

3 - NOV 1947

Index No. 39341  
(For London Office only.)

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name Oil Tanker "TURNIA" <i>ex U.S. Army Y-75</i>	Official Number Letters S P A G	Nationality and Port of Registry Polish Gdynia	Gross Tonnage 633 t	Date of Build 1944	Port of Survey Gdynia
Moulded Dimensions: Length <i>54.330</i> mtrs. Breadth <i>9.143</i> mtrs. Depth <i>4.115</i> actual <i>4.12</i> mtrs. <i>to centre of rudder stock</i> <i>virtual</i> <i>3.974</i> <i>virtual</i>					Date of Survey 28th June - 8th August 1947
Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>1470</i> ENGL. tons					Surveyor's Signature <i>A. C. E. Jumper</i>
Coefficient of fineness for use with Tables <i>.868</i>					Particulars of Classification

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
<i>Virtual</i> Moulded depth ... .. <i>3.974</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>8.33(3.974 - 3.622) 13.719 = + 40 mm</i>	Moulded Breadth (B) <i>9.143</i> m = 30'0" <i>✓</i>
Stringer plate ... .. <i>✓</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <i>.352</i>	Standard Round of Beam = $\frac{B \times 12}{50} = 183 \text{ mm}$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam <i>Virtual</i> = 0'183 mm
Depth for Freeboard (D) = <i>3.974</i>		Difference <i>(see over)</i>
		Restricted to
		Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \text{NIL}$ <i>✓</i>

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..	-	-	-	-	-
" overhang ... ..	-	-	-	-	-
R.Q.D. enclosed ... ..	-	-	-	-	-
" overhang ... ..	-	-	-	-	-
Bridge enclosed ... ..	<i>11650</i>	<i>11650</i>	<i>3350</i>	<i>✓</i>	<i>11.650</i>
" overhang aft ... ..	-	-	-	-	-
" overhang forward ... ..	<i>5943</i>	<i>5943</i>	<i>2100</i>	<i>✓</i>	<i>5.943</i>
F'cle enclosed ... ..	<i>6425</i>	<i>5943</i>	-	-	-
" overhang ... ..	-	-	-	-	-
Trunk aft ... ..	-	-	-	-	-
" forward ... ..	-	-	-	-	-
Tonnage opening aft ... ..	-	-	-	-	-
" forward ... ..	-	-	-	-	-
Total ... ..	<i>17593</i>	<i>17593</i>	-	-	<i>17593</i>

Standard Height of Superstructure	<i>1.83 m</i> <i>✓</i>
" " R.Q.D.	<i>✓</i>
Deduction for complete superstructure	<i>606</i> <i>✓</i>
Percentage covered $\frac{S}{L} =$	<i>32.38</i> <i>✓</i>
" " $\frac{S_1}{L} =$	<i>23.38</i> <i>✓</i>
" " $\frac{E}{L} =$	<i>23.38</i> <i>✓</i>
Percentage from Table, Line A. Tanker	<i>23.38</i> <i>✓</i>
(corrected for absence of forecastle (if required))	<i>✓</i>
Percentage from Table, Line B.	<i>✓</i>
(corrected for absence of forecastle (if required))	<i>✓</i>
Interpolation for bridge less than .2L (if required)	<i>✓</i>
Deduction = $606 \times .2338 = - 142 \text{ mm}$	<i>✓</i>

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ... ..	<i>707</i>	<i>1</i>	<i>707</i>	<i>0</i>	<i>46</i>	<i>1</i>	<i>46</i>
$\frac{1}{2}L$ from A.P. ... ..	<i>314</i>	<i>4</i>	<i>1256</i>	<i>0</i>	<i>18</i>	<i>4</i>	<i>72</i>
$\frac{2}{3}L$ " ... ..	<i>705</i>	<i>2</i>	<i>157</i>	<i>0</i>	<i>-</i>	<i>2</i>	<i>-</i>
Amidships ... ..	<i>-</i>	<i>4</i>	<i>-</i>	<i>0</i>	<i>-</i>	<i>4</i>	<i>-</i>
$\frac{2}{3}L$ from F.P. ... ..	<i>157</i>	<i>2</i>	<i>314</i>	<i>0</i>	<i>-</i>	<i>2</i>	<i>-</i>
$\frac{1}{2}L$ " ... ..	<i>628</i>	<i>4</i>	<i>2512</i>	<i>0</i>	<i>-</i>	<i>4</i>	<i>-</i>
F.P. ... ..	<i>1413</i>	<i>1</i>	<i>1413</i>	<i>0</i>	<i>140</i>	<i>1</i>	<i>140</i>
Total ... ..			<i>6359</i>	<i>0</i>			<i>258</i>

Mean actual sheer aft	} deficient
Mean standard sheer aft	
Mean actual sheer forward	} deficient
Mean standard sheer forward	
Length of enclosed superstructure	} deficient
L forward of amidships	
" " aft of	sheer

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{6101}{18} \times (.75 - .1619) = + 199 \text{ mm} + 208$   
 If limited on account of midship superstructure. *5881* 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 = *4.115*  
 Summer freeboard = *800*  
 Moulded draught (d) = *3.315*

## Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{48}$  inches = *69 mm*

## Addition for Winter North Atlantic Freeboard (if required) =

*not assigned*

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 1443$

Tons per inch immersion at summer load water line

T = *12.04*

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

= *3.00"*

= *76 mm*

## TABULAR FREEBOARD

Correction for coefficient  $\frac{.868 + .68}{1.36} = 1.548$

Depth Correction ... .. *56* ... *40*

Deduction for superstructures ... .. *142*

Sheer correction ... .. *208* ... *199* ... *103*

Round of Beam correction ... .. *141*

Correction for Thickness of Deck amidships ... .. *141*

Other corrections, scantlings, etc. ... .. *264*

Summer Freeboard = *800* *723*

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

*As previously assigned by American Bureau*

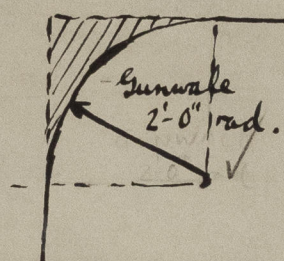
Tropical Fresh Water Line above Centre of Disc	<i>1.46</i> mm
Fresh Water Line	<i>76</i> "
Tropical Line	<i>70</i> "
Winter Line below	<i>70</i> "
Winter North Atlantic Line	<i>✓</i>

Tropical Fresh Water Freeboard	<i>559</i> mm
Fresh Water	<i>629</i> "
Tropical	<i>635</i> "
Winter	<i>775</i> "
Winter North Atlantic	<i>✓</i>



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.

## Equiv Depth :-



Area of shaded portion =

$$4 - \frac{\pi r^2}{4} = 4 - 3.1416 = .8584 \text{ ft}^2$$

$$\text{reduction in depth} = \frac{.8584}{15} = .0572'$$

$$\text{standard round of beam } \frac{30}{50} \times 12 = 7.2''$$

$$\text{equiv mean camber} = 4.8'' = .4000'$$

$$\therefore \text{Equiv mld depth} = 13.5' - .46' = 13.04' / = 3.974 \text{ m}$$

$$\text{Equiv sheer forward} = .46' \times 12 = 5.52'' / = 140 \text{ mm}$$

$$\text{aft } \left[ 13.5 - \frac{7.2}{12} \left( \frac{10.75}{15} \right)^2 \right] - 13.04 = 1.82'' / = 46''$$

$$\frac{13.50}{.308} \quad \frac{1}{6} \text{ from AP} = .0572 \times 12 = .69'' / = 18''$$

$$13.192$$

$$13.04$$

$$.152 \times 12 = 1.824$$

$$\text{Length BP } 182.50'$$

$$\text{less } 3.75 + .5 = 4.25'$$

$$\text{Freebd length } 178.25 = 54.33 \text{ m}$$

Trade of ship... Carrying inflammable and combustible liquid cargoes between North European ports and Poland

Names of sister ships... one of a series built for the United States Army

Builder's name and yard number... Greece in the State of New York during 1944

Owners... Gdynia America Lines Ltd.

Fee... 32,000 Zloty; applied for 8th August 1947 and received 18th August 1947.

Expenses 600 "



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