

No. 477 Ship, "Venice Maru."

LIGHT DISPLACEMENT

AND

DEADWEIGHT CARRYING CAPACITY.

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1. - Draught and Displacement at 10.30 A.M., June 8th, 1921:-

Temperature of sea water ... ... ... ... ... ... 69° F.

Specific gravity of sea water by Baume's hydrometer 1.020

Weight of sea water per cub.ft. 62.373 x 1.020 = 63.620 lbs.

Where 62.373 is the weight of 1 cub.ft. of fresh water

at 59° F. (Water with unit specific gravity) in lbs.

Draught at ends : Forward ... ... ... ... ... 6' 2 $\frac{15}{16}$ "

Aft ... ... ... ... ... 12' 5 $\frac{15}{16}$ "

Mean ... ... ... ... ... 9' 4 $\frac{7}{16}$ "

Trim by the stern ... ... ... ... 6' 3" = 6.25 ft.

Draught amidships: Port ... ... ... ... ... 10' 0 $\frac{1}{2}$ "

Starboard ... ... ... ... ... 9' 4 $\frac{1}{2}$ "

Mean ... ... ... ... ... 9' 2 $\frac{1}{2}$ "

Hogging h = 9' 4 $\frac{7}{16}$ " - 9' 2 $\frac{1}{2}$ " = ... ... ... ... 1 $\frac{15}{16}$ "

Change in displacement by one ft. trim(35 cub.ft. per ton) 7.80 tons

Tons per inch immersion T = ... ... ... ... ... 39.27

Longitudinal I of W.P. about midship I = 143,860,000 Sq.ft.  
x Sq. ft.

Displacement at 9' 4 $\frac{7}{16}$ " draught, even keel(35 cub.ft.per ton) 4,053.8 tons

Correction for the trim - 7.80 x 6.25 = - 48.6 "

\* \* \* hogging = - h x ( $T - \frac{I}{105L^2}$ )

$$= -1\frac{15}{16} \times (39.27 - \frac{143,860,000}{105 \times 400^2})$$

$$= -1\frac{15}{16} \times (39.27 - 6.35) = - 58.9 "$$

Displacement corrected for the trim & hogging(35 cub.ft. 3,945.1 tons per ton)

Displacement further corrected for the density of sea water

$$3,945.1 \times \frac{63.620}{64,000} = 3,921.7 \text{ tons}$$

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Lloyd's Register  
Foundation



- Weight to Come Out of Ship:-

<u>Item.</u>		<u>Respective Wt. in Tons.</u>	<u>Gross Wt. in Tons.</u>
No. 1 ballast tank	Empty	0	
No. 2 "	"	0	
No. 3 "	"	0	
No. 4 "	"	0	
No. 5 "	"	0	
Feed water tank, P F.W. Full		97.3	
" " ", S " "		97.3	
Fore peak tank	Empty	0	
After "	"	0	
Deep tank, P	"	0	
" ", S	"	0	
Settling tank, P	"	0	
" ", S	"	0	
Fresh water tank, P F.W. 5'-10"		19.4	
" " ", S " Full		20.0	
Sanitary tank	Empty	0	
Water in tanks, Total	....	334.0	
Bilge water	....	3.8	
Brine and water in refrigerating plant	....	0.7	
Water in two boilers	....	63.4	
Coal and coke	....	6.5	
Men on board (120)	....	7.1	
Temporary weight	....	6.5	
<u>Weight to come out of ship, Total</u>	....	<u>320.4</u>	

- Weight to Go On Board after the Date:-

Bedding, awning, &c. .... 1.50 tons.

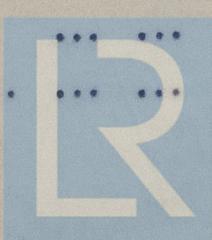
- Light Displacement and Draught:-

Displacement on June 8th, 1921, corrected for the trim, hogging  
and density of sea water .... 3,921.7 tons.

Weight to come out of ship .... 320.4 "

Weight to go on board after the date .... 1.50 "

Equipped weight .... 3,602.8 tons



Mr. Dk.  
edge House  
castle  
on Deck  
Hatchway  
of

Deduct height of 'tween deck when this does not exceed 8ft.

Concourse Number

29.0  
82

Built at

When built 1921

Launched 22<sup>nd</sup> Aug

(Continued)

Boiler water	...	...	...	...	...	...	...	...	...	89.4 tons.
Light displacement	...	...	...	...	...	...	...	...	...	3,692.2 tons.
Corresponding draught	...	...	...	...	...	...	...	...	...	8'-7 $\frac{1}{4}$ "

5. - Deadweight Carrying Capacity:-

Displacement at 28'-0" draught (Summer Load Draught)	13,420.0 tons.
Light displacement	- 3,692.2 "
<u>Deadweight Carrying Capacity</u>	<u>9,727.8 tons.</u>

