

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.
(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index. No. _____
(For London Office only).

HANGA
ex

Ship's Name M/T "SVERBORG"	Official Number 8644	Nationality and Port of Registry Swedish Stockholm.	Gross Tonnage 8500	Date of Build 1944	Port of Survey Malmö.
Moulded Dimensions: Length 465.75' Breadth 62.0' Depth 34.5'					Date of Survey Whilst building.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 18830 tons					Surveyor's Signature Adunden
Coefficient of fineness for use with Tables .7783					Particulars of Classification 100A1 Carrying Petroleum in Bulk. (Completed)

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth 34.5'	(a) Where D is greater than Table depth (D—Table depth) R = (34.56—31.05) 3 = +10.53"	Moulded Breadth (B) 62.0'
Stringer plate .76" = 0.63'	(b) Where D is less than Table depth (if allowed) (Table depth—D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 14.88$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = 14.97'
Depth for Freeboard (D) = 34.563'		Difference trans 0.09
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.09}{4} \times .5873 = -.01"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	97.11'	97.11	7.25'		97.11
» overhang					
R.Q.D. enclosed					
» overhang	38.33'	38.33	7.25'		38.33
Bridge enclosed					
» overhang aft					
» overhang forward	56.79'	56.79	7.5'		56.79
Deck enclosed					
» overhang					
Trunk aft					
» forward					
Tonnage opening aft					
» forward					
Total	192.23'	192.23			192.23

Standard Height of Superstructure **7.5'**

» » R.Q.D.

Deduction for complete superstructure **42"**

Percentage covered $\frac{S}{L} = 41.27$

» » $\frac{S_1}{L} = 41.27$

» » $\frac{E}{L} = 41.27$

Percentage from Table, Line A. **Yanker** (corrected for absence of forecastle [if required]) **32.27%**

Percentage from Table, Line B. (corrected for absence of forecastle [if required])

Interpolation for bridge less than 2L (if required)

Deduction = **42 × .3227 = -13.55"**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	56.57	1	56.57	41.74"	41.74	1	41.74		
1/6 L from A.P.	25.18	4	100.72	3.02"	3.02	4	12.08		
2/6 L	6.22	2	12.44	0	0	2	-		
Amidships	-	4	-	0	0	4	-		
2/6 L from F.P.	12.44	2	24.88	0.08"	0.08	2	0.16		
1/6 L	50.35	4	201.40	25.88"	25.88	4	103.52		
F.P.	113.15	1	113.15	100.25"	100.25	1	100.25		
Total			509.16				257.75		

Mean actual sheer aft = **Deficient.**

Mean standard sheer aft =

Mean actual sheer forward = **Deficient.**

Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = **Yanker with deficient sheer.**

» » aft of » =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{251.41}{18} (.75 - .2064) = +7.59"$

If limited on account of midship superstructure. **5436** If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard.	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 17270$ Tons per inch immersion at summer load water line $T = 61.05$ Deduction = $\frac{\Delta}{40 T}$ inches = $\frac{17270}{40 \times 61.05} = 7.08" = 180\%$ See over.	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{7783 + .68}{1.36} = \frac{1.4583}{1.36}$ Depth Correction 10.53 Deduction for superstructures - 13.55 Sheer correction 7.59 Round of Beam correction - .01 Correction for Thickness of Deck amidships - Other corrections, scantlings, etc. - 18.12 13.56 + 4.56 Summer Freeboard = 89.40"
Depth to Freeboard Deck = 34.56 Summer freeboard = 7.45 Moulded draught (d) = 27.11		
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $\frac{6.78}{4} = 1.72\%$ Addition for Winter North Atlantic Freeboard (if required) = $\frac{6.78 + 4.66}{4} = 11.44" = 291\%$		

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

Tropical Fresh Water Line above Centre of Disc	352 7/8	Tropical Fresh Water Freeboard	2271 7/8
Fresh Water Line	180 "	Fresh Water	1919 "
Tropical Line	172 "	Tropical	2091 "
Winter Line below	172 "	Winter	2099 "
Winter North Atlantic Line	291 "	Winter North Atlantic	2443 "
			2562 "

Sveaborg.

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.

Displacement in salt water and tons per inch immersion:-

Moulded draught.	Displacement	Tons per inch.
75% = 25.875'	14345 tons.	60.87
80% = 27.60'	17630 "	61.12
85% = 29.325'	18900 "	61.37

Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £

M/T "Glimmingehus", Kockums Yard No. 248.

Kockums Mek. Verkstad's A.B., Malmö, Yard No. 263.

Stockholms Rederi A.B. Svea, Stockholm.



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