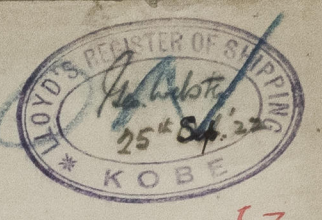


DISCLOSED SECTION

11th NOV. 1922



No 371 J.7

(CLASSIFICATION SOCIETY RECOGNISED BY THE JAPANESE GOVERNMENT)
FREEBOARD COMPUTATION SHEETS. JAPANESE VESSELS

OFFICIAL NUMBER	VESSEL'S NAME "TATEISHI MARU"	Port of Survey	Yokohama
Yokohama Dock Co's No. 96.		No. of Report	9
TONNAGE, Gross	UNDER DECK 3444.45	DATE	4th Sept. 1922
PORT OF REGISTRY	KAWANO (FUKUIKEN)	NAME OF SURVEYOR	Jas. Crichton.
TYPE OF VESSEL	Full Scantling, Poop, Bridge and Forecastle.	OWNERS	Ukon Shoji Kabushiki Kaisha
PARTICULARS OF CLASS	100 A.1. Lloyd's Teishinsho 1st class.	TRADE	
SITUATION OF FREEBOARD DECK	Upper deck.	FLYING LIMITS	Ocean going.
		BUILDERS	Yokohama Dock Co.
		DATE WHEN BUILT	1922
		LAUNCHED	September 1922

PRINCIPAL DIMENSIONS

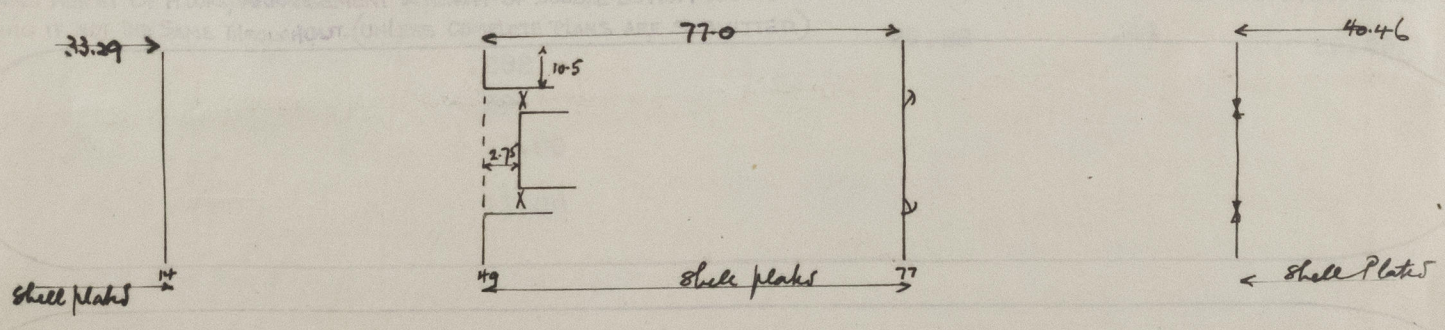
LENGTH REGISTERED	345	FT	BREADTH, MOULDED	= 50.0	FT	DEPTH, MOULDED	29	1.25	actual measure - point
LENGTH ON LOAD LINE		FT	THICKNESS SIDE PLATING		FT	THICKNESS STRINGER PL.		.54	
			IN INCHES $\times \frac{1}{2} =$.68	$\times \frac{1}{2} =$	THICKNESS WOOD DECK			
			OR IF JOGGED $\times \frac{3}{4} =$		$\times \frac{3}{4} =$	CORRECTION FOR INITIAL		1.29	
						WOOD JOIST OR SUPER-STRUCTURES (ART. 1-4)			
						CORRECTED DEPTH	29	3.08	
LENGTH FOR FREEBOARD	345	FT	BREADTH FOR FREEBOARD	50.17	FT	DEPTH FOR FREEBOARD	29.26		

COEFFICIENT OF FINENESS (ART. 39)

$$F = \frac{100(V \pm v)}{L(D - 25)(D + B + d) + 7v} = \frac{100(3444.45 - 19.24)}{345 \times 50.17 - .61 \times 26.69 - .00 \times .39} = \frac{3444.21}{17380.17} = .74$$

Tonnage UNDER FREEBOARD DECK = 3444.45
Tonnage BETWEEN TOP OF DOUBLE BOTTOM OR ORIGINARY FLOORS (INCLUDING ORIGINARY FIRST FLOORS) AND TOP OF UPPER DECK = 19.24
LENGTH OF VESSEL = 345 FT
B = BREADTH OF VESSEL OUTSIDE PLATING AT PROMEST POINT = 50.17 FT
D = DEPTH FROM TOP OF FREEBOARD DECK BEAM AT CENTRE LINE TO TOP OF UPPER BOTTOM RATING OR ORIGINARY FLOORS = 26.69 FT

HEIGHT OF UPPER DECK	(ACTUAL) 11.68	INS	DEPTH DOUBLE BOTTOM	(ACTUAL) 42.48	INS
	(STANDARD) 8	INS	OR ORIGINARY FLOORS	(STANDARD) 43.98	INS
DIFFERENCE	3.68	$\times \frac{3}{4} = .61$	WORKING	DIFFERENCE 1.50	$\times \frac{1}{2} = .13$
MEAN SHEER	(ACTUAL) 19.56	INS	TL = ZERO FOR VESSELS WITH DOUBLE BOTTOMS AND 0.02 FOR VESSELS WITH ORIGINARY FLOORS		
	(STANDARD) 14.83	INS			
DIFFERENCE	4.73	$\times \frac{1}{2} = .39$			



6"x2" Cargo Batten in all holds and tier decks.
2 1/2" ceiling on Tank Top on 2" Battens throughout all holds.

	40.46	assume	119.8
	77.00	"	227.9
----	33.29	"	98.5

Sum of products	446.2
Sum of products	446.2
length word dk	1.29
Sum of products	345
length of vessel	

TIME FOR HEIGHT OF SUPERSTRUCTURES (Hrs. 46 to 49)

Height = (0.0151 + 1.9) ft = (0.015 345 + 1.9) = 7.41

Complete Superstructure	Forcastle	Bridge	Stack
7.75	7.75	7.75	
7.41	7.41	7.41	

	Mean length	Cost	Height	Product
40.46	1.0	1.0	40.46	
75.45	1.0	1.0	75.45	
1.55	.75	1.0	1.16	
33.29	1.0	1.0	33.29	

	150.36	
150.36		
345	.44	
	.282	
	39	
	11.00	
	11.00	

$\frac{1}{200} (1 - \frac{1}{2})(10 + 10)(1 - 100)$
 $= \frac{1}{200} (1 - \frac{1}{2}) \cdot 200 \cdot (-99)$
 $= .282 \quad 29.26 \quad 345 \quad 29.26$
 $= .79$

Standard read of 12m. = 11.52 ins.

Correction = $\frac{1}{4}$ (Standard Read of Bm - Actual Rd of Bm)

= $\frac{1}{4}$ (11.52 - 12.5) = -.25

height of shear		
6' - 11 $\frac{5}{8}$ "	83.63	83.63
3' - 0 $\frac{3}{16}$ "	36.19	144.76
8 $\frac{1}{16}$ "	8.06	16.12
0 7"	0.00	
1 $\frac{1}{16}$ 5"	1.44	2.88
1' - 3 $\frac{3}{8}$ "	15.63	62.52
3' - 6 $\frac{1}{8}$ "	42.13	42.13

Sum of products = 352.04

Mean height of shov, $\bar{S} = \frac{\text{Sum of products}}{15} = 19.56$

Standard mean shov, $S_0 = \frac{1}{3} \left(\frac{1}{10} + 10 \right) = 14.83$

Correction = $\frac{3}{2} (1 - c) (S_0 - \bar{S})$

$= \frac{3}{2} (.282) (14.83 - 19.56) = - 2.55$

SUMMARY OF COMPUTATION

Freeboard by the Tables 79.44 ins.

Correction for Partial Wood Deck	1.29
Superstructures	11.00
Proportions L/D	.79
Round of Beam	.25
Sheer	2.55
Freeing ports & access	
Totals	-15.88
Net correction	

Distance from upper edge of fresh water line indicating the position of the centre of the disc	63.56
	= 63.6 ins.
Distance from centre of the Fresh Water line	6.0 ins. measured upward
Distance from centre of the Tropical Load line	5.1 ins. measured upward
Distance from centre of the Winter Load line	5.1 ins. measured downward
Distance from centre of the Winter N.A. line	- ins. measured downward
Distance from the point of action of the extended line of the surface of the Steel Upper deck at the mid-length of the vessel with the hull shell plating to the upper horizontal line indicating the freeboard deck	0.00 ins. measured upward

Resulting Geometric Draught = 23.85

Frame spacing 10x3 1/2 x 3 1/2 x .42 Channel

" " 10x3 1/2 x 3 1/2 x .40 "

23"

STRENGTH & MODULAE

Standard longitudinal Modulus (Arts. 75 & 76)

$I = f \cdot d \cdot b$ Full Scantling Vessel

Standard thickness side plating (Art. 77)

$$0.105 L + 17 = 0.105 \cdot 100 + 17 = 27.5$$

100

100

Actual thickness

Standard frame spacing (Art. 78)

$$0.022 L + 17 = 0.022 \cdot 100 + 17 = 29.2$$

or 27 if L be not greater than 100 ft

Actual frame spacing

Where the frame spacing exceeds the standard, the standard thickness of side plating is to be taken as

$$\sqrt{\frac{S}{S_0}} \times t = \text{ins.}$$

S = Actual frame spacing

S_0 = Standard frame spacing

t = thickness side plating

Standard Transverse Modulus (Arts. 79 & 80)

$$I = (d - t) \cdot (t_1 + t_2) = \text{ins.}^4$$

1000

1000

Actual least Transverse Modulus

Draught due to longitudinal strength

$$\text{Draught} = \frac{M}{S \cdot f}$$

Draught due to transverse strength (Art. 84)

$$\text{Draught} = \frac{1500 M}{S \cdot f \cdot l}$$



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0160 3/4

CLOSING APPLIANCES FOR SUPERSTRUCTURES

	FORECASTLE	BRIDGE		POOP OR RAISED QUARTER DECK
		FORWARD END	AFTER END	
MEANS OF CLOSING OPENINGS IN SIDEWALLS	Channels & Storm Board $\frac{1}{2}$ height	Two Steel W.T. Doors.	Channels & Storm Boards $\frac{1}{2}$ height	Two Steel W.T. Doors.
CORRESPONDING CLASS (ART. 5-34)	1V	1.	1V	1.

ACCESS TO CREW'S QUARTERS IN VESSELS HAVING A FORECASTLE AND LONG POOP AND IN VESSELS OF LESS THAN 15 FT. MOULDED DEPTH HAVING A FORECASTLE, BRIDGE AND POOP.

ARE CREW BERTHED IN BRIDGE HOUSE OR FORECASTLE?

HEIGHT AND BREADTH OF GANGWAY.

CORRECTION (ART. 5-66) = $.012(30-L) D$ INS. = $.012(30-)$ INS.
OR $.12(F-.05) D$ INS. = $.12(- .05)$ INS.

DETAILS OF CONSTRUCTION OF THE WEATHER DECK HATCHWAYS.

	Nº 1	Nº 2	Nº 3	Nº 4	Nº 5	Nº 6	Nº 7	Nº 8
LENGTH AND BREADTH	27.5 x 18	33' x 18'	30.25 x 18'	27.5 x 18'				
HEIGHT ABOVE DECK AND THICKNESS OF COAMING	24 x .44	24 x .44	24 x .44	24 x .44				
SHIFTING SCAMS NUMBER AND MATERIAL SCANTLING	5 Steel	7 Steel	6 Steel	5 Steel				
	P 15 x .36	14 $\frac{1}{2}$ x .34	15 $\frac{1}{4}$ x .34	15 x .36				
	A 3 $\frac{1}{2}$ x 3 $\frac{1}{2}$ x .44	3 $\frac{1}{2}$ x 3 $\frac{1}{2}$ x .44	3 $\frac{1}{2}$ x 3 $\frac{1}{2}$ x .44	3 $\frac{1}{2}$ x 3 $\frac{1}{2}$ x .44				
FORE AND AFTERS NUMBER AND MATERIAL SCANTLING	None	None	None	None				
THICKNESS OF HATCHES	3"	3"	3"	3"				
REMARKS	7 x 3 $\frac{1}{2}$ x .4 B.A. stiffener at sides and ends of hatches.							

* WHEN THE FORE AND AFTERS ARE OF WOOD THE DEPTH SHOULD BE STATED FROM THE UNDERSIDE OF THE HATCHES.

ARE THE ENGINE AND BOILER OPENINGS COVERED BY A BRIDGE, POOP, RAISED QUARTER DECK, OR ENCLOSED BY A STRONG STEEL DECKHOUSE?

Covered by Bridge

IF OPENINGS ARE NOT SO PROTECTED GIVE THICKNESS OF PLATING AND SCANTLING AND SPACING OF STIFFENERS OF CASINGS.

ARE SUITABLE MEANS PROVIDED FOR CLOSING ALL OPENINGS IN THEM IN BAD WEATHER? Yes

STATE VERTICAL DISTANCE FROM BASE LINE AT TOP OF KEEL TO LOWER EDGE OF LOWEST SIDE SCUTTLE. 26'-7"

STATE IF THERE ARE ANY CARGO PORTS OR SCUPPERS THROUGH SIDES OF VESSEL BELOW UPPER DECK. No

STATE ANY SPECIAL FEATURES IN THE CONSTRUCTION OF THE VESSEL.

Sister vessel to S/S "Eastern Guide".

Fee = Yen

Keel = 2.50"



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