

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD-STEAMERS.

Port of Survey  
Date of Survey 22-11-30.  
Name of Surveyor

Ship's Name.	Port of Registry and Nationality.	Official Number.	Gross Tonnage.	Date of Build.	Particulars of Classification.
T.S.S. LIMPOPO.	LORENZO MARQUES. PORTUGUESE.			1930.	100 A.1.
Number in Register Book					

Moulded dimensions 170.0 x 30.0 x 11.50

Moulded displacement at a moulded draught of 85 per cent. of moulded depth

Coefficient of fineness for use with tables

985 tons

$$COEFF = \frac{985 \times 35}{170.0 \times 30.0 \times 11.5 \times 85} = .692$$

### DEPTH FOR FREEBOARD.

Moulded depth	...	...	...	...	11.50
Stringer plate	...	...	...	...	.04
Sheathing in wells	$T \left( \frac{L-S}{L} \right) = .21 \left( \frac{170-119.4}{170} \right)$				.06
Depth D =	...				11.60

### CORRECTION FOR LENGTH.

(a) When D is greater than $\frac{L}{15}$	$(D - \frac{L}{15}) \times R = (11.60 - 11.33) \times 1.307 = +.35$
(b) When D is less than $\frac{L}{15}$ (if allowed).	$(\frac{L}{15} - D) \times R = ...$
If restricted by height of superstructures	...

### SUPERSTRUCTURES.

	Mean Covered Length S.	Equivalent Enclosed Length S <sub>1</sub> .	Height.	Correction for Height.	Effective Length.
Poop enclosed	18.83	18.83	8'-0"	✓	18.83
" overhang	3.50	1.75			1.75
R.Q.D. enclosed					
" overhang					
Bridge enclosed	42.17	42.17	8'-0"	✓	42.17
" overhang aft	23.50	17.62			17.62
" overhang forward	7.87	3.93			3.93
F'cle enclosed	22.83	22.83	8'-0"	✓	22.83
" overhang HOUSES	.70	.70			.70
Trunks forward					
" aft					
Tonnage opening					

See sketch on back of form.

TOTAL =

Length of ship (L) =

% Covered ... =

Corresponding %, corrected for absence of forecastle if required

Allowance ... =

119.40

107.83

170.00

70.23%

63.43%

A = 51.83%

B = 51.83%

23.0

x .5183

107.83

170.00

63.43%

Correction for Bridge less than 2L if required

= -11.92

### SHEER.

Station.	Actual Sheer.	Standard Sheer.	Allowed Sheer.	S. M.	Products.
A.P. 1)	27.00	27.00	27.00	1	27.00
2)	15.00		15.00	4	60.00
3)			6.68	2	13.36
4)			1.67	4	6.68
5)				2	
6)			3.33	7	23.31
7)			13.32	2	26.64
F.P. 7	30.00		30.00	4	120.00
	54.00	54.00	54.00	1	54.00

If excess sheer forward and deficient sheer aft :-

$$\frac{\text{Actual sheer aft}}{\text{Standard sheer aft}} = 99.11\% \text{ deficient}$$
$$\frac{\text{Actual sheer forward}}{\text{Standard sheer forward}} = 99.11\% \text{ defective}$$

Length of enclosed superstructure

L

Forward of amidships =

Aft of amidships =

Mean effective sheer ...	...	...	...	...	13.38
Standard sheer .05L + 5 =	...	...	...	...	13.50
Difference (Df)	...	...	...	...	.12
Allowance = $Df \times (.75 - \frac{S}{2L})$	...	...	...	...	.05
If limited on account of amidship superstructure	...	...	...	...	✓
If limited on account of excess sheer (1½ in. per 100 ft.)	...	...	...	...	✓

### ROUND OF BEAM.

Standard	...	...	...	...	7.20
Ship	...	...	...	...	7.50
Difference	...	...	...	...	.30
Restricted to	...	...	...	...	✓
Allowance = $\frac{\text{Difference}}{4} \times (1 - \frac{S}{L})$	...	...	...	...	.03

### TABULAR FREEBOARD (corrected for flush deck if required) =

Corrected for Coefficient  $.692 + \frac{.68}{1.86} = 1.01 \times 18.30 = 18.48$

Correction for Length	...	...	...	...	.35
" Superstructures	...	...	...	...	11.92
" Sheer	...	...	...	...	.05
" Round of beam	...	...	...	...	.03
" Thickness of deck	...	...	...	...	.75
" Scantlings, etc.	...	...	...	...	-
" Statutory deck line	...	...	...	...	-

+	-
.35	
	11.92
.05	
	.03
	.75
.40	12.70

Summer Freeboard = 6.18

FREEBOARD recommended amidships from centre of Disc to top of Statutory Deck Line, (Steel) Deck :-

Fresh Water Line	above centre of Disc	...	...	...	...
Indian Summer Line	"	"	"	"	...
Winter Line	below	"	"	"	...
Winter North Atlantic Line	"	"	"	"	...

