

## STEEL STEAMER or MOTORSHIP.

13 JUL 1931

Received at London Office

State if Report has been sent on the Freeboard of the Vessel NoState if Report is sent on the Machinery of the Vessel YesDate of completion of report 17-6-31Port of KobeNo. 7387Survey held at JamaDate First Survey 5-11-30Last Survey 25-5-1931On the (State if Machinery fitted Aft and if Single, Twin or Triple Screw) Single Screw M.V. "SANTO MARU"State Type (Full Scantling, Complete Superstructure with or without Tonnage Openings) Full ScantlingState Type of Erections Pop. Br. & Fell.TONNAGE under Tonnage Deck... 2723.80CLASS 100 A1State if with freeboard as condition of Class ✓Built at Jama

Do. of space or spaces between Tonnage Dk. and Upper Dk.

Total 2723.80s Tonnage 3234.31ster Tonnage 1820.47Length from fore part of stem to after part of stern post on summer L.W.L. See Sec. 3 (1a) L 335.00Breadth (greatest moulded) B 48.50Depth, at middle of length from top of keel to top of beam at side of uppermost continuous deck. See Sec. 3 (1c) D 24.051st Longitudinal Number (L x D) = 80572nd Numeral L x (B + D) = 24304Framing Depth "d," at middle of length. See Sec. 3 (1d) 21'-6"Proportions—Depth to Length—Uppermost continuous deck to top of keel 13.92Do. Long Bridge to top of keel 10.53Draught Moulded Assigned by Japanese Gov. 19'-9.83"Launched April 15<sup>th</sup> 1931 Yard No. 184Builders Mitsui Bussan KaishaOwners Dairen Kisen Kab. Kaisha.Managers ✓

(Where necessary to be entered in Reg. Book.)

Residence ✓Port of Registry Dairen.

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	30"		Bracket Floors, Frame	165 x 75 x 8.5	
" from $\frac{3}{4}$ length to Collision bulkhead	27"		" " Reversed Frame	150 x 75 x 7.5	
" in peaks	24"		" " Vertical Struts	250 x 90 x 11	
FRAMING.			Centre Girder, depth and thickness amidships	38 x 48"	
me Amidships, Angle <u>E or F</u>	200 x 90 x 12	$\frac{1}{2}$ L & and	" " top Angles	130 x 130 x 11	
" Extends up to <u>2<sup>nd</sup> Dk.</u>	200 x 90 x 10	Motor space	" " bottom Angles	150 x 150 x 12-13	
ersed Frame Amidships, Angle			" " Gussets, spacing and scantling abaft $\frac{1}{4}$ len. from stem	90 x 90 x 13	
" Extends up to			Side Girders, No. each side and thickness	One $\frac{1}{4}$ flg. .35 not flg.	
th of Framing Girder			Margin Plate depth (excl. of flange) and thickness	29" x .45"	
mes in Uppermost Continuous Deck, Angle <u>E or F</u>	180 x 90 x 8.5		" " Vertical Angle to Tank side Bracket abaft $\frac{1}{4}$ len. from stem	130 x 130 x 11	
een deck for <u>2<sup>nd</sup> Dk.</u>			" " Vertical Angle to Tank side Bracket forward $\frac{1}{4}$ len. from stem	130 x 130 x 11	
Third			" " Gussets, spacing and scantling abaft $\frac{1}{4}$ len. from stem	150 x 150 x 12	
ming in Peaks, Angle or <u>F</u>	180 x 75 x 8.5		" " Gussets, spacing and scantling forward $\frac{1}{4}$ len. from stem	37 x 30 x 27"	
meter and Spacing of Rivets through Frame and Shell Plating amidships	$\frac{7}{8}$ 5 $\frac{3}{4}$		" " Gussets, spacing and scantling forward $\frac{1}{4}$ len. from stem	37 Continuous Gusset	
e if Frame Joggled	Joggled		Tank Side Brackets, height above base line at toe of Frame and thickness	55" .40" .41"	
ING ARRANGEMENTS (Sec. 7), state system and particulars	Deep Frame System 3 <sup>rd</sup> and 130 x 75 x 10 6' 0" apart 3 <sup>rd</sup> and 320 x 100 x 14 Btm. pl. 54 2 <sup>nd</sup> and side girder Keel ang. 11 Solid floor every 3' + wide flg. fr. 150 x 150 x 12		INNER BOTTOM PLATING.		
NGTHENING OF BOTTOM FOR- ARD. State Particulars			Breadth and thickness of Middle Line Strake	47" x 43" .37"	
E-BOTTOM.			Thickness of remainder in Holds	.50 in M.R.H. .40 ~ .37"	
gs, Depth and thickness at mid-line in Holds			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?	Yes.	
Height of Brackets at side above base line at toe of frame			BEAMS.		
le Line Keelson, on Floors, Angles, <u>E or F</u>			Uppermost Continuous Deck, amidships in Wells, Angle <u>E or F</u>	180 x 90 x 8.5	
Through Plate or Intercoastal Plate			" " in way of Bridge, Angle <u>E or F</u>	" " "	
Foundation Plate on Floors			Spacing	180 x 75 x 8 30"	
Flat Plate Keel Angles			Second Deck, amidships, Angle <u>E or F</u>	180 x 75 x 8	
Keelsons, No. each side			Spacing	30"	
thickness of Intercoastal Plate			Third Deck, amidships, Angle <u>E or F</u>		
Angles			Spacing		
DOUBLE BOTTOM.			Fourth Deck, amidships, Angle <u>E or F</u>		
Solid Floors, thickness and spacing	.35" 3 x $\frac{3}{4}$ stiff every 3 <sup>rd</sup> ft.		Spacing		
" " Are Frame and Reversed Frame joggled?	Frame-joggled Rev. intercoastal		Poop Deck, Angle <u>E or F</u>	8" x 3" x .34"	
Bracket Floors, breadth and thickness at middle line	28" .37"		Spacing	150 x 75 x 8 30" respectively	
" " breadth and thickness at margin plate	" "		Bridge Deck, Angle <u>E or F</u>	180 x 75 x 8 30"	
			Spacing	165 x 75 x 8 27" respectively	
			Forecastle Deck, Angle <u>E or F</u>	200 x 75 x 11 27"	
			Spacing	48" respectively	



PILLARS AND DECKS.		INCHES IN SHIP.	Any Departure from Approved Plans to be Noted.	INCHES IN SHIP.	Any Dep. Approve be
<b>PILLARS, No. of Rows.....</b>	<b>one Row</b>				
<b>W.S. Girders 3 rows.</b>					
" in 'tween Decks, Size and Spacing.....	200 x 85 x 10 JL h. 40, 52, 98				
" " " " " "	{ 200 x 85 x 10 JL h. 86 7" x 7/16"				
" in Holds " " "	{ h. 17, 220 x 90 x 11 x 9 7/16" JL h. 24 " " 7 x 7/16" " h. 40, 10" x 4" x 475 x 42" " h. 52; " " 7 1/2 x 42" " h. 86-11 x 3 3/4 x 50" 12 x 60 " h. 98-10 x 4" x 475" 11' x 50 " h. 110-20 x 9 1/2 x 10" 7/16" " h. 123-10 x 4" x 475 x 10" 7/16" "				
<b>Centre Line Bulkhead.</b>					
Stiffeners and Spacing.....					
Plating, thickness of .....					
<b>STRINGERS AND DECKS.</b>					
<b>Uppermost Continuous Deck.</b>					
Stringer Plate, breadth and thickness in Wells	51" x .80"				
" " " " in way of Bridge	51" x .36"				
" Angle in Wells .....	160 x 160 x 22				
Thickness of Plating abreast Deck openings in way of Wells .....	.66"				
Thickness of Plating abreast Deck openings in way of Bridge .....	.32"				
Thickness of Plating within line of openings...	.38"				
If Sheathed, material and thickness .....	No.				
<b>Second Deck.</b>					
Stringer Plate, breadth and thickness in Wells...	83" x .34"				
Stringer Plate, breadth and thickness in way of Bridge .....	83" x .34"				
Thickness of Plating abreast Deck openings in way of Wells .....	.30"				
Thickness of Plating abreast Deck openings in way of Bridge .....					
Thickness of Plating within line of openings...	.30"				
If Sheathed, material and thickness .....	No.				
<b>Third Deck.</b>					
Stringer Plate, breadth and thickness.....					
If Plated, state thickness.....					
<b>Fourth Deck.</b>					
Stringer Plate, breadth and thickness.....					
If Plated, state thickness .....					
<b>Poop Deck.</b>					
Stringer Plate, breadth and thickness .....	32" x .32"				
Plating, Sheathing, material and thickness ...	.32"				
<b>Bridge Deck.</b>					
Stringer Plate, breadth and thickness.....	60" x .40"				
Plating, Sheathing, material and thickness ...	.32" 5" x 2 1/2" a.p.				
<b>Forecastle Deck.</b>					
Stringer Plate, breadth and thickness.....	32" x .32"				
Plating, Sheathing, material and thickness ...	.32"				

SCANTLINGS.					RIVETING.							
STRAKES.	AS IN VESSEL.				ANY DEPARTURE FROM APPROVED PLANS TO BE NOTED.	EDGES.			BUTTS.			
	AMIDSHIPS.		FORWARD.	AFT.		State if jogged?	No.	No. OF ROWS OF RIVETS.	RIVETS.		STRAKE LAP	
	Breadth. Inches.	Thickness. Inches.	Thickness. Inches.	Thickness. Inches.					SINGLE OR DOUBLE.	RIVETS. Diam. Spacing cr. to cr.		Diam. Spacing cr. to cr.
FLAT PLATE KEEL .....	47"	.66"	.60"	.60"		2 <sup>1</sup> / <sub>4</sub>	7/8"	3 1/2"	3 <sup>1</sup> / <sub>4</sub>	7/8"	3 1/8"	Lap
" DBLG. (if any)												
BOTTOM PLATING, No. of Strakes ..... 3	84"	.57"	.47"	.47"		"	"	"	"	"	"	"
BILGE PLATING, No. of Strakes ..... 1	58"	"	"	"		"	"	"	"	"	"	"
SIDE PLATING, No. of Strakes ..... 2	82 3/4"	"	"	"		"	"	"	"	"	"	"
UPPER DECK, Sheer- strake in Wells.....	49"	.84"	/	/		"	1"	4"	4 <sup>1</sup> / <sub>4</sub>	1"	4"	"
UPPER DECK, Sheer- strake in Bridge ...	"	.57"	/	/		"	7/8"	3 1/2"	3"	7/8"	3 1/8"	"
STRAKE BELOW Sheer- strake in Wells.....	71 3/4"	.68"	/	/		"	"	"	4 <sup>1</sup> / <sub>4</sub>	"	"	"
STRAKE BELOW Sheer- strake in Bridge ...	"	.57"	/	/		"	"	"	3"	"	"	"
POOP SIDE PLATING .....	/	/	/	.36"		Single	3/4"	3"	2"	3/4"	2 5/8"	"
BRIDGE SIDE PLATING ...	/	.50"	/	/		"	7/8"	3 1/2"	3"	7/8"	3 1/8"	"
FORECASTLE SIDE PLATING	/	/	.38"	/		"	3/4"	3"	2"	3/4"	2 5/8"	"

Total No. of W.T. BULKHEADS in Vessel— 5 BHD  
Extending to Upper Deck (Sec. 3 c) to Up. Deck  
~~Deck next below~~  
As per Rule Yes

	Casting or Forging.	Scantlings.	Maker's Name.	Any department approved to be no
<del>KEEL, Bar</del>				
STEM	Forging Lower part Cast steel	12" x 2 1/4" x 1/2" x 10" x 1 1/4" x 1 1/4"	Versingigte Stahlwerke	
STERN FRAME	Cast steel Steel pl. + Section	.60" 15" x 4" x 4" x .60"	Rippon Seikojo	
RUDDER—A x D	231.04			
Speed of Vessel	Under	12 K		
RUDDER mainpiece at head	Steel Castings	x 1 1/4" x 1 1/4" x 1 1/2"	Rippon Seikojo	
" " heel		x 9/8 K		
" how constructed	Oertz Rudder	x 9/8 K		
" double or single plate		.38"		
" coupling, vertical or horizontal	Vertical	23" x 20 1/2"		

Manufacturer's Name or Trade Mark of the Steel used in the construction of the Vessel (state process of manufacture)  
 Section - Nippon Kokean K.K.  
 Plate - Kawasaki Dockyard & Asano Dock Co.  
 Has the Steel been tested as required by the Rules? Yes

Lloyd's Register  
Foundation



EQUIPMENT No. 25465

LETTER V

ANCHORS. 3B; 1S.

Any Dep. Approve be	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.				
	1st Bower	51	1	4	-	-	-	43	4	2	11	48 3/4	Stockless	Japan Steel Works	Muroran 18-2-31 M.K.
	2nd "	51	2	15				43	9	0	0	48 3/4	C.S. anchor	"	" " " "
	3rd "	44	0	21				38	13	1	17	41 1/2		"	" " " "
	Collective weight.	147	0	12								139			
	Stream	12	2	1	3	3	1	14	7	0	22	13.0 Ex.		"	" " " "

## CHAIN CABLES.

## HAWSERS AND WARPS.

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.	Cwts.	qrs.	lbs.	Cwts.	Fathoms.	Ins.					Fathoms.	Ins.		Fathoms.	Ins.
135	2	72	100.8	270-2-14			538 1/2	135	2	Stud link	Hingley & Son	L.P.H.-N 6-7-30 H. Green	TOWLINE	120	4	23 Rule 5/16" dia late	120	4"
135	2	72	100.8	270-0-21				135	2				HAWSERS & WARPS Manila	90	7		90	7
				540-3-7													4 coils	
90	4 1/2							90	4 1/2			hausers - As per Rule						

eng Gear, ~~Electric~~ Shaw Martineau Type Steering Gear, Hand Yes  
2-26'0" Lift boat  
1-17'0" Jemma  
Steering Chains, Size and Test 2 1/2 O.P. under H. way Windlass Elec. driven  
g in Holds, thickness and material " " 2" Batten Cargo Battens, thickness, material and spacing 6" x 2" O.P. 9" apart  
in way of O. Tank  
Hatchways: (Upper Deck) 4 Hatches Thickness of Hatches H. board 2 1/2" O.P.  
f No. 1 Hatchway (Forward) 29'3" x 22'0" No. 2 30'0" x 22'0" No. 3 30'0" x 22'0" No. 4 30'0" x 22'0" No. 5 ✓ No. 6 ✓  
Shifting Beams and/or Fore and Afters 5 each.

S. Ukar

Builder's Signature

L 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  
oil tanker, is fitted for carrying oil as cargo No. 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  
instructions as well as with the printed Rules. The material and  
workmanship are good.

The double bottom, wing tanks + peak tanks, wells + cofferdams,  
heads, tunnel, weather decks and scuppers, watertight doors, tarpaulins  
have been tested as required by the Rules.

The requirements of section 20 of the Rules have been  
applied with and oil fuel is to be carried in fore and after double  
bottom fuel oil tanks.

In my opinion the vessel is entitled to the notation "Fitted  
oil fuel 5-31 flash point above 150°F," "Lloyd's A+CP," "Wireless and  
Electric Light."

Amount of Entry Fee ..... ¥ 70.- : Fees applied for,  
Special Survey Fee.... ¥ 3551.- : 19/6/1931  
Travelling Expenses, if any ¥ 220.- : Received by me,  
(Including Machinery) 23/7/1931

whether the Vessel has been built under Special Survey Yes

I am of opinion the Vessel should be Classed 100 A 1

whether the Vessel has been built under Special Survey Yes

to be sent to Kobe Office Date of issue 21/7/31

Committee's Minute TUE. 21 JUL 1931

Character assigned + 100A1

+ L.M.C. 5,31 C.L.

Oil Eng. 50.100 lb.

Lloyd's A+CP



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Lloyd's Register  
Foundation

W1028-00642/2



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 copy of the Plans should be embodied.)

- (1) Midship section.
- (2) Construction, Profile, Decks & Inner Bottom.
- (3) General Arrangement.

Copies of Certificates for Ship forgings and Castings

- (1) Stem.
- (2) Stern frame.
- (3) Rudder fittings

Particulars of Drop Test of Cast Steel Anchors, viz.:— Weight, Surveyor's Initials, Number of Certificate, Date of Test.	1st Bower	33	cwt	2	qr.	8	lbs	M.K. No. 719	22-1-31.
	2nd "	33	"	1	"	24	"	M.K. No. 721	22-1-31.
	3rd "	28	"	4	"	21	"	M.K. No. 723	22-1-31.
	Stream "	12	"	2	"	1	"	M.K. No. 724	18-2-31

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop 32.50 ft., R.Q.D. ☒ ft., Bridge 80.00 ft., Forecastle 30 (in feet and tenths). When the Poop is joined to the B.D., this should be distinctly stated **Not joined.**

No. and Material of Decks (this information is to be given as it should appear in the Register Book) **One deck steel.**

(Second deck in way of nos. 2 + 3 Holds.)  
& Engine Room.

Official No. **28**

; Signal Letters **X**

Is bottom of Vessel coated with cement **Ballast Tank** No. **YES.** if

particulars of composition

**X = To be assigned in Dallen & not yet known.**

#### PARTICULARS OF WATER BALLAST.—

Where Fitted.	Length. Feet.	Water Capacity. Tons.	Where Fitted.	Length. Feet.	Water Capacity. Tons.
Double bottom, aft, (incl. Wing Tank)	120.00	414.55	Fore peak tank,	20.00	63
Double bottom, under Engines and Boilers,			After peak tank,	20.00	10
Double bottom, if under Engines only,	32.50	131-34	Deep tank, aft,	—	—
Double bottom, if under Boilers only,			Deep tank, forward,	—	—
Double bottom, forward,	129.75	341.03	Other tanks, if fitted, (Wing Tank) included	45.00	26
	Total capacity of double bottom	886.92	(If necessary, furnish further information by sketch.)		

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

Order for Special Survey No. **38**

Date **12<sup>th</sup> June 1930**

Dates of Surveys held while building

1930. Nov. 5, 21, 27. Dec. 4, 10. 1931 Jan. 13, 14, 21. Feb. 6, 14  
Mar. 2, 4, 7, 9, 12, 13, 20. Apr. 3, 6, 9, 13, 15, 18, 23. May 1, 14, 23, 25

Total No. of Visits