

LLOYD'S REGISTER  
LONDON.

RECD

13 DEC 1921

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YOKOHAMA

11th August, 1921.

James. Crichton

The Builders examine the calculation of Displacement, weight of Hull Machinery and Equipment and Dead Weight carrying capacity of the Steel Screw Steamer "MANDAI MARU" Yard No.16 at the Nitto Dockyard Co Osaka and find the following figures to be correct with a reasonable degree of approximation viz 8390 tons. Displacement at the draught of 24-1/2, corresponding to the Board of Trade summer load line.

Weight of equipped Hull and machinery including water in boilers and condensers = 3408.13 tons.

Deadweight = 5087.87 tons.

The principal upon which the above figures are based is summarised in the signed sheets accompany this certificate.

*James Crichton*

*Surveyor to Lloyd's Register*

*Fee 600.00*  
*Arch 50.00*



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to the Chief Ship Surveyor.

12 DEC 1921

Referred to Mr. Magno.

*Handwritten signature and notes*

Signature  
James Fisher

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(1)

S. S. "BANDAI-MARU"

Dead weight calculation &c.:-

- 1) Date, 3rd, Aug., 1921 at Port of Shimidzu.  
Draught forward, 10'-1 $\frac{3}{4}$ "  
aft, 14'-0 $\frac{1}{4}$ "  
mean, 12'-1 $\frac{1}{4}$ "  
Trim by the stern, 3'-11" or 47 inches.
- 2) Corresponding displacement to the above draught,  
even keel, in 35 cub.ft. per ton 3,880.00 tons.  
Corresponding tons per inch immersion, 30.00 "  
Centre of flotation before amidships, 2.92 feet.
- 3) Reduction of displacement due to trim,  
$$\frac{2.92 \times 47.00 \times 30.00}{340} = 12.11 \text{ tons.}$$
- 4) Corrected displacement in tons for trim,  
 $3,880.00 - 12.11 = 3,867.89 \text{ tons.}$
- 5) Temperature of water, 79° Fah.  
Density of water at above temperature,  
$$\frac{0.9968 + 0.0468}{\text{Sea water}} = \frac{1.0436}{1.0286} = 1.014$$
  
Fresh water
- 6) Corrected displacement in tons for density,  
 $3,867.89 \times 1.014 = 3,922.04 \text{ tons.}$
- 7) Weight to go on board, 32.28 "
- 8) Weight to come off, 1,552.19 "



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(2)

9) Total weight of vessel,

$$3,922.04 + 32.28 - 1,552.19 = 2,402.13 \text{ tons.}$$

10) Displacement at Board of Trade's Summer Load Line,

or at 24'- 1 $\frac{1}{4}$ " mean draught 8,390.00 tons.

11) Dead weight carrying capacity,

$$8,390.00 - 2,402.13 = 5,987.87 \text{ tons.}$$

Say 5,988 tons.



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