

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. **34487**
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having

Port of Survey

(Type of Superstructures.)

Date of Survey **10/5/34**

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

Name of Surveyor

Moulded Dimensions: Length **102.106** Breadth **17.070** Depth **4.495**
Moulded displacement at moulded draught = 85 per cent. of moulded depth
Coefficient of fineness for use with Tables **.832**

Particulars of Classification **7100AT**
carry petroleum in bulk
(Contingent)

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	4.495	(a) Where D is greater than Table depth (D-Table depth) R =		Moulded Breadth (B)	17.070
Stringer plate	11			Standard Round of Beam = $\frac{B \times 100}{50}$	341
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Ship's Round of Beam	357
		$8.33(6.807-4.506) \times 25.78 = -494$		Difference	16
Depth for Freeboard (D) =	4.506	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L}\right)$	$\frac{16}{4} \times 2342 = -1$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	26.412	26.412	2.210	✓	26.412
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
Forecastle enclosed ...	12.008	12.008	2.210	✓	12.008
" overhang ...					
Trunk enclosure 63.646		39.775	2.210	✓	39.775
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	38.420	78.195			78.195

Standard Height of Superstructure **2090**

" " R.Q.D. ✓

Deduction for complete superstructure **957**Percentage covered $\frac{S}{L} = 37.63$ " " $\frac{S_1}{L} = 76.58$ " " $\frac{E}{L} = 76.58$ Percentage from Table, Line A. **Tanker 7109**

(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 = $957 \times 7109 = -680$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	1105	1		1105	450	450	1		450
$\frac{1}{8}L$ from A.P. ...	491	4		1964	-	-	4		-
$\frac{2}{8}L$ " ...	123	2		246	-	-	2		-
Amidships ...	-	4		-	-	-	4		-
$\frac{3}{8}L$ from F.P. ...	245	2		490	-	-	2		-
$\frac{4}{8}L$ " ...	982	4		3928	125	125	4		500
F.P. ...	2210	1		2210	1372	1372	1		1372
Total ...				9943					2322

Mean actual sheer aft = **Deficient**
Mean standard sheer aftMean actual sheer forward = **Deficient**
Mean standard sheer forward

Length of enclosed superstructure forward of amidships =

" " aft of " =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(75 - \frac{S}{2L} \right) = \frac{76.21}{18} (75 - 1881) = +238$

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 = **4506**
Summer freeboard = **420**
Moulded draught (d) = **4086**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{48} \text{ inches} = 85.4$ Addition for Winter North Atlantic Freeboard (if required) = $85 + 84 = 169$

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$

Tons per inch immersion at summer load water line

T =

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

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{832 + 68}{1.36} = \frac{1.512}{1.36}$

	+	-
Depth Correction	-	494
Deduction for superstructures	-	680
Sheer correction	238	-
Round of Beam correction	-	1
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc.	-	-
	238	1175

Summer Freeboard = **422**

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

Tropical Fresh Water Line above Centre of Disc ... **18 cm**
Fresh Water Line " " ... **9**
Tropical Line " " ... **9**
Winter Line below " " ... **9**
Winter North Atlantic Line " " ... **17**

Tropical Fresh Water Freeboard ... **24**
Fresh Water " ... **33**
Tropical " ... **33**
Winter " ... **51**
Winter North Atlantic " ... **59**