

DISCLOSED
BAY No. 204

LLOYD'S REGISTER OF SHIPPING.
(CLASSIFICATION SOCIETY RECOGNISED BY THE JAPANESE GOVERNMENT)
SURVEY FOR FREEBOARD.

HUZISAN MARU

Ship's Name M.S. "FUJISAN MARU"	Port of Registry Fachu.	Official No.	No. in R.B.	Gross Tonnage About 9300	Tonnage under Fbd. Deck = V 8612.50	Date of Launch 31st May 1931	Date when Built 1931	Report Number 81
Owners Iino Shoji Kab. Kaisha.		Builders Harima Shipbuilding and Engineering Co. Ltd.			Yard No. 179	Port of Survey Oh. Harima.		
Type of vessel Full scantling Tanker	Particulars of Classification * 100 A-1 Carrying Petroleum in Bulk		Position of Freeboard Deck Upper deck.		Date of Survey While building.			
Two Long. Bds.						Name of Surveyor H.M. Parker.		

PRINCIPAL DIMENSIONS.

Length between perpendiculars 490 ft.	Breadth Moulded = B ₀ 65 ft.	Depth Moulded to Fbd. deck = D ₀ 37 ft.
Length on Load Line ft.	Thickness of Side plating in ins. x $\frac{3}{12}$70 ft.	Round of Beam + 1.38 ft.
Length for Freeboard = L 490 ft.	* (2/12 if plating is joggled)	* Depth from base of bottom plating to top of upper floor 38.38 ft.
	Breadth for Freeboard = B 65.18 ft.	Depth from base of bottom plating to top of ordinary floor 1.57 ft.
		Depth for Tonnage Coef. (Art. 39) = D 36.81 ft.

CORRECTION TO TONNAGE (Art. 39)

Tonnage between top of ceiling on double bottom or ordinary floors as fitted and standard level of top of ceiling (v) = **-452.76** tons.

DEPTH OF DOUBLE BOTTOM (Art. 39)

* Depth of Actual Double Bottom (including plating) or Ordinary Floors **18.84** ins.
Depth of Standard Double Bottom (including plating) or Ordinary Floors **+ 2 1/2" Ceiling 52.08** ins.
Difference **-33.24**
x $\frac{1}{12}$ = **-2.77** d.

SHEER (Arts. 39 and 60-63)

Ordinate	Height of Sheer in inches.	S.M.	Products
1	60.00	1	60.00
2	11.88	4	47.52
3	0	2	0
4	0	4	0
5	0	2	0
6	21.13	4	84.52
7	108.00	1	108.00

Sum of Products = **300.04**

Mean Height of Sheer = S = $\frac{\text{Sum of Products}}{18}$ = **16.67** ins.
Standard Mean Height = S₀ = $\frac{1}{3}(L/10 + 10)$ = **19.67** ins.
Difference = **3.00** x $\frac{1}{12}$ = **-.25** ft. = d₁
Correction (Arts. 60-63) = $\frac{1}{4}(1 - e)(S_0 - S)$ = **1.62** ins.

FRAMING (Art. 39)

Between Frames	Length in ft.	Depth of Frame in ins.	Thickness of Sparring in inches	Total depth in inches	Products ft. x inches
FP & 108	25.32	9.06	--	9.06	229.40
108-79	65.25	11.82	2	13.82	901.76
79-44	28.50	8.84	--	8.84	2559.18
44-10	89.25	13.25	--	13.25	1182.56
10-AP	20.68	9.06	--	9.06	187.36

* Mean depth of side long **18.84**

490.00

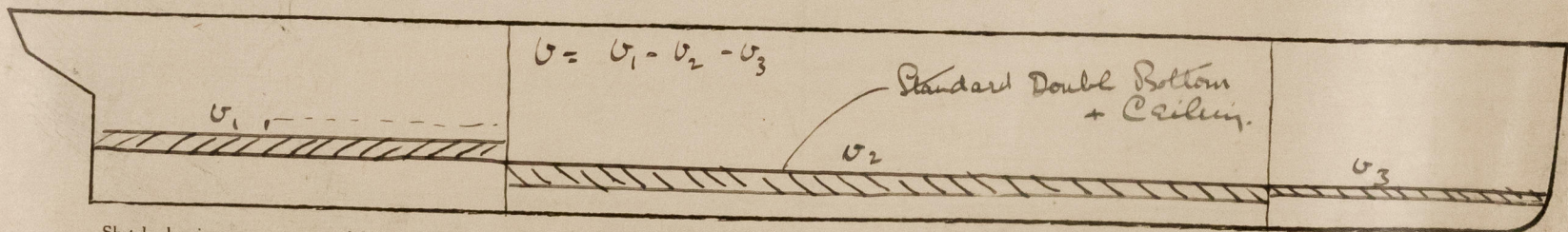
Sum of Products = **5060.26**

Sum of Products = Actual Mean Depth of framing **10.33** ins.
Length of Ship **7 1/2" + 2** **9.5** ins.
Standard " " " " **.83** ins.
Difference **.14** x $\frac{2}{12}$ = **= 2b**

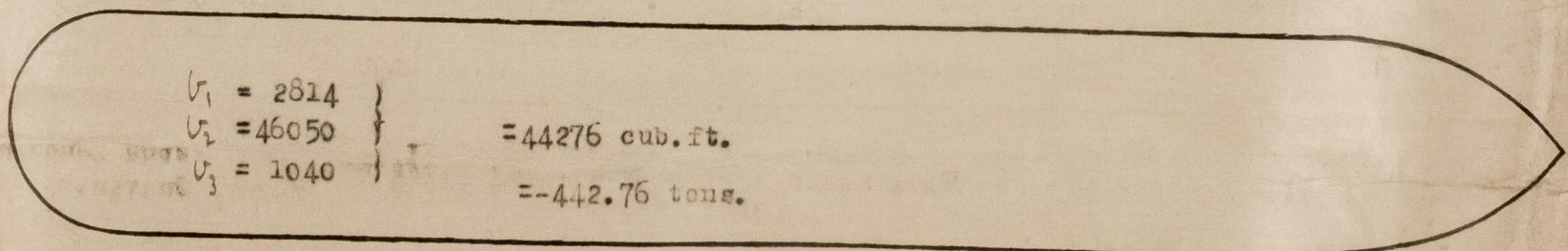
COEFFICIENT OF FINENESS (Art. 39 or 43)

$$\frac{100(V \pm v)}{L(B - 2b)(D + d + d_1) + n}$$
$$\frac{100(8612.50 - 442.76)}{490(65.18 - .14)(36.81 \pm 2.77 - .25)} = 76$$

$$\text{or } \frac{35 \times \Delta}{L \times B_0 \times d_0} + 0.04$$
$$= \frac{35 \times 1.38}{490 \times 65 \times 37} + 0.04 = 0.04$$

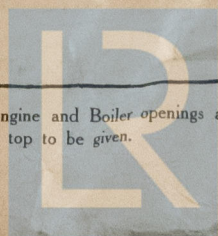


Sketch showing arrangement and height of double bottom or ordinary floors and of superstructures (unless complete plans are submitted).



Sketch of deck erections showing openings in end bulkheads and position and arrangement of closing appliances. Hatchways, and Engine and Boiler openings also to be shown. Extent and thickness of wood deck or composition to be shown in red ink, and extent and thickness of ceiling (and battens) on tank top to be given.

W1343-0053 1/2



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WOOD DECK (Arts. 5 and 6)

	Mean Length in ft.	Thickness in ins.	Products
Forecastle	36.65	3.75	137.44
Bridge	37.50	2.72	102.00
Poop or R.Q.D.	146.80		
Open Deck, fwd.			
" " aft.			
Total length = l =	220.95		
Sum of Products =			600.98
Sum of Products = t =		ins. ;	Sum of Products = t ₁ = 1.23 ins.

CORRECTION FOR DEPTH & CORRECTION FOR FREEBOARD.

If no sheathing fitted amidships = t₁ = ± 1.23 ins. (Arts. 6 and 57 p. 1)
 If sheathing is fitted amidships = (t - t₁) = 0 ins. (Arts. 6 and 57 p. 2)
 *Note: Use the upper sign in correction for depth and the lower sign in correction for freeboard.

DEPTH TO USE IN FREEBOARD TABLE.

Depth moulded = 37 ft. 0 ins.
 Thickness of Stringer Plate = 0.78
 Thickness of Wood Deck Amidships = 37 - 0.78 = 36.22
 Correction for partial wood deck = + 1.23
 Depth to use in Freeboard Tables = 37 ft. 2.01 ins. = D₁ = 37.17 ft.

SUPERSTRUCTURES.

HEIGHT (Arts. 46-48)
 Standard Height = (0.018 L + 1.2) ft. = 7.5 ft.

	Complete Superstructure	Forecastle	Bridge	Poop or R.Q.D.
Actual	7.62	1	7.63	1
Standard	7.5	1	7.5	1

CLOSING APPLIANCES (Arts. 50 and 54)

	Forecastle	Bridge	Poop or Raised Quarter Deck
Means of Closing openings in bulkhead	Full height riveted Channels	Steel W.T.D.	Full height riveted Channels
Corresponding Class	II	I	I

EFFECTIVE LENGTH (Arts. 55 and 56)

	Mean Length	Coef. Art. 56	Height Coef.	Products
Forecastle closed part	36.65	1.0	1.0	36.65
" open part	34.00	1.0	1.0	34.00
Bridge closed part	2.75	.50	1.0	1.38
" open part fwd.	.75	.75	1.0	.56
Poop closed part	144.00	1.0	1.0	144.00
" open part	2.75	.50	1.0	1.38
Total Effective Length =				217.97
Length of Vessel = l =				217.97
Corresponding Coef. in Table (Art. 49) = e =				.202
Reduction for Complete Superstructure				11.00
Product				11.00
Correction for Superstructures				11.00

EFFECTIVE LENGTH (Shelter Deck Vessels Arts. 87-92)

l + 1/2(1-p)(L-l) = 217.97 ft.
 (* See Art. 90)

CORRECTION FOR PROPORTIONS L/D (Art. 58)

When D₁ is less than 35 ft. = $\frac{D_1 + 16}{300} (1 - e/2) (L - 12 D_1)$
 " " greater than 35 ft. = $0.17 (1 - e/2) (L - 12 D_1)$
 [Note e = 1.0 if more than 6/10 covered] = 6.42 ins.

Are the Engine and Boiler openings covered by a Bridge, Poop, Raised Quarter Deck or enclosed by a strong steel deck house? **Yes, Poop**

If openings are not so protected give thickness of plating and scantlings and spacing of stiffeners of Casings **--**

Are suitable means provided for closing all openings in them in bad weather? **Yes**

State the vertical distance from base line at top of keel to lower edge of lowest side scuttle **--**

tate if there are any cargo ports or scuppers through sides of vessel below upper deck **All above freeboard deck.**

ate any special features in the construction of the vessel **Oil Tanker, longitudinal system of framing.**

ter vessels **--**

Yen **--**; Depth of Keel **--** ins.; Draught (btm. keel) **--** ft. **--** ins.

DETAILS OF CONSTRUCTION OF WEATHER DECK HATCHWAYS.

	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6
Length and Breadth	24'9" x 22					
Height above deck and thickness of side and end coaming	30" x .44					
Shifting Beams	19 x .36 4 1/2 x 3 x .46					
*Fore and Afters						
Thickness of hatches	2 1/2					
Remarks						

* When the fore and afters are of wood the depth should be stated from the underside of hatches.

LONGITUDINAL MODULUS.

Height of Assumed Axis above base = **--** Section at **--**

BELOW ASSUMED AXIS.						ABOVE ASSUMED AXIS.					
Item	Scantlings	Area	Lever	Moment	Mt. of Inertia	Item	Scantlings	Area	Lever	Moment	Mt. of Inertia
Flat Keel						Top Deck Str.					
" "						" " "					
Centre Girder						" " Plating					
C.G. btm. ang.						" " "					
C.G. top angles						" " "					
T.T. Cr. Strake						" " Str. Ang.					
T.T. plating						2nd Deck Str.					
" "						" " Plating					
" "						" " "					
" "						" " Str. Ang.					
Margin Plate						3rd Deck Str.					
" "						" " Plating					
" Angle						" " "					
Shell Strake A						" " Str. Ang.					
" " B						Sheerstrake					
" " C						Strake below					
" " D						Shell Strake					
" " E						" "					
" " F						" "					
" " G						" "					
Totals below assumed axis						Totals above assumed axis					
" above assumed axis											
Sum or Difference											

Neutral Axis above assumed axis (x) = **--**
 below assumed axis = **--**
 Correction = (Total Area x x² x 2) = **--**
 Moment of Inertia about Neutral Axis = **--**
 Distance from Neutral Axis to top of Strength deck beam at side = **--** ft.
 Keel
 MODULUS OF SECTION = **--**

DRAUGHT PERMITTED BY LONGITUDINAL STRENGTH (Arts. 81-86) = $\frac{\text{Actual Modulus}}{f \cdot B_o} = \text{--}$

TRANSVERSE MODULUS.

Minimum Side Plating (Art. 77) $\frac{0.105 \times +17}{100} = \text{--}$; Standard Frame Spacing (Art. 78) = .025 X +17 = **--**

Actual Side Plating = **--**; Actual Frame Spacing = **--**

If actual frame spacing exceeds the standard $\sqrt{\frac{\text{Actual frame spacing}}{\text{Standard frame spacing}}} t = \text{--}$

Moulded Geometric Draught (d) = **--** H = **--**
 t = **--** K = **--** f₂ = **--**
 d - t = **--** f₁ + f₂ = **--**

Standard I/y = $\frac{s(d-t)(f_1 + f_2)}{1000} = \text{--}$

Frame in ship = **--** at **--** spacing, I/y = **--**

DRAUGHT PERMITTED BY TRANSVERSE STRENGTH = $\frac{I/y \times 1000}{s(f_1 + f_2)} + t = \text{--}$