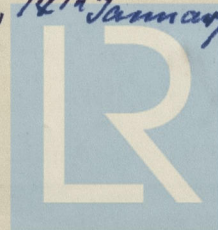
none

Builder's name and yard number Odense Staal & Kibs'værft A/S - Yard No 78
Converted by: Kieler Howaldts werke A.G., Kiel.

Rederi A/B Rex, Stockholm

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Midship Section } approved: Hamburg, 12th January, 1958.
Profile and Decks }
General Arrangement (2 plans)
Hydrostatic Curves.



1958.

Lloyd's Register
Foundation