

STEEL STEAMER or MOTORSHIP.

29 DEC 1930

Received at London Office

State if Report has been sent on the Freeboard of the Vessel *yes*State if Report is sent on the Machinery of the Vessel *yes*Date of completion of report *26th Nov 1930* Port of *Kobe* No. *7150*
Survey held at *Osaka* Date First Survey *14th June 1929* Last Survey *21st November 1930*On the *(State if Machinery fitted Aft and* *Twin Screw motorship* *HEIAN MARU*
of Single, Twin or Triple Screw)
State Type *(Full scantling, Complete Superstructure* *Intermediate Type* *State Type of Erections* *Single Long Bridge*
*with or without Tonnage Openings)*TONNAGE under *9380.54* CLASS *H-100A1* State if with freeboard *yes* Built at *Osaka*
Tonnage Deck...
Do. of space or spaces Length from fore part of stem to after part of stern } L *510.00* Launched *16th April 1930* and No. *1128*
between Tonnage Dk. post on summer L.W.L. See Sec. 3 (1a) }
and Upper Dk. Breadth (greatest moulded) B *66.00* Builders *Osaka Iron Works Ltd.*
Total Depth, at middle of length from top of keel to top of beam at side of uppermost continuous } D *41.06* Owners *Nippon Yusen Kaisha*
Gross Tonnage *11616.46* 1st Longitudinal Number (L x D) = *20940* Managers
Register Tonnage *6788.83* 2nd Numeral L x (B + D) = *54600* *(Where necessary to be entered in Reg. Book.)*

REGISTERED DIMENSIONS.

FEET.
h *511.6*
dth *66.0*
h *41.0*Framing Depth "d," at middle of length. See *19.87*
Sec. 3 (1d) *2R. 16.80*
Proportions—Depth to Length—Uppermost con- *BR. 18.50*
tinuous deck to top of keel *12.44*
Do. Long Bridge to top of keel *10.20*
Draught Moulded *30.06*

Residence

Port of Registry *Tokyo*

If surveyed while building, afloat, or in dry dock

Building.

FRAMES, DOUBLE BOTTOM AND BEAMS.

	INCHES IN SHIP.	Any Departure from Approved Plans to be Noted.		INCHES IN SHIP.	Any Departure from Approved Plans to be Noted.
IES, Spacing amidships	33"		Bracket Floors, Frame		
" from $\frac{3}{8}$ length to Collision } bulkhead.....}	27"		" " Reversed Frame		
" in peaks.....	24"		" " Vertical Struts		
FRAMING.			Centre Girder, depth and thickness amidships	<i>49$\frac{1}{2}$ x .64</i>	
me Amidships, Angle or <i>N.B.S.</i>	<i>10 3$\frac{1}{2}$ 42</i>	<i>See framing plan for details</i>	" " top Angles	<i>3$\frac{1}{2}$ 3$\frac{1}{2}$ 60 double</i>	
" Extends up to <i>Bridge & upper alternately</i>		<i>See appd. plans</i>	" " bottom Angles	<i>5 5 .70 double</i>	
ersed Frame Amidships, Angle	<i>6 3 42</i>		Side Girders, No. each side and thickness	<i>1 Continuous .46 thick</i>	
" " Extends up to... <i>Third Deck</i>			Margin Plate depth (excl. of flange) and thickness	<i>44 x .60</i>	
th of Framing Girder.....	<i>11"</i>		" " Vertical Angle to Tank side Bracket abaft $\frac{1}{4}$ len. from stem	<i>6 6 50 ship</i>	
mes in Uppermost Continuous 'tween } Decks, Angle or <i>N.B.S.</i> }	<i>10 3$\frac{1}{2}$ 40</i>	<i>See appd. plans</i>	" " Vertical Angle to Tank side Bracket forward $\frac{1}{4}$ len. from stem	<i>ditto 9 in appd. plan</i>	
" Second 'tween Decks, Angle or <i>N.B.S.</i>	<i>ditto</i>		" " Gussets, spacing and scantling abaft $\frac{1}{4}$ len. from stem.....	<i>.46 at every frame</i>	
" Third (Partial) <i>5 N.B.S.</i>	<i>10 3$\frac{1}{2}$ 50</i>		" " Gussets, spacing and scantling forward $\frac{1}{4}$ len. from stem.....	<i>.46 at every frame</i>	
uming in Peaks, Angle <i>N.B.S.</i>	<i>10 3$\frac{1}{2}$ 40</i>		Tank Side Brackets, height above base line at toe of Frame and thickness	<i>79$\frac{1}{4}$ x .50</i>	
meter and Spacing of Rivets through Frame and Shell Plating amidships	<i>7/8" Rivets 6 diam. apart</i>		INNER BOTTOM PLATING.		
te if Frame Joggled <i>Joggled</i>			Breadth and thickness of Middle Line Strake	<i>58 x .58</i>	
ING ARRANGEMENTS (Sec. 7), state system and particulars	<i>Stirrups 38 x .45" ditto S.A. plan</i>		Thickness of remainder in Holds	<i>.50</i>	
NGTHENING OF BOTTOM FORWARD. State Particulars	<i>Shell plating increased .04 in</i>		Are Rule requirements complied with regarding increases of scantlings in way of double bottom in E. & B. space and framing in Bunkers and Boiler Room?.....	<i>yes</i>	
LE BOTTOM.			BEAMS.		
ors, Depth and thickness at mid-line in Holds			Uppermost Continuous Deck, amidships in Wells, Angle, <i>C or F</i>	<i>9 x 3$\frac{1}{2}$ x 3$\frac{1}{2}$ x 37</i>	
Height of Brackets at side above base line at toe of frame			" " in way of Bridge, Angle, <i>C or F</i>	<i>9 x 3$\frac{1}{2}$ x 3$\frac{1}{2}$ x 34</i>	
dle Line Keelson, on Floors, Angles, <i>C or F</i>			Spacing	<i>33"</i>	
" " Through Plate or Intercoastal Plate...			Second Deck, amidships, Angle, <i>C or F</i>	<i>9 x 3 x 3 x 34</i>	
" " Foundation Plate on Floors			Spacing.....	<i>33"</i>	
" " Flat Plate Keel Angles			Third Deck, amidships, Angle, <i>C or F</i>	<i>9 x 3$\frac{1}{2}$ x 3$\frac{1}{2}$ x 46</i>	
Keelsons, No. each side			Spacing.....	<i>33</i>	
" thickness of Intercoastal Plate...			Fourth Deck, amidships, Angle, <i>C or F</i>	<i>9 x 3$\frac{1}{2}$ x 3$\frac{1}{2}$ x 48</i>	
" Angles			Spacing.....	<i>33"</i>	
LE BOTTOM.			Prop Deck, Angle, <i>C or F</i>		
Solid Floors, thickness and spacing	<i>.46 at every frame</i>		Spacing.....		
" " Are Frame and Reversed Frame joggled?.....	<i>yes</i>		Bridge Deck, Angle, <i>C or F</i>	<i>7 x 3$\frac{1}{2}$ x 3$\frac{1}{2}$ x 45</i>	
Bracket Floors, breadth and thickness at middle line.....			Spacing.....	<i>33</i>	
" breadth and thickness at margin plate.....			Forecastle Deck, Angle, <i>C or F</i>	<i>8 x 3 x 3 x 46</i>	
			Spacing	<i>27 2 14</i>	

PILLARS AND DECKS.

	INCHES IN SHIP.	Any Departure from Approved Plans to be Noted.		INCHES IN SHIP.	Any Departure from Approved Plans to be Noted.
PILLARS, No. of Rows.....	Two Rows		Stringer Plate, breadth and thickness in way of Bridge	59 1/2 x 40 x 42	alt. 52 x 40 x 42
" in 'tween Decks, Size and Spacing.....	of width		Thickness of Plating abreast Deck openings in way of Wells	44	alt. 24' opening
" " " " " "	Spaced pillars.		Thickness of Plating abreast Deck openings in way of Bridge36; .38	alt. 24' opening
" in Holds " "	See app'd plans.		Thickness of Plating within line of openings.....	.36	
" " " " " "			If Sheathed, material and thickness	3" Oregon pine	
Centre Line Bulkhead.			Third Deck.		
Stiffeners and Spacing.....			Stringer Plate, breadth and thickness.....	52 x 40	and see app'd plans
Plating, thickness of			If Plated, state thickness.....	.36	
STRINGERS AND DECKS.			Fourth Deck.		
Uppermost Continuous Deck.			Stringer Plate, breadth and thickness.....	59 1/2 x 34	
Stringer Plate, breadth and thickness in Wells	72 x 90	70 x 90 app'd	If Plated, state thickness30	
" " " " in way of Bridge	70 x 48	52 x 48 app'd	Poop Deck.		
" " " " at 20' opening	70 x 56	52 x 56	Stringer Plate, breadth and thickness		
" Angle in Wells	7 x 7 x 90		Plating, Sheathing, material and thickness		
Thickness of Plating abreast Deck openings in way of Wells	69" at 18' openings		Bridge Deck.		
Thickness of Plating abreast Deck openings in way of Bridge	72 at 20' openings		Stringer Plate, breadth and thickness.....	70 x 50	
Thickness of Plating within line of openings.....	44		Plating, Sheathing, material and thickness	48 not sheathed 46 sheathed	
If Sheathed, material and thickness	48		Forecastle Deck.		
	46		Stringer Plate, breadth and thickness.....	37 x 40	
	3 1/2 x 3" Oregon pine		Plating, Sheathing, material and thickness	32, 3" o.p.	
Second Deck.					
Stringer Plate, breadth and thickness in Wells.....	57 x 48	52 x 48 app'd			

SHELL PLATING.

SCANTLINGS.					RIVETING.						
STRAKES.	AS IN VESSEL.				ANY DEPARTURE FROM APPROVED PLANS TO BE NOTED.	EDGES.		BUTTS.			
	AMIDSHIPS.		FORWARD.	AFT.		State if jogged? <i>no</i>		RIVETS.		NO. OF ROWS OF RIVETS.	STRAPPED OR LAPPED.
	Breadth.	Thickness.	Thickness.	Thickness.		SINGLE OR DOUBLE.		Diam.	Spacing cr. to cr.		
FLAT PLATE KEEL	57	98	86	90		Double		1 1/8	4 1/2	Triple	Double Straps
" DELG. (if any)											
BOTTOM PLATING, No. of Strakes		72	68 x 62	60	See also app'd	Double		7/8	3-3	Quad ?	Lapped
BILGE PLATING, No. of Strakes		72	56	66 x 70	Boring plan	"		"	"	ditto	"
SIDE PLATING, No. of Strakes		72	52	52		"		"	"	ditto	"
UPPER DECK, Sheer-strake in Wells.....	64	1.03	52	52		"		1 1/8	4 1/2	quadruple	"
UPPER DECK, Sheer-strake in Bridge ...	64	72				"		1 1/8	3 1/2	triple	"
STRAKE BELOW Sheer-strake in Wells.....	78	84	52	52		"		1 1/8	3 1/2	quadruple	"
STRAKE BELOW Sheer-strake in Bridge ...	77 1/2	72				"		7/8	3-3	triple	"
POOP SIDE PLATING											
BRIDGE SIDE PLATING ...	68	80				Double		1"	3 1/2	Quadruple	Lapped
2 strakes	48	74				Single		3/4	3	Double	"
FORECASTLE SIDE PLATING			46								

WATERTIGHT BULKHEADS.

Total No. of W.T. BULKHEADS in Vessel—	9
Extending to Upper Deck (Sec. 3 c)	9
" Deck next below	-
As per Rule	8

STIFFENERS.

	Plating Thickness.	VERTICAL.		HORIZONTAL.	
		Scantlings	Spacing.	Scantlings	Spacing.
MIDSHIP BULKHD, Upper tween decks	26-30	4 1/2 x 13	34 L	20"	-
at frame 158					
" Second "	30-32	6 x 13	36 L	3 1/2	-
" " " "					
" Holds	34-48	15 x 4 x 4 x 48	@ 3 1/2"	-	
" " " "					
COLLISION " (in Hold)	33-56	9 x 3 x 4 x 5	@ 2 1/2"	on 10' flat	
AFTER PEAK					
See plan of Shaft Tunnel Riser etc.	33 x 54	7 1/2 x 3 x 4 x 4	@ 2 1/2"	tunnel riser top and on struts	

FORGINGS and CASTINGS.

	Casting or Forging.	Scantlings.	Maker's Name.	Any departure from approved plans to be noted.
KEEL, Bar				
STEM	Cast	See plan	Kobe P.L. Works	
STERN FRAME	Propeller Bar	Cast	See plan	ditto
	Bulldoz			
RUDDER—A x D	204 x 435	888		
Speed of Vessel	17 knots			
RUDDER mainpiece at head ...		17"	ditto	
" " heel ...		11"		
" how constructed	Top of P.L. mainpiece & head			See app'd
" double or single plate coupling, vertical or horizontal	Double plate			plan of alterations

STEEL.

Manufacturer's Name or Trade Mark of the Steel used in the construction of the Vessel (state process of manufacture) *Connell Bros. Co., Birmingham, Ala., D. C. O. S. Co.,*
Cargo Steel Co. Ltd., Torrance, Long Is. Ltd., Bolckow & Co. Ltd., Pease & Partners Ltd., Lanarkshire Steelworks Ltd., D. Colville & Son,
Kawasaki Dockyard Co. Ltd., Oceanic Shipbuilding Co. Ltd.
 Has the Steel been tested as required by the Rules? *yes*

EQUIPMENT No. 58435												LETTER h		ANCHORS. 4	
Number of Certificate.	Anchors.	WEIGHT, EX. STOCK			WEIGHT OF STOCK			TEST, PER CERTIFICATE.				WEIGHT REQUIRED BY TABLE 53.	Description of Anchor.	Makers.	Where and when tested and Superintendent.
		Cwts.	qrs.	lbs.	Cwts.	qrs.	lbs.	Tons.	cwts.	qrs.	lbs.	Cwts.			
1021	1st Bower	104	2	12				69	2	2	0		Ball Imp'd Stocken	Kobe Steel	Kobe 4.12.29 A.W.
1019	2nd "	104	2	1				69	2	2	0		ditto	work	" " "
1020	3rd "	104	1	27				69	2	2	0		ditto	ditto	" " "
	Collective weight.	313	2	12								285			
1022	Stream	29	2	9	7	1	17	28	6	3	14	29.2.0	ord 4 type. Cast steel body, forged stock	ditto	" 10.1.30 "

CHAIN CABLES.										HAWSERS AND WARPS.									
Number of Certificate.	Length and size supplied.		Test per Certificate.		WEIGHT OF CHAIN CABLE.				Length and Size per Table 53.		Description.	Makers of Cables.	Where and when tested, and Superintendent.	Material.	Length and Size supplied.		Breaking Test of Steel Wire.	Length and Size per Table 53.	
	Length.	Diam.	Statu- tory.	Break- ing.	Supplied.	Per Rule.	Length.	Diam.	Length.	Cir.					Length.	Cir.			
	Fathoms.	Ins.	Tons.	Tons.	Owts.	qrs.	lbs.	Owts.	Fathoms.	Ins.					Fathoms.	Ins.	Tons.	Fathoms.	Ins.
1695	341½	2½	1293	181.0	1370	1	22	1258	330	2¾	Stud Osaka Chain work.	Osaka 7.2.30 y.jp	TOWLINE...	130	7	146.6	130	7	
													HAWSERS & WARPS	240	4"	56.2	480, 2¾		
													"	240	3½	38.5			
													"	240	3"	28.3			
Stream Steel Wire	120	6	85	113.2	-				120	6	Tokyo Seiko K.K.								

Steering Gear, ~~Steam~~ *Electro-hydraulic direct acting* ~~Electric~~ *alteration* - *Extra motor & pump.*
Boats *One 28' motor life boat, nine 26' lifeboats, two 26' collapsible boats* ~~Steering Chains, line and Test~~ *and on 18' Lemna.* Windlass *Clarke Chapman Electric.*
Ceiling in Holds, thickness and material *2½" Pine on 2" ground cargo* Battsens, thickness, material and spacing *6" x 2" pine 8" apart*
Cargo Hatchways.-(Upper Deck) *33" x 44" Steel coaming* Thickness of Hatches *3"* *upper deck*
Size of No. 1 Hatchway (Forward) *26'3" x 18"* No. 2 *32'6" x 20"* No. 3 *16'6" x 18'0"* No. 4 *13'9" x 18'0"* No. 5 *27'6" x 18"* No. 6 *19'3" x 18'0"*
Number of Shifting Beams ~~and~~ *Fore and Afters* *101-3; 102-6; 103-2; 104-2; 105-5; 106-3*

Builder's Signature

S. Kamekura

GENERAL DECLARATION. It should be stated (a) whether the vessel is fitted for the carriage and burning of oil used as fuel *yes* (b) whether the vessel, not being an oil tanker, is fitted for carrying oil as cargo *yes* The positions in which oil is carried as fuel or cargo should be indicated, together with the flash point.

This vessel has been built in accordance with the approved plans & instructions as well as with the printed Rules. The materials & workmanship are satisfactory; the former have been tested as required by Rules. The freeboard has been verified and cut in on vessel side.

The double bottom & deep tanks, peak tanks, wells & cofferdams, bulkheads, tunnels, weather decks & sampers, watertight doors & scuppers have been tested as required by Rules.

The requirements of section 20 of the Rules have been complied with and oil fuel is to be carried in Nos 3, 4, 5, 6, 7, 8, & 11 double bottom tanks, in the deep tanks forward of the Boiler Room and in the after wing tanks.

The after deep tanks have been fitted for the carriage of oil cargo in bulk, flash point above 150°F

In my opinion the vessel is entitled to the notations: "fitted for oil fuel, 11.30, flash point above 150°F" "Lloyd's A.C.P." "fitted for carrying cargo oil (1930), F.P. above 150°F, in Deep Tanks;" "Wireless Telegraph" "Electric Light"

The amount of Entry Fee £ 120.00 Fees applied for, 21. Nov 1930
Special Survey Fee.... £ 7055.00 Received by me, 1st Dec. 1930
Travelling Expenses, if any £ 715.00 (including machinery)

State whether the Vessel has been built under Special Survey *yes*

Hull Certificate to be sent to *Builder* Date of issue *13/1/31*

I am of opinion the Vessel should be Classed **100A1**

"with freeboard"

Signature *Mordaunt, Mr. J. Parker.*
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 13 JAN 1931

Character assigned

+ 100A1 With freeboard
Fitted for carrying oil (11.30) F.P. above 150°F in Deep Tanks

Lloyd's Assch. + Limb. 11.30 oil Eng. Cl.,
2 DR-120 Hk Elec. Lt.

Write Note
" Cpr

See Letter to Kobi dated 7/2/31 re amended notation re carrying oil

GENERAL REMARKS—(The Surveyor should state the Number of Report and Name of any Sister Vessel. Plans showing Vessel as built should be forwarded and a List of the Plans should be embodied.)

This vessel is very similar to T.S.M.S. Hikawa Maru a T.S.M.S. Hig. Maru, Yokohama Dock Co. No. 17708. ^{no new arrangement separate plans}

The following plans & papers are forwarded with this report:—

- ① Midship Section, as built.
- ② Profile & Deck plans, as built, (four sheets)
- ③ The Advice notes
- ④ Copies of Forging Certificate

Particulars of Drop Test of Cast Steel Anchors, viz.:— Weight, Surveyor's Initials, Number of Certificate, Date of Test.	1st Bower	2nd "	3rd "	Stream	Weight	Surveyor	Certificate	Date
	60.3.19	60.2.27	60.1.13	27 2 0		A. Watt	1021	14.12.29
						A. Watt	1019	14.12.29
						A. Watt	1020	14.12.29
						A. Watt	1022	10.1.30

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop — ft., R.Q.D. — ft., Bridge 225.5 ft., Forecastle 76.4 ft.
(in feet and tenths). When the Poop is joined to the B.D., this should be distinctly stated.

No. and Material of Decks (this information is to be given as it should appear in the Register Book) 3 decks steel. 4th deck fitted in No. 3 hold.

Official No. 36813 ; Signal Letters VKGC

Is bottom of Vessel coated with cement fillets only. if not give particulars of composition —

PARTICULARS OF WATER BALLAST, oil fuel etc, but excluding drain tanks.

Where Fitted.	*Length. Feet.	Water Capacity. Tons.	Where Fitted.	*Length. Feet.	Water Capacity. Tons.
Double bottom, aft,	143	505	Fore peak tank,		116
Double bottom, under Engines and Boilers,	99	933	After peak tank,		176
Double bottom, if under Engines only,	-	-	Deep tanks aft,	16.5	518
Double bottom, if under Boilers only,			Deep tank, forward,	22.0	791
Double bottom, forward,	182	751	Other tanks, if fitted,	19.2	704
Total capacity of double bottom		2189	(If necessary, furnish full particulars of tanks)	52.2	319
				22.0	172

* The wells are not to be included in the lengths of the tanks.

Order for Special Survey No. 32

Date 28 Nov 1928

Dates of Surveys held while building

June 1929, 14.28.
July " "
August " 26
October " 29
Nov " 1, 13, 19, 21, 27, 29

Dec 1929; 2, 3, 5, 12, 13, 19, 23, 30.
Jan 1930 7, 15, 21, 22, 24, 29.
Feb " 4, 6, 10, 12, 14, 22, 25, 28.
Mar " 5, 11, 13, 17, 20, 22, 24, 26, 31.
April " 1, 2, 5, 7, 8, 9, 10, 11, 12, 16, 24

See Structural Profile & Decks.
May 1930, 1, 5, 7.
June " 4, 24
July " 3
Aug " 1
Sept " 9, 25.
Oct. 1930; 13, 15, 18, 23, 30.
Nov 1930; 13, 21

Lloyd's Register
Foundation
Total No. of Visits 67