

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

SUFFOLK COAST (COMPUTATION FOR STEAMER, ~~SAILING SHIP, TANKER~~)

Ship's Name M.V. "MARALI".	Official Number 166362	Nationality and Port of Registry British London Liverpool	Gross Tonnage not yet measured 535 541 M.O.T. 175.52	Date of Build Building	Port of Survey Groningen.
Moulded Dimensions: Length 155'-0" Breadth 28'-0" Depth 11'-10"					Date of Survey 21th of January 1938.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 905. tons					Surveyor's Signature <i>R. H. Wehrmeyer</i>
Coefficient of fineness for use with Tables .726					Particulars of Classification * 100 A-1. Class contemplated.

Depth for Freeboard (D).		Depth correction.	Round of Beam correction.
Moulded depth	11'-10"	(a) Where D is greater than Table depth (D - Table depth) R = $(11.86 - 10.33) 1.192 = +1.82"$	Moulded Breadth (B) 28'-0"
Stringer plate	.32"	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 6.72"$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		If restricted by superstructures	Ship's Round of Beam = $9\frac{1}{2}"$
Depth for Freeboard (D) =	11.86		Difference 2.78 excess
			Restricted to
			Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{2.78}{4} \times .2629 = -.18$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	48'-10"	48.82	6'-11"		48.82
" overhang ...	- .84				
R.Q.D. enclosed ...	47'-10"	47.84	3'-3"	3.28	46.60
" overhang ...	-				
Bridge enclosed ...	-				
" overhang aft ...	-				
" overhang forward ...	-				
Fore enclosed ...	17'-10"	17.59	6'-11"		17.59
" overhang ...	-				
Trunk aft ...	-				
" forward ...	-				
Tonnage opening aft ...	-				
" forward ...	-				
Total ...	114.25	114.25			113.01

Standard Height of Superstructure	6.00
" " R.Q.D.	3.367
Deduction for complete superstructure	21.5
Percentage covered $\frac{S}{L} =$	73.71
" " $\frac{S_1}{L} =$	73.71
" " $\frac{E}{L} =$	72.92
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	66.59
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction = $21.5 \times .6659 =$	14.32

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	25.50	1		25.50	25 5/16	25.31	1		25.31
1/4 L from A.P. ...	11.345	4		45.38	10 5/8	10.625	4		42.50
1/2 L " ...	2.805	2		5.61	2."	2.00	2		4.00
Amidships ...		4			0.		4		
3/4 L from F.P. ...	5.61	2		11.22	9 1/16	9.06	2		18.12
3/4 L " ...	22.69	4		90.76	28 3/16	28.19	4		112.76
F.P. ...	51.00	1		51.00	55"	55.00	1		55.00
Total ...				229.47					257.69

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{28.22}{18} \left(\frac{.75 - .3685}{.3815} \right) = -.60$
 If limited on account of midship superstructure. *Yes. No allowance*

Mean actual sheer aft = *Deficient out 75% of standard*
 Mean standard sheer aft
 Mean actual sheer forward = *excess*
 Mean standard sheer forward
 Length of enclosed superstructure forward of amidships = $> 1L$ (Deficient Height)
 " " aft of " = $.5L$

Deduction for Tropical Freeboard.
 Addition for Winter and Winter North Atlantic Freeboard.

RAISED QUARTER
 Depth to Freeboard Deck = 15.14
 Summer freeboard = 3.62
 Moulded draught (d) = 11.52

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $2.88 = 3"$
 Addition for Winter North Atlantic Freeboard (if required) = $5"$

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta = 1105$
 Tons per inch immersion at summer load water line
 $T = 13.5$

Deduction = $\frac{\Delta}{40T}$ inches
 $= \frac{1105}{40 \times 13.5} = 2.05$
 $\frac{1}{4} = 3" - 2"$

TABULAR FREEBOARD corrected for Flush Deck (if required)
 Correction for coefficient $\frac{.726 + .68}{1.36} = \frac{1.406}{1.36}$

	+	-
Depth Correction	1.82	
Deduction for superstructures		14.32
Sheer correction		
Round of Beam correction		.18
Correction for Thickness of Deck amidships		
Other corrections, <i>higher beams, quarter, etc.</i>	39.36	
Summer Freeboard =	41.18	14.50 + 26.68 = 43.43

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

Tropical Fresh Water Line above Centre of Disc	5"
Fresh Water Line	3.3"
Tropical Line	2" (LIMITED)
Winter Line	3"
Winter North Atlantic Line	5"

Tropical Fresh Water Freeboard	3' 7 1/2"
Fresh Water	3' 2 1/2"
Tropical	3' 4 1/2"
Winter	3' 5 1/2" (LIMITED)
Winter North Atlantic	3' 10 1/2"
	4' 0 1/2"

15 FEB 1938

011079 - 011088 - 0158

22 JAN 1940

RECEIVED 17 FEB 1938

1400 3 3

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.

Trade of ship Sea going trade.

Names of sister ships -----

Builder's name and yard number N.V.E.J.Smit en Zoon, at Westerbroek. Yard No. 653.

Owners London Owners.

Fee £ F1.96.-



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Lloyd's Register
Foundation

MARALI.