

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

14 JUL 1953

Date of writing Report 19... When handed in at Local Office 8 JUL 1953 Port of KOBE

No. in Survey held at Osaka, Japan Date, First Survey 17th April Last Survey 2nd May 1953
Reg. Book. (No. of Visits 3)

on the Steel Single Screw M.V. "SHOSEI MARU" Tons Gross 7199.23 Net 4175.29

Built at Osaka, Japan By whom built Fujinagata Shipbuilding Co., Ltd. No. 30 When built May, 1953

Owners Matsuoka Kisen K.K. Port belonging to Ashiya, Japan

Installation fitted by Fujinagata Shipbuilding Co., Ltd. When fitted May, 1953.

Is vessel equipped for carrying Petroleum in bulk No Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. Yes Sub.Sig. No Radar Yes

Plans, have they been submitted and approved Yes System of Distribution 3 phase 3 wire Voltage of Lighting 110V

Heating 110V Power 440V D.C. or A.C., Lighting A.C. Power A.C. If A.C. state frequency 60 cycles

Prime Movers, has the governing been found as per Rule when full load is thrown on and off Yes Are turbine emergency governors fitted with a trip switch - Generators, are they compound wound - and level compounded under working conditions -

if not compound wound state distance between generators - and from switchboard - Are the generators arranged to run in parallel Yes, are shunt field regulators provided Yes Is the compound winding connected to the negative or positive pole - Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing Yes Have certificates of test for machines under 100 kw. been supplied Yes and the results found as per Rule

Position of Generators Frame No. 81-90 Portside at manoeuvring flat in engine room

is the ventilation in way of generators satisfactory Yes are they clear of inflammable material and protected from mechanical injury and damage from water, steam and oil Yes Switchboards, where are main switchboards placed Frame No. 89-90 Fore & Middle of manoeuvring flat in engine room

are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water, steam and oil Yes, what insulation is used for the panels Phenolic resin, if of synthetic insulating material is it an Approved Type Yes, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule - Is the construction as per Rule, including locking of screws and nuts. Yes Description of Main Switchgear for each generator and arrangement of equaliser switches Triple Pole, Air Brake C/Breakers with Over current & Reverse Power Protection and a Triple Pole Isolating Switch.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit Triple Pole Air Brake C/Breakers with Over Current Protection, for circuits rated above 60 Amps., Triple Pole Switch & Fuse for circuits rated below 60 Amps.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. Yes Instruments on main switchboard 9 ammeters 9 voltmeters 1 synchronising devices. For compound machines in parallel are the ammeters and reversed current protection devices connected on the pole opposite to the equaliser connection - Earth Testing, state means provided Earth lamps with metal filament for each phase of 440V circuits and 110V circuits.

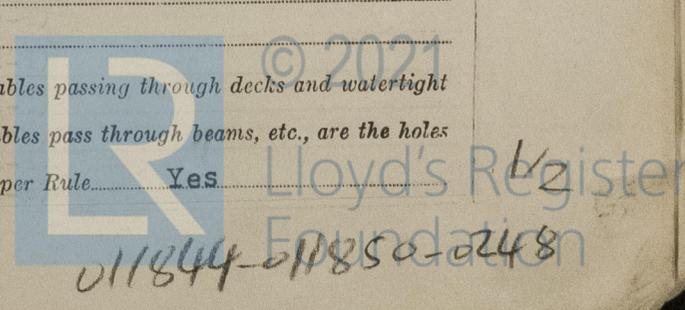
Switches, Circuit Breakers and Fuses, are they as per Rule. Yes, are the fuses an Approved Type. Yes

make of fuses Fuji Electric Mfg., Co., Ltd. Tokyo, Japan, are all fuses labelled. Yes If circuit breakers are provided for the generators, at what overload do they operate 150% and at what current do the reverse protective devices operate 15%

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule. Yes

Cables, are they insulated and protected as per Rule. Yes, if otherwise than as per Rule are they of an Approved Type - state maximum fall of pressure between bus bars and any point under maximum load 5.5V, are the ends of all cables having a sectional area of 0.01 square inch and above provided with soldering sockets. No, Clamp Are all paper insulated and varnished cambric insulated cables sealed at the ends. Yes Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage. Yes, are any cables laid under machines or floorplates. Yes, if so, are they adequately protected. Yes Are cables in machinery spaces, galleys, laundries, etc., lead covered. No or run in conduit. No or of the "HR" type. Yes State how the cables are supported or protected Clipped to solid or perforated steel tray, structured steel work or wood work.

Are all lead sheaths, armouring and conduits effectually bonded and earthed. - Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands. Yes, where unarmoured cables pass through beams, etc., are the holes effectively bushed. Yes Refrigerated chambers, are the cables and fittings as per Rule. Yes



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LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
From MSB to							
S-A (Middle Upper Deck)	1	0.007	16 A	22 A	32.8	V.C.	H.R.C.
S-B (Middle Cargo Lamp)	1	0.06	56.5	81	36.2	"	"
L-A (Flying Bridge Deck)	1	0.0045	9.3	15	82.0	V.R.	"
L-B (Upper Bridge Deck)	1	0.0045	10.7	15	71.0	"	"
L-C (Boat Deck)	1	0.01	18	29	59.0	V.C.	"
L-D (Bridge Deck)	1	0.01	21.5	29	51.0	"	"
L-G (Engine Room)	1	0.0145	24.2	29	49.2	"	"
L-H (")	1	0.0225	28.4	37	32.8	"	"
L-I (Projector Heater & Accommodation)	1	0.0225	32.2	43	62.5	"	"
F-J (Ceiling & Table Fan)	1	0.007	12.7	22	52.5	"	"
C-A (AC 110V communication)	1	0.0145	23.5	34	85.0	"	"
Pressure log.	1	0.003	1.2	7	26.2	V.R.	"
Gyro Compass	1	0.0045	12	15	55.0	"	"
Suez Canal Projector	1	0.04	36.5	83	250.0	V.C.	"
Wireless Equipment	1	0.01	14.0	29	100.0	"	"
Motor Siren	1	0.007	13.0	22	105.0	"	"

Note:-
At the item of insulation
V.C.: Vernished Cambric insulation
V.R.: Vulcanized Rubber insulation
At the Protective covering
HRC: Polychloroprene-compound-sheathed cable.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
From MBS to Steering Gear	1	15	1	0.01	22	29	262.0	V.C.	H.R.C.
" Piston Cooling & L.U. Pump	2	70	1	0.15	92	125	105.0	"	"
From P-A to S.W. & F.W. Cooling Pump	3	35	1	0.04	42.8	54	39.2	"	"
From P-B to Aux. Cooling Pump	2	6	1	0.0045	8.1	11	13.1	V.R.	"
From P-B to Fuel Valve " "	2	2	1	0.003	2.9	7	49.2	"	"
From P-C to G.S. Pump	1	35	1	0.04	42.8	54	23.0	V.C.	"
" Ballast Pump	1	35	1	0.04	42.8	54	16.4	"	"
" Vacuum Pump	1	5	1	0.0045	6.8	11	4.9	V.R.	"
From P-D to O.F. Service Pump	2	3	1	0.003	4.3	7	36.2	"	"
" L.O. Transfer " "	1	3	1	0.003	4.3	7	42.5	"	"
From P-E to Boiler Water Circ. Pump	2	3	1	0.003	4.3	7	26.2	"	"
From P-F to Ref. Compressor	2	7.5	1	0.0045	9.8	15	9.85	"	"
" Ref. Cooling Pump	2	1	1	0.003	1.5	7	49.5	"	"
From P-G to E.R. Vent Fan	2	6	1	0.0045	7.7	11	59.0	"	"
From P-H to Upper Dk. Vent Fan	1	1.5	1	0.003	2.1	10	98.5	"	"
" " Store Vent Fan	1	0.5	1	0.003	0.8	10	82.0	"	"
" Cooking Fan	1	1	1	0.003	1.75	10	46.0	"	"
" Bean Curd Machine	1	0.5	1	0.003	0.8	10	46.0	"	"
From P-I to Turning Gear	1	10.5	1	0.01	16.3	25	82.0	V.C.	"
" Machine Tool	1	5	1	0.0045	6.8	11	29.0	V.R.	"
" O.F. Burning Pump	1	4	1	0.0045	5.8	11	115.0	"	"
" Lifting Gear	1	7.5	1	0.007	10.7	19	65.6	V.C.	"
From P-J to F.W. Pump	1	4	1	0.0045	5.6	11	26.2	V.R.	"
" Sanitary Pump	1	5	1	0.0045	6.5	11	49.2	"	"
" O.F. Transfer " "	1	15	1	0.0145	21	29	78.5	V.C.	"
" O.F. Purifire	3	2	1	0.003	2.8	7	34.3	V.R.	"
" L.O. " "	1	2	1	0.003	2.8	7	39.2	"	"
From P-K to Washing Machine	1	0.5	1	0.0045	8.2	15	52.5	"	"
" Electric Refrigerator	1	0.4KW	1	0.0045	3.65	15	59.0	"	"

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes **Auxiliary** ~~Emergency~~ Supply, state position **Frame No. 73-78 Portside at Manoeuvring flat in engine room**

Navigation Lamps, are they separately wired Yes controlled by separate double pole switches and fuses Yes Are the switches and fuses in a position accessible only to the officers on watch Yes, is an automatic indicator fitted Yes Is an alternative supply provided Yes

Secondary Batteries, are they constructed and fitted as per Rule Yes, are they adequately ventilated Yes state battery capacity in ampere hours **24V 200AH 2 sets, 32V 200AH 1 set, 108V 2AH 1 set**

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof Yes Are any fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present No if so, how are they protected - and where are the controlling switches fitted - Are all fittings suitably ventilated Yes

Searchlight Lamps, No. of -, whether fixed or portable -, are they of the carbon arc or of the filament type -

Heating and Cooking, is the general construction as per Rule Yes, are the frames effectually earthed Yes, are heaters in the accommodation of the convection type Yes Motors, are all motors constructed and installed as per Rule and placed in well-ventilated compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil Yes Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment Yes Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing - Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule Yes

Control Gear and Resistances, are they constructed and fitted as per Rule Yes Lightning Conductors, where required are they fitted as per Rule Yes Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with -, are all fuses of an Approved Cartridge Type -, make of fuse - Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships - Are the cables lead covered as per Rule -

E.S.D., if fitted state make Nippon Electric Co., Ltd. location of transmitter Frame No. 139-140 P.S. Bottom receiver Frame No. 139-140 S.S. Bottom

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and suitably stored in dry situations Yes

Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory Yes

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT			TYPE.	PRIME MOVER.	MAKER.
			Kilowatts per Generator.	Volts.	Ampères.			
MAIN	2	Tokyo Shibaura Electric Co. Ltd.	200K.V.A.	450	256	400	Diesel Eng.	Hanshin Diesel Wks.
Auxiliary	1	Kurosaki Mfg. Co. Ltd.	50 K.V.A.	450	64	600	"	Daihatsu Kogyo K.K.
TRANSFORMER	5	Hitachi Mfg. Co., Ltd.	30KVA 3phx1 450/220 15KVA 1phx4 450/115					

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	200KVA	1	0.4in ²	256A	244A	39.2	V.C.	H.R.C.
Exciter	6.5KW	1	0.03 in ²	59.1A	63A	31.2	V.C.	H.R.C.
Auxiliary GENERATOR	50KVA	1	0.06in ²	64A	70A	78.7	V.C.	H.R.C.
Exciter	3KW	1	0.01 in ²	27.2A	36A	75.2	V.C.	H.R.C.

MAIN DISTRIBUTION CABLES (to Section Boards, Distribution Fuse Boards, etc.).

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
From M.S.B. to 30 KVA Transformer for shore connection	1	0.04 in ²	35.5	54	65.6	V.C.	H.R.C.
Engine Room Pannel (P-A)	1	0.15	85.2	125	41	"	"
(P-B)	1	0.01	22	25	82	"	"
(P-C)	1	0.15	92.4	125	98.5	"	"
(P-D)	1	0.01	12.9	25	32.8	"	"
(P-E)	1	0.0045	8.6	11	98.5	V.R.	"
(P-F)	1	0.0225	22.6	37	24	V.C.	"
(P-G)	1	0.01	15.4	25	32.8	"	"
(P-H)	1	0.0045	5.45	15	65.6	V.R.	"
(P-I)	1	0.04	39.6	54	52.5	V.C.	"
(P-J)	1	0.04	41.5	54	59.0	"	"
(P-K)	1	0.007	11.85	19	39.2	"	"
(P-L)	1	0.0045	6.4	11	46.0	V.R.	"

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.
All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.
The foregoing is a correct description.

Electrical Contractors. Date

COMPASSES.

Have the compasses been adjusted under working conditions. Yes

Fujinagata Shipbuilding Co., Ltd.

S. Hasegawa

Builder's Signature.

Date

Have the foregoing descriptions and schedules been verified and found correct. Yes

Is this installation a duplicate of a previous case. No If so, state name of vessel.

Plans. Are approved plans forwarded herewith. - If not, state date of approval. 10th Feb., 1953.

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith. Yes

General Remarks. (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

The Electrical Installation fitted in this vessel has been installed under the Supervision of the Surveyors in accordance with the Society's Rules, Approved Plans and Secretary's Letters, tested on board under working condition and found satisfactory.

The Materials and Workmanship are good.

2m. 9. 18. - Transfer. (MADE AND PRINTED IN ENGLAND)
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

Total Capacity of Generators 450 K.V.A. Kilowatts.

The amount of Fee ... £ 219,000

When applied for, 8 JUL 1953

Travelling Expenses (if any) £

When received, 19

S. B. Johnson
Surveyor to Lloyd's Register of Shipping.

FRIDAY 28 AUG 1953

Committee's Minute

Assigned

See F.E. mch. rpt



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