

AMENDED (with 1966 tabular freeboards)

Rpt. C.11 (Comp.)

For LONDON OFFICE ONLY

# LLOYD'S REGISTER OF SHIPPING

## SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER)

Received \_\_\_\_\_  
Index No. \_\_\_\_\_  
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Owners C11 \_\_\_\_\_

Ship's Name <b>TINA ONASSIS</b>	Official Number <b>328</b>	Nationality and Port of Registry <b>LIBERIAN MONROVIA</b>	Gross Tonnage <b>1953</b>	Date of Build <b>1953</b>	Port of Survey <b>LONDON H.P.</b>
Moulded Dimensions: Length <b>220.50 m</b> Breadth <b>29.00 m</b> Depth <b>15.735 m</b>					Date of Survey <b>8.9.66</b>
Freeboard Length <b>220.50 m</b>					Surveyor's Signature <b>Ens</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>68600 m<sup>3</sup></b> tons					Particulars of Classification <b>+ 100 Ft</b>
Coefficient of fineness for use with Tables <b>.802</b>					<b>OIL TANKER</b>

<b>DEPTH FOR FREEBOARD (D).</b> Moulded depth ... .. <b>15.735</b> Stringer plate ... .. <b>.036</b> Wood Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <b>15.771</b>	<b>DEPTH CORRECTION.</b> (a) Where D is greater than Table depth (D-Table depth) R = $(15.771 - 14.700) 250$ $= 268 \text{ mm}$ (b) Where D is less than Table depth (if allowed) (Table depth-D) R = If restricted by superstructures	<b>ROUND OF BEAM CORRECTION.</b> Moulded Breadth (B) Standard Round of Beam = $\frac{B \times 12}{50} =$ Ship's Round of Beam = Difference Restricted to Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S}{L} \right) = \frac{30}{4} \times .6505 = +5 \text{ mm}$
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DEDUCTION FOR SUPERSTRUCTURES.				
Mean Covered Length (S)	Equivalent Enclosed Length (S)	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..	49.130	49.130	2966	49.130
" overhang ... ..				
R.Q.D. enclosed ... ..				
" overhang ... ..				
Bridge enclosed ... ..				
" overhang aft ... ..				
" overhang forward ... ..				
F'cle enclosed ... ..	32.344	32.344	3228	32.344
" overhang ... ..				
Trunk aft ... ..				
" forward ... ..				
Tonnage opening aft ... ..				
" " forward ... ..				
Total ... ..	81.474	81.474		81.474

Standard Height of Superstructure **2.30 m.**  
 " " R.Q.D. \_\_\_\_\_  
 Deduction for complete superstructure **1070 mm**  
 Percentage covered  $\frac{S}{L} =$   
 $\frac{S_1}{L} =$   
 $\frac{S_2}{L} =$   
 $\frac{E}{L} =$   
**36.95**  
 Percentage from Table, Line A. **27.95**  
 (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 =  $1070 \times .2795 = 299 \text{ mm}$

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	M	Product
A.P. ... ..		1			1192	1192	1	1192
1/2 L from A.P. ... ..		4			238	238	4	952
1/2 L " ... ..		2			0	0	2	0
Amidships ... ..	0	4	0	0	0	0	4	0
1/2 L from F.P. ... ..		2			0	0	2	0
1/2 L " ... ..		4			246	246	4	984
F.P. ... ..		1			1687	1687	1	1687
Total ... ..				18813				4815

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \left( \frac{13998}{18} - 148 \right) \left( .75 - \frac{.56525}{.18475} \right) = 356 \text{ mm}$   
 If limited on account of midship superstructure.  
 Deduction for Tropical Freeboard.  
 Addition for Winter and Winter North Atlantic Freeboard.  
 Depth to Freeboard Deck = **51.74**  
 Summer freeboard = **11.08**  
 Moulded draught (d) = **40.66**  
 Keel allowance 1/8" = **.11**  
 Extreme draught = **40.77**  
 Deduction for Tropical freeboard and addition for = **10 3/4**  
 Winter freeboard =  $\frac{d}{4}$  inches = **10.17 = 10 1/4**  
 Addition for Winter North Atlantic Freeboard (if required) = **10.17 + 7.23 = 17.40 = 17 1/2**

ALLOWANCE FOR EXCESS HT. OF POOP =  $\frac{.66}{3} \times \frac{49.13}{220.5} = 49 \text{ mm}$   
 ALLOWANCE FOR EXCESS HT. OF F'CLE =  $\frac{.2034}{3} \times \frac{32.344}{220.5} = 99 \text{ mm}$   
 Mean actual sheer aft =  
 Mean standard sheer aft =  
 Mean actual sheer forward =  
 Mean standard sheer forward =  
**DEFICIENT**  
 Length of enclosed superstructure forward of amidships =  
 " " aft of " =  
**TANKER DEFICIENT SHEERS.**

Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 62,878 \text{ mt}$ Tons per inch immersion at summer load water line $T = 145.29 \text{ mt/in}$ Deduction = $\frac{\Delta}{T}$ inches $= 40 \text{ T}$ $= 10.82$ $= 10 3/4$	<b>TABULAR FREEBOARD corrected for Flush Deck (if required)</b> Correction for coefficient $\frac{.802 + .68}{1.36} = 1.482$ Depth Correction ... .. <b>268</b> Deduction for superstructures ... .. <b>299</b> Sheer correction ... .. <b>356</b> Round of Beam correction ... .. <b>5</b> Correction for Thickness of Deck amidships ... .. Other corrections, scantlings, etc. ... .. <b>629 299 + 330</b> <b>Summer Freeboard = 3378 = 132.99"</b>
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**SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-**

Tropical Fresh Water Line above Centre of Disc	21.0"	Tropical Fresh Water Freeboard	9'-4"
Fresh Water Line	10 3/4"	Fresh Water	10'-2 1/4"
Tropical Line	10 1/4"	Tropical	10'-2 3/4"
Winter Line below	10 1/4"	Winter	11'-1 1/4"
Winter North Atlantic Line	17 1/2"	Winter North Atlantic	12'-6 1/2"

(26 JAN 1967)