

13298.

Rpt. C.11.

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Index. No. \_\_\_\_\_  
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker  
having Poop, Bridge and Forecastle

(Type of Superstructures.)

Ship's Name M/S TANKLAND Nationality and Port of Registry Swedish Gothenburg Official Number 8498 Gross Tonnage 8044 (Swed.) Date of Build 1941 11

Moulded Dimensions: Length 141.921 m Breadth 18.518 m Depth 10.363 m  
Moulded displacement at moulded draught = 85 per cent. of moulded depth 18370 m<sup>3</sup>  
Coefficient of fineness for use with Tables 7935

Port of Survey Gothenburg  
Date of Survey 7<sup>th</sup>, 9<sup>th</sup> and 20<sup>th</sup> of October 1941  
Name of Surveyor Bertrand Grawers  
Particulars of Classification contemplated + 100 A1 carrying Petroleum in Bulk

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... 10363	(a) Where D is greater than Table depth (D - Table depth) R = $8.33(10.363 - 9.461)30 = +231\%$	Moulded Breadth (B) 18518 mm
Stringer plate ... 21.5 mm ... 22	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 8}{50} = 370$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = 386 mm
Depth for Freeboard (D) = 10385		Difference <u>excess</u> = 16 "
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{16}{4} \times 0.6437 = -3\%$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S) mm	Equivalent Enclosed Length (S <sub>1</sub> )	Height mm	Height Correction	Effective Length (E)
Poop enclosed ...	28.684	29063	2286	-	29063
... overhang ...	29063				
R.Q.D. enclosed ...					
... overhang ...	9950	9950	2286	-	9950
Bridge enclosed ...	9.625				
... overhang aft ...					
... overhang forward ...					
Fore enclosed ...	11560	11560	2286	-	11560
... overhang ...					
Forecastle aft ...					
... forward ...					
Forecastle opening aft ...					
... forward ...					
Total ...	50.573	50.573			50.573

Standard Height of Superstructure	2290 mm
" " R.Q.D.	
Deduction for complete superstructure	1067 mm
Percentage covered $\frac{S}{L} =$	35.63
" " $\frac{S_1}{L} =$	35.63
" " $\frac{E}{L} =$	35.63
Percentage from Table, <u>Line A. Tanker</u> (corrected for absence of forecastle (if required))	26.63%
Percentage from Table, <u>Line B.</u> (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction = $1067 \times 0.2663$	= -284 mm

## SHEER CORRECTION.

Station	Standard Ordinate mm	S	Product	Actual Ordinate mm	Effective Ordinate	S	Product
A.P. ...	1436	1	1436	1016	1016	1	1016
1/4 from A.P. ...	638	4	2552	371	371	4	1484
1/2 " ...	160	2	320	64	64	2	128
Amidships ...	0	1	-	0	0	1	0
3/4 from F.P. ...	319	2	638	193	193	2	386
1/4 " ...	1270	4	5104	886	886	4	3544
F.P. ...	2872	1	2872	2032	2032	1	2032
Total ...	2032		12922				8590

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{75 - S}{21} \right) = \frac{4332}{18} \left( \frac{75 - 1782}{5718} \right) = +138\%$

If limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft. ✓

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line $\Delta = 17046 \text{ tons}$	Correction for coefficient $2009 \times \frac{7935 + 68}{1.36}$
Depth to Freeboard Deck = 10385	Tons per inch immersion at summer load water line $T = 58.84$	Depth Correction ... 231
Summer freeboard = 2259	Deduction = $\frac{\Delta}{40 T}$ inches $= 7.24 = 184\%$	Deduction for superstructures ... 284
Moulded draught (d) = 8126	See end of report	Sheer correction ... 138
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{48}$ inches = 169 mm		Round of Beam correction ... 3
Addition for Winter North Atlantic Freeboard (if required) = $169 + 116 = 285$		Correction for Thickness of Deck amidships ...
		Other corrections, scantlings, etc. ...
		369 287 + 82
		Summer Freeboard = 2259 mm

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

Tropical Fresh Water Line above Centre of Disc ...	353 mm	Tropical Fresh Water Freeboard ...	1906 mm
Fresh Water Line ...	184	Fresh Water ...	2075 "
Tropical Line ...	169	Tropical ...	2090 "
Winter Line below ...	169	Winter ...	2428 "
Winter North Atlantic Line ...	285	Winter North Atlantic ...	2544 "