

PRELIMINARY

# LLOYD'S REGISTER OF SHIPPING

## SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER)

For LONDON OFFICE ONLY

Received .....  
Index No. ....  
Govt. Copy .....  
Owners C11 .....

Ship's Name <b>LENGTHENING OF "MOBILE RADIANT"</b>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey <b>LONDON OFFICE</b>
					Date of Survey <b>26/9/62</b>
Moulded Dimensions: Length <b>206.253 m</b> Breadth <b>25.145 m</b> Depth <b>12.954 m</b>					Surveyor's Signature _____
Freeboard Length <b>206.253 m</b>					Particulars of Classification _____
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>45859 m<sup>3</sup></b> tons					
Coefficient of fineness for use with Tables <b>801 / (.706)</b>					

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... <b>12.954</b>	(a) Where D is greater than Table depth (D-Table depth) R =	Moulded Breadth (B) <b>25.145</b>
Stringer plate ... <b>26</b>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <b>8.33(13.790-12.980) 30 = 202.2</b>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{25.145 \times 12}{50} = 503$
Wood Sheathing on exposed deck	If restricted by superstructures <b>NO</b>	Ship's Round of Beam = <b>503</b>
$T \left( \frac{L-S}{L} \right) =$		Difference <b>0</b>
Depth for Freeboard (D) = <b>12.980</b>		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S}{L} \right) = \frac{0}{4} \times \left( 1 - \frac{25.145}{12.980} \right) = \text{NIL}$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
From previous 011 Poop enclosed EQU. ...	41.144	41.144	2.591	NIL	41.144
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
From previous 011 Bridge enclosed EQU. ...	13.975	13.975			13.975
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	22.300	22.300			22.300
" overhang ...	1.770	1.885			1.885
Trunk aft ...		57.770			57.770
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	79.189	136.074			136.074

Standard Height of Superstructure **2.290 m**

R.Q.D. **1.870 m**

Deduction for complete superstructure **1067 m<sup>3</sup>**

Percentage covered  $\frac{S}{L} = \frac{136.074}{206.253} = 38.28\%$

$\frac{S_1}{L} = \frac{136.074}{206.253} = 65.78\%$

Percentage from Table, Line A. TANKER = 58.36 (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 =  $1067 \times 58.36 = 623\%$

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	1977	1		1977	394	394	1		394
$\frac{1}{2}L$ from A.P. ...	878	4		3512	66	66	4		264
$\frac{3}{4}L$ " ...	220	2		440	29	29	2		118
Amidships ...	0	4		0	0	0	4		0
$\frac{3}{4}L$ from F.P. ...	439	2		878	29	29	2		118
$\frac{1}{2}L$ " ...	1757	4		7028	66	66	4		264
F.P. ...	3934	1		3934	500	500	1		500
Total ...				17789	394	394			1352

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{S}{2L} \right) = \frac{16437}{18} \left( \frac{1}{2} \right) = 456.25$

If limited on account of midship superstructure.

Mean actual sheer aft = **500**

Mean standard sheer aft = **500**

Mean actual sheer forward = **499**

Mean standard sheer forward = **499**

Length of enclosed superstructure forward of amidships = **499 m**

Length of enclosed superstructure aft of amidships = **499 m**

Excess H<sub>1</sub> of Poop = 2591 - 2290 = 301

SHEER ALLOWANCE =  $\frac{301}{3} \times \frac{29300}{206853} = 14.2\%$

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

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **12.980**

Summer freeboard = **2.990**

Moulded draught (d) = **9.990**

Keel allowance =

Extreme draught =

Deduction for Tropical freeboard and addition for =

Winter freeboard =  $\frac{d}{4}$  inches =

Addition for Winter North Atlantic Freeboard (if required) =

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

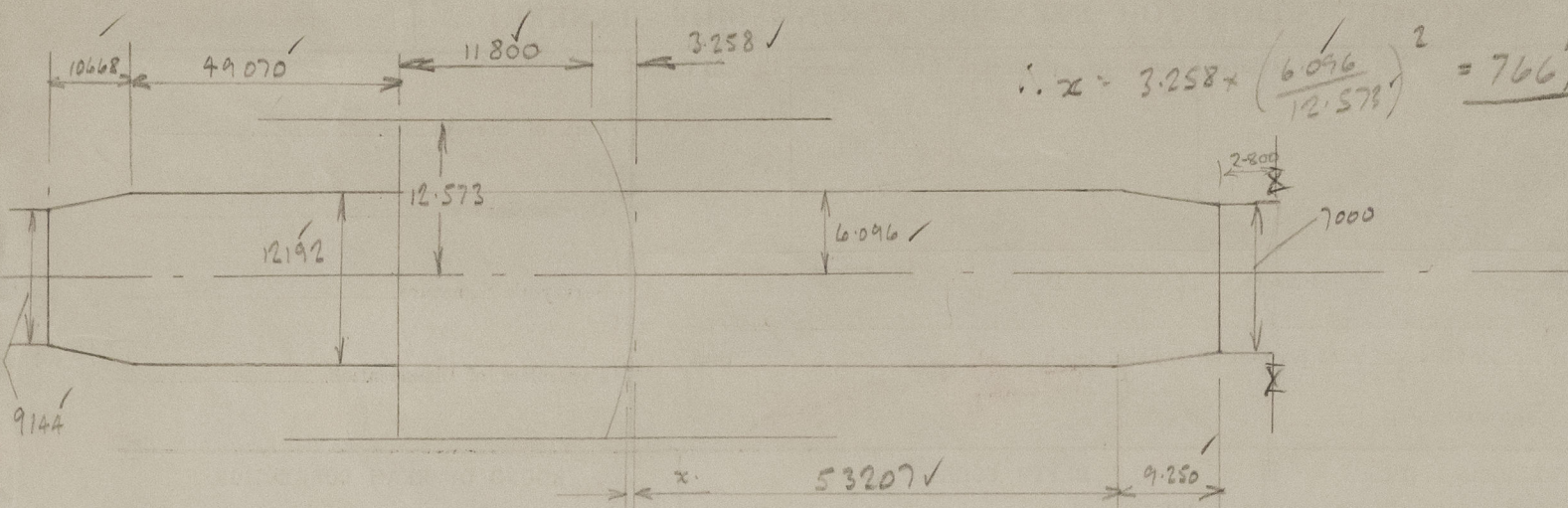
## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{201.62}{1.76} \times \frac{1.481}{1.76}$	<b>3045</b>
Depth Correction ...	<b>3045</b>
Deduction for superstructures ...	<b>3316</b>
Sheer correction ...	<b>3045</b>
Round of Beam correction ...	<b>3045</b>
Correction for Thickness of Deck amidships ...	<b>3045</b>
Other corrections, scantlings, etc. ...	<b>3045</b>
Summer Freeboard = <b>2990</b>	<b>2990</b>

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

Tropical Fresh Water Line above Centre of Disc ...	Tropical Fresh Water Freeboard ...
Fresh Water Line " " ...	Fresh Water " " ...
Tropical Line " " ...	Tropical " " ...
Winter Line below " " ...	Winter " " ...
Winter North Atlantic Line " " ...	Winter North Atlantic " " ...

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.

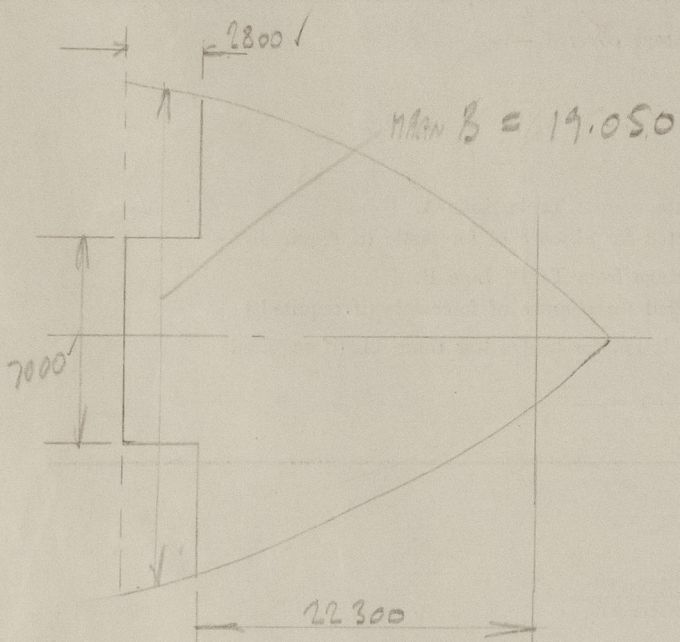


$$\begin{aligned} \text{EQU LENGTH OF TRUNK} &= \left( 10668 \times \frac{12192 + 9144}{2} \right) + (49070 \times 12192) + \left[ 53207 + \frac{766}{2} \right] \times 12192 + \left[ 9250 \times \frac{12192 + 7000}{2} \right] \\ &= 113740 + 598822 + 651400 + 887603 \\ &= 25145 \end{aligned}$$

$$\begin{aligned} &= \frac{452750}{25145} + \frac{(2800 \times 7000)}{25145} = \frac{1472.239}{25.145} \\ &= 57.770 \text{ } \cancel{58.550} \text{ M} \end{aligned}$$

not allowed on account of class II openings in fore & no end bld to trunk.

Equiv length of Bridge = 13.975M (see previous column).



no credit can be given for portion of fore extending aft beyond 22.300M from FP. (Class 2 C.A. in Fore).  
 $\therefore$  Length of fore = 22.300M & Overhang = 2.800M.

FORE 1/4 EQU LENGTH  

$$2800 \times \frac{19.050}{19.050} = 1.770$$

Trade of ship.....

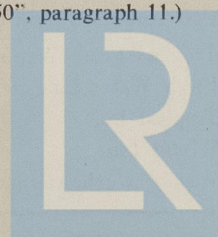
Names of sister ships.....

Builder's name and yard number.....

Owners .....

Fee £.....

List of plans forwarded for reference. (See "Instructions to Surveyors, Part 4, 1950", paragraph 11.)



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