

STEEL STEAMER or MOTORSHIP.

Received at London Office 22 Feb 1926

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 22nd December, 1925. Port of NAGASAKI. No. 1514.

Survey held at NAGASAKI. Date First Survey 5th January, 1925. Last Survey 11th December, 1925.

On the (State if Machinery Fitted Aft and if Single, Twin or Triple Screw) Steel Twin Screw Motor Vessel "SANTOS MARU".

State Type (Full Scantling, Complete Superstructure with or without Tonnage Openings) Complete Superstructure without Tonnage Openings. Type of Erections Forecastle and Bridge.

TONNAGE under Tonnage Deck... 4,466.90
Do. of space or spaces between Tonnage Dk. and Upper Dk. 1,621.51
Total 6,088.41
Gross Tonnage 7,266.96
Net Tonnage 4,386.85

CLASS *100A1. State if with freeboard as condition of Class Yes
Length from fore part of stem to after part of stern post on summer L.W.L. See Sec. 3 (1a) L 430.0
Breadth (greatest moulded) B 56.0
Depth, at middle of length from top of keel to top of beam at side of uppermost continuous deck. See Sec. 3 (1c) D 36.0
1st Longitudinal Number (L x D) = 15,480
2nd Numeral L x (B + D) = 39,560
Framing Depth "d" at middle of length. See Sec. 3 (1d) 15.92
Proportions—Depth to Length—Uppermost continuous deck to top of keel 11.94
Do. Long Bridge to top of keel 9.77
Draught Moulded 25'-1" While Building.

Built at Nagasaki.
Launched 5th Sept. 1925. Yard No. 410.
Builders Mitsubishi Zosen Kaisha, Ltd.,
Owners Osaka Shosen Kabushiki Kaisha.,
Managers " " " "
(Where necessary to be entered in Reg. Book.)
Residence Osaka. Japan.
Port of Registry Osaka. Japan.
If surveyed while building, afloat, or in dry dock

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.
ES, Spacing amidships	30		Bracket Floors, Frame B.A.	6 1/2 3/2 .40	
" from 1/2 length to Collision bulkhead	27		" " Reversed Frame B.A.	6 3 .40	
" in peaks	24		" " Vertical Struts Chan.	12x3 1/2 x 3 1/2 x .42	
FRAMING.			Centre Girder, depth and thickness amidships	48 .58-.46	
me Amidships, Angle	10 3 1/2 .48		" " top Angles Double	3 1/2 3 1/2 .54-.50	
" Extends up to 3rd Dk.			" " bottom Angles	5 5 .60	
Reversed Frame Amidships, Angle	/		Side Girders, No. each side and thickness	One .42 .46 where flgd.	
" Extends up to	/		Margin Plate depth (excl. of flange) and thickness	48 .54	
th of Framing Girder	10		" " Angle to Tank side	6 6 .50	
mes in Uppermost Continuous 'tween Decks, Angle	7 3 1/2 .36		" " Bracket abaft 1/2 len. from stem	6 6 .50	
" Second 'tween Decks, Angle	7 3 1/2 .36		" " Angle to Tank side	6 6 .50	
" Third " " " F.P.	7 1/2 x 3 1/2 x .375 BA.		" " Bracket forward 1/2 len. from stem	6 6 .50	
ming in Peaks, Angle or	A.P. 5 1/2 x 3 1/2 x .36 A		" " Gussets, spacing and scantling abaft 1/2 len. from stem	Level Tank	
meter and Spacing of Rivets through Shell Plating	3 1/2 x 3 .36 Back Bar 6" Girder.		" " Gussets, spacing and scantling forward 1/2 len. from stem	" "	
te if Frame Joggled	7/8" D x 5 1/4" in Holds 6 1/2" in Tv. Dks.		Tank Side Brackets, height above base line at toe of Frame and thickness	84" .42	
ING ARRANGEMENTS (Sec. 7), state system and particulars	Web Frame Arrangement 3WF-27"x48" FA 9x3 1/2 x .54 BA 2 Str.-27x.40 FA 4x3 1/2 x .54 A		Breadth and thickness of Middle Line Strake	54 .52-.44	
NGTHENING OF BOTTOM FOR FORWARD. State Particulars	2 Additional side girders fitted, spaced 48" apart.		Thickness of remainder in Holds	44-.40	
LE BOTTOM.			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	
ors, Depth and thickness at mid-line in Holds			BEAMS.		
Height of Brackets at side above base line at toe of frame			Uppermost Continuous Deck, amidships in Wells, Angle, Angle	9x3 1/2 x 3 1/2 x .58	
dle Line Keelson, on Floors, Angles, Angle or Angle			" " in way of Bridge, Angle, Angle	9x3 1/2 x 3 1/2 x .58	
" " Through Plate or Intercostal Plate			Spacing	60	
" " Foundation Plate on Floors			Second Deck, amidships, Angle, Angle	9x3 1/2 x 3 1/2 x .58	
" " Flat Plate Keel Angles			Spacing	60	
e Keelsons, No. each side			Third Deck, amidships, Angle, Angle	8x3x3x.34	
" thickness of Intercostal Plate			Spacing	30	
" Angles			Fourth Deck, amidships, Angle, Angle or Angle		
BLE BOTTOM.			Spacing		
id Floors, thickness and spacing	.42 SP. 90"		Poop Deck, Angle, Angle or Angle		
" Are Frame and Reversed Frame joggled?	Frame only.		Spacing		
cket Floors, breadth and thickness at middle line	.42 x 33		Bridge Deck, Angle, Angle	9x3 1/2 x 3 1/2 x .58	
" breadth and thickness at margin plate	.42 x 66		Spacing	60	
			Forecastle Deck, Angle, Angle	10 3 1/2 .50	
			Spacing	48 & 54	

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.....				Stringer Plate, breadth and thickness in way of Bridge	48 .38		
" in 'tween Decks, Size and Spacing.....	Widely spaced			Thickness of Plating abreast Deck openings in way of Wells .....	.38-.34		
" " " " " "	Pillars.			Thickness of Plating abreast Deck openings in way of Bridge .....	.34		
" in Holds " "				If Sheathed, material and thickness	2 1/2" O.Pine		
" " " " " "				in way of accommodation.			
Centre Line Bulkhead.				Third Deck.			
Stiffeners and Spacing.....	✓	/		Stringer Plate, breadth and thickness.....	48"x.38-36"x.36"		
Plating, thickness of	✓	/		If Plated, state thickness.....	.34-.32		
STRINGERS AND DECKS.				Fourth Deck.			
Uppermost Continuous Deck.				Stringer Plate, breadth and thickness.....			
Stringer Plate, breadth and thickness in Wells	60	✓	.66	If Plated, state thickness			
" " " " in way of Bridge	60	✓	.42	Poop Deck.			
" Angle in Wells	6	6	.66	Stringer Plate, breadth and thickness			
Thickness of Plating abreast Deck openings in way of Wells	✓		.46	Plating, Sheathing, material and thickness ...			
Thickness of Plating abreast Deck openings in way of Bridge	✓		.38	Bridge Deck.			
If Sheathed, material and thickness	2 1/2" O.Pine			Stringer Plate, breadth and thickness.....	60 .44		
Second Deck.				Plating, Sheathing, material and thickness ...	.38 3" O.P. where exposed.		
Stringer Plate, breadth and thickness in Wells...	48		.42	2 1/2" O.P. inside.			
				Forecastle Deck.			
				Stringer Plate, breadth and thickness.....	30 .36		
				Plating, Sheathing, material and thickness ...	.30 3" O.Pine.		

SHELL PLATING.

SCANTLINGS.					RIVETING.						
STRAKES.	AS IN VESSEL.				ANY DEPARTURE FROM APPROVED PLANS TO BE NOTED.	EDGES. State if jogged? No.		BUTTS.			
	AMIDSHIPS.		FORWARD.	AFT.		SINGLE OR DOUBLE.	RIVETS. Diam. Spacing cr. to cr.	No. OF ROWS OF RIVETS.	RIVETS.		STRAPPED OR LAPPED.
	Breadth. Inches.	Thickness. Inches.	Thickness. Inches.	Thickness. Inches.					Diam. Inches.	Spacing cr. to cr. Inches.	
FLAT PLATE KEEL	53	.78	.68	.68		Double.	1 3/4	4-3	1	4	Lapped
" DBLG. (if any)	/					/		/			
BOTTOM PLATING, No. of Strakes Three }	(.60 Maintained to coll Bhd.)					Double	7/8 3 1/3	3-3	7/8	3 1/8	Lapped
BILGE PLATING, No. of Strakes Two.....		.60	.50	.50		"	" "	"	"	"	"
SIDE PLATING, No. of Strakes Four.....		.60	.46	.46		"	" "	"	"	"	"
UPPER DECK, Sheer-strake in Wells.....	54	.74	.46	.46	1.08 at Brid. Ends.	"	1 3/4	4-3	1 1/8	4 1/8	B. Ends. Lapped.
UPPER DECK, Sheer-strake in Bridge ...	54	.60	/	/		"	7/8 3 1/3	3	7/8	3 1/8	"
STRAKE BELOW Sheer-strake in Wells.....	51	.66	.46	.46		"	" "	4-3	7/8	3 1/8	"
STRAKE BELOW Sheer-strake in Bridge ...		.60	/	/		"	" "	3	7/8	3 1/8	"
POOP SIDE PLATING	/					/		/			
BRIDGE SIDE PLATING ...	.54	/	/	/		Double.	7/8 3 1/3	3	7/8	3 1/8	Lapped
FORECASTLE SIDE PLATING	/	.42	/	/		Single.	3/4 3	1	3/4	2 5/8	"

WATERTIGHT BULKHEADS.

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

FORGINGS and CASTINGS.

	Casting or Forging.	Scantlings.	Maker's Name.	Any departure from approved plans to be noted.
KEEL, Bar	/			
STEM	Rolled steel	10x2 1/2		
STERN FRAME	C.S. Shaft Brackets	Nippon Seikosho. Muroan.		
Rudder	C.S. 9 1/2"x4"	Mitsubishi Z.K. Nagasaki.		
RUDDER—A x D. 505 &				
Speed of Vessel 14 knots.				
RUDDER mainpiece at head ...	F.S.	11"		
" " heel ...		6"		
" how constructed	Semi-Balanced. Sing. Plate Type	Forged Stl. Mainpiece & C.S. Arms.		
" single single plate coupling, vertical xx	1.06			
" xxxxxx	28 3/4 x 24 3/4			

STEEL.

STIFFENERS.			
	VERTICAL.	HORIZONTAL.	
	Scantlings. Spacing.	Scantlings. Spacing.	
MIDSHIP BULKHEAD Up. in 'tween decks.	.26 5x3x.30A.	30	
Nos. 11, 37, 67, 89, 115 & 142	No. 167.	.26 5x3x.30A.	24
" " " " " "	Lower No. 11.	.30 6x3x.32BA.	32
Nos. 37, 67, 89, 115 & 142.		.30 6x3x.32BA.	30
" Holds. 37.	.44-.34	10x3 1/2x3 1/2x.46	28
" " " " " "	67	.40-.32	12x4x4x.60 24
" " " " " "	89 & 115	.44-.32	10x3 1/2x3 1/2x.40 31
" " " " " "	Holds 142.	.44-.32	12x3 1/2x3 1/2x.40 31
COLLISION (in Hold)	167.	.54-.30	9x3x3x.48 24
AFTER PEAK " "	11.	.52-.30	8x3x.40 24
			48"x.36
Manufacturer's name or trade mark of the Steel used in the construction of the		Imperial Steel Wks. Yawata.	
Vessel (state process of manufacture)		Lanarkshire Stl Co., D. Colville & Sons. Dorman	
Open Hearth Process.		Long & Co.	
Has the Steel been tested as required by the Rules?		Yes.	

EQUIPMENT No. 41634.												LETTER	bt.	ANCHORS.	
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.			
87409	1st Bower ...	69	2	7	Stockless			53	12	2	0	69-0-0	Hall's Type	N.Hingley	Netherton. 5-3-25. H.G.
87419	2nd „ ...	69	1	21	“			53	10	0	0	69-0-0	“	“	7-3-25. H.G.
87420	3rd „ ...	69	0	0	“			53	5	0	0	69-0-0	“	“	7-3-25. H.G.
	Collective weight.	208	0	0								207-0-0			
87380	Stream	20	2	24	5	1	18	21	8	0	0	20-2-0	Ordinary.	“	20-2-25. H.G.

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 Ryde.		Length.	Diam.				Length.	Cir.	Tons.	Length.	Cir.		
76629	150	2 3/8	101.5	142.1	424-0-9	844-1-0	300	2 3/8	S.I.N.Hingley	Netherton.	12-2-25. H.G.	TOWLINE	SW 130	5	73	130	5 1/2		
76649	150	2 3/8	"	"	423-0-25				"	"	4-3-25. H.G.	HAWSERS & WARPS	2-100	8	2-100	8			
												"	2-100	8	2-100	8			
Iron Stream	120	4 1/2		59				120	5			"							

2 sets - "Williams Janney Brown"
Steering Gear, Steam
Electro-Hydraulic.
Steering Gear, Hand
None.

6 - 30 ft. Lifeboats.
Boats
4 - 26 ft. Lifeboats.
Steering Chains, Size and Test
Clarke Chapman & Co.
6 - 28 ft. Decked boats.
Windlass
Electric Windlass.

Ceiling in Holds, thickness and material
2 1/2" Pine Laid on 2"
Cargo Battens, thickness, material and spacing
2" O.Pine. 15" spacing.
Pine Battens.

Cargo Hatchways.-(Upper Deck)
Plates & Angles, & Wood Covers.
Thickness of Hatches
3" O.Pine.

Size of No. 1 Hatchway (Forward)
20-3x16-0
No. 2
27-6x18-0
No. 3
22-6x18-0
No. 4
25-0x18-0
No. 5
20-0x16-0
No. 6
/

Number of Shifting Beams and/or Fore and Afters
No.1 = 3, No.2 = 5, No.3 = 4, No.4 = 4, No.5 = 3.

NAGASAKI WORKS, MITSUBISHI ZOSSEN KAISHA, LTD.
Builder's Signature
C. A. S.
GENERAL MANAGER.

GENERAL DECLARATION
This vessel has been built in accordance with the approved plans & instructions as well as with the printed Rules.
The materials and workmanship are good.
The Freeboard has been verified and the Freeboard Marks have been "cut in" on the vessel's side.
The Fore and After Peak Tanks, Double Bottom Tanks, Fuel Oil Tanks at side of Tunnels, Fresh Water Tanks, Weather Decks and Gutterways, O.T. & W.T.Bulkheads have been satisfactorily tested.
All the Boat's Davits are of the "Welins Patent" Semi-Rotary Type, and have been tested with the Full Load + 10 %.
Plans sent under separate cover of:- Midship Section, Construction Profile & Deck Plan (2 in No.)
List of Widely Spaced Pillars & Girders, O.T. & W.T.Bulkheads, Sternframe, Rudder, Shaft Brackets, Engine Seatings (2 in No.), Air & Sounding Pipes & Pumping Plan, and Fuel Oil Service Tanks. also
Certificates of Castings & forgings.

The amount of Entry Fee¥ 113:30 :
Special Survey Fee....¥ 6486:36 :
¥ 95:07 Kobe.
Travelling Expenses, if any ¥ 33:17 London.
Fees applied for,
10.12.19 25
Received by me,
17, 12, 19 25
I am of opinion the Vessel should be Classed
*100AI,
with freeboard.
State whether the Vessel has been built under Special Survey
Yes.
Signature
B. Crawford.
Surveyor to Lloyd's Register of Shipping.
Certificate to be sent to
Nagasaki.
Date of issue
12-25.
26/2/26

Committee's Minute
FRI. 26 FEB 1926
Character assigned
100 F.H. with Freeboard.
+ L.M.C. 12:25 C.L.
Lloyd's & C.P.
Oil Engines

are requested not to write on or below the Committee's Minute.

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.)

S, No. of Rov
in 'tween
in Holds
Line Bulk
ers and Spac
g, thickness
RS AND D
ost Contin
er Plate, bre
Angle in
ess of Plat
ay of Wells
ess of Plat
ay of Bridge
thed, mate
Deck.
Plate, bre

Particulars of Drop Test of Cast Steel Anchors, viz. :— Weight, Surveyor's Initials, Number of Certificate, Date of Test.	1st Bower	39-0-14	D.D.W.	No.180	30-1-25.
	2nd "	39-1-20	"	No.190	16-2-25.
	3rd "	39-0-21	"	No.201	24-2-25.

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop -- ft., R.Q.D. -- ft., Bridge 62.5 ft., Forecastle 46.5 (in feet and tenths). When the Poop is joined to the B.D., this should be distinctly stated /

No. and Material of Decks and No. of tiers of Beams (this information is to be given as it should appear in the Register Book) 3 Dks (Stl U-ws).
3 tiers of Beams.

Official No. 31173. ; Signal Letters T B L Q.
particulars of composition Fore and After Peak Tanks, F.W.Tanks, Cofferdams and Wellcement washed.
Fuel Oil Tanks not coated.

PARTICULARS OF WATER BALLAST.—

Where Fitted.	*Length.		Water Capacity.		Where Fitted.	*Length.		Water Capacity.	
	Feet.	Tons.	Feet.	Tons.		Feet.	Tons.	Feet.	Tons.
Double bottom, aft,	112.5	375.95			Fore peak tank,	24.0	116.9		
Double bottom, under Engines and Boilers,	--	--			After peak tank,	22.0	46.0		
Double bottom, if under Engines only,	52.5	280.26			Deep tank, aft,	--	--		
Double bottom, if under Boilers only,	--	--			Deep tank, forward,	--	--		
Double bottom, forward,	188.0	712.05			Other tanks, if fitted, of Shaft Tunnel P & S.	72.5	464.2		
Total capacity of double bottom		1368.26	Total capacity of double bottom		F.W.Tanks at sides of Thrust Recess P&S.		20	254.4	

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

Order for Special Survey No. 72.
Date 10th Sept.1924.
London.

Dates of Surveys held while building
1925.
Jan.5.22, Feb.6.23, Mar.25.30, Apr.9.13,18,20,23,27, May 9.12,16,19,21,28, June 5.8,9,10,13,17,18,20,23,24,26,30, July 6.8,9,10,11,22,24,25, Aug.1.13,19,22,26, Sep.5.10,14,29, Oct.2.5,14,20,22,30. Nov.9.13,14,21,28.30
Dec.1.5.11.

Total No. of Visits 63.