

923

16 NOV 1953

No. 1693

Rpt. 13.

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 19... When handed in at Local Office 19... Port of Kobe, Japan  
No. in Survey held at Kobe Date, First Survey 15th June, 1953 Last Survey 28th Aug, 1953  
Reg. Book. (No. of Visits 24)

on the Single Screw Steel S.S. "Meitai-Maru" Tons Gross 12982.28 Net 9558.53  
Built at Kobe, Japan By whom built Kawasaki Dockyard Co., Ltd. Yard No. 923 When built Aug. 1953  
Owners Meiji Kaiun Co., Ltd. Port belonging to Kobe, Japan  
Installation fitted by Kawasaki Dockyard Co., Ltd. When fitted Aug. 1953

Is vessel equipped for carrying Petroleum in bulk Yes Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. Yes Sub.Sig. None Radar Yes

Plans, have they been submitted and approved Yes System of Distribution 2-wire D.C. 3-wire A.C. Voltage of Lighting 110 V.  
Heating 220 V. Power 220 V. D.C. or A.C., Lighting A.C. Power D.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 Yes Generators, are they compound wound Yes, and level compounded under working conditions Yes  
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 Negative 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 Yes

Position of Generators Frame No. 36 - 43 Portside 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. 44 Forward center 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 Phenol Resin (Synthetic Resin) Bonded board, 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. a triple pole linked air circuit breaker (two poles for main, one pole for equalizer) with overload and reverse current trips arranged with equalizer circuit being closed before main circuits and opened after main circuits, and a triple pole linked switch.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit generally double pole linked switch with a fuse on each pole is used for each out-going circuit, and double pole air circuit breakers with overload trips for steering gear and for circuits above 200A, and triple pole linked switch for each lighting circuit.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 14  
ammeters 6 volimeters --- synchronising devices. For compound machines in parallel are the ammeters and reversed current protection devices connected on the pole opposite to the equaliser connection Yes Earth Testing, state means provided 5  
(2 for D.C., 3 for A.C.) earth lamps with metal filament

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes  
make of fuses fuse Kawasaki "SK" Cartridge fuse Yes If circuit breakers are provided for the generators, at what overload do they operate 150 % and at what current do the reversed current protective devices operate for main 76A for aux. 65A

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 No: substantial mechanical clamp are the ends of all cables having a sectional area of 0.01 square inch and above provided with soldering sockets. Yes 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 Yes or run in conduit Yes (Partly)

or of the "HR" type --- State how the cables are supported or protected generally supported by iron hangers and fixed to them by metal clips and protected by lead-alloy sheath and steel-wire armour. Where exposed to risk of mechanical damage, protected by sheet iron plating, and under floor plates in engine room in conduits.

Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes 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 (Provision use)

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Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule..... Yes Emergency Supply, state position  
Frame No. 44 starboard 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..... 2 x 24V x 200 A.H.  
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..... Yes  
if so, how are they protected..... Flame - proof type  
Passage on after upper deck.  
and where are the controlling switches fitted..... Passage under fore-castle deck Are all fittings suitably ventilated..... Yes  
Searchlight Lamps, No. of 1 (Suez), whether fixed or portable..... Portable are they of the carbon arc or of the filament type..... 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..... Yes  
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..... Yes are all fuses of an Approved Cartridge Type..... Yes Kawasaki "SK" cartridge  
Are the fittings for pump  
rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships..... Yes Are the cables lead covered as per Rule..... Yes  
E.S.D., if fitted state maker..... Nippon Electric Co., Ltd. location of transmitter..... Bottom Fr.No. 196-197 and receiver..... Bottom Fr.No. 196-197  
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				PRIME MOVER.	
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN ...	2	Kawasaki Dockyard Co., Ltd.	350	230	1520	1200	Turbine	Mitsubishi Heavy-Industries, Reorganized, Ltd.
EMERGENCY ... ROTARY TRANSFORMER	1	"	100	230	435	450	Diesel	Daihatsu Kogyo Co., Ltd.
	2	"	A.C. 30 K.V.A. 40	115	200	1800	Motor-Generator	Kawasaki Dockyard Co., Ltd.

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet) meter	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 No.1	350	3	1.0	1520	✓ 1785	23	R	LEAD-ALLOY SHEATHED STEEL WIRE ARMoured
" " EQUALISER		2	0.75		922	"	"	"
" " FIELD		1	0.007		24	11.5	"	"
No.2	350	3	1.0	1520	✓ 1785	33	"	"
EQUALISER		2	0.75		922	"	"	"
FIELD		1	0.007		24	16.5	"	"
EMERGENCY GENERATOR	100	1	0.75	435	✓ 461	30	"	"
ROTARY TRANSFORMER: MOTOR	50HP	1	0.3	186	✓ 240	20	"	"
" " GENERATOR	A.C. 30 K.V.A.	1	0.25	200	✓ 254	20	V	"

Similar circuits are omitted

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

DESCRIPTION.								
FROM M.S.B. TO No.1 M.G. MOTOR (M-MG-1)	1	0.3	186 ✓	240	20	R	LEAD-ALLOY SHEATHED	
" No.2 " (M-MG-2)	1	"	"	"	"	"	STEEL WIRE ARMoured	"
" No.1 MG. GENERATOR (G-MG-1)	1	0.25	200 ✓	254	"	V		"
" No.2 " (M-MG-3)	1	"	"	"	"	"		"
" SHORE CONNECTION BOX (SC-1)	1	0.3	200 ✓	240	60	R		"
" " (SC-3)	1	0.25	200 ✓	254	"	V		"
" TESTING S.B. (T-1)	1	0.0145		40	40	R		"
" " A.C. (T-3)	1	"		40	40	"		"
" DIS. BOX ENGINEER (PD-1)	1	0.1	42.5 ✓	118	20	R		"
" " BOILER (PD-3)	1	0.01	25 ✓	45	70	V		"
" " ENGINEER (PD-5)	1	"	40 ✓	45	50	"		"
" " ENGINEER (PD-7)	1	0.2	126 ✓	184	40	R		"
FROM M.S.B. TO DIS. BOX BOILER (PD-9)	1	0.007	22 ✓	30	70	V		"
" " ENGINEER (PD-11)	1	0.04	54 ✓	67	24	R		"
" " BOILER (PD-13)	1	0.0145	54 ✓	60	70	V		"
" " REF. MACHINER (PD-15)	1	0.1	80 ✓	118	130	R		"
" " PANTRY (PD-17)	1	0.0045	9 ✓	15	40	R		"
" " FORE BRIDGE (PD-19)	1	0.0145	60 ✓	60	200	V		"



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

[illegible]

## MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.		No.	B.H.P.								
M.S.B. TO FORCED DRAFT FANS		2	85	1	0.25	320 ✓	363	120	V	LEAD-ALLOY SHEATHED STEEL WIRE ARMORED	
" MAIN CONDENSATE PUMPS		2	20	1	0.1	79 ✓	118	30	R	"	
" AUXILIARY CONDENSATE PUMP		2	6	1	0.0145	25 ✓	37	37	"	"	
" MAIN CONDENSER C. PUMP		1	110	1	0.75	420 ✓	461	50	"	"	
" AUXILIARY CONDENSER C. PUMP		1	35	1	0.06	132 ✓	143	45	V	"	
" LUBRICATING OIL PUMPS		2	30	1	"	115 ✓	"	70	"	"	
" FIRE & GENERAL SERVICE PUMP		1	50	1	0.3	186 ✓	240	60	R	"	
" ENGINEER SERVICE AIR COMP.		1	5	1	0.007	21 ✓	24	40	"	"	
" FUEL OIL TRANSFER PUMP		1	10	1	0.01	40 ✓	45	80	V	"	
" EXHAUSTER		1	0.75	1	0.003	3.8 ✓	10	60	R	"	
" BURNING FAN COOKING RANGE		1	1	1	0.003	5 ✓	10	50	"	"	
" AFTER ACCOMODATION VENT. FANS		2	3	1	0.0045	13 ✓	15	70	"	"	
" RATING TOILET VENT. FAN		1	0.5	1	0.003	5 ✓	10	50	"	"	
" TURNING MOTOR		1	1.5	1	0.01	31 ✓	45	50	V	"	
" STEERING GEAR MOTORS		2	20	1	0.1	79 ✓	118	130	R	"	
DIS. BOX TO REF. COMPRESSORS		2	7.5	1	0.01	31 ✓	50	15	V	"	
" COOLING W. PUMPS		2	2	1	0.0045	9 ✓	15	130	R	"	
" ENGINEER VENT. FANS		2	6.5	1	0.0145	27 ✓	37	120	R	"	
" BOILER " "		2	6.5	1	0.007	27 ✓	30	120	V	"	



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.

Takeo. Morimoto Electrical Contractors. Date.....  
Standing Director of Kawasaki Dockyard, Kobe, Japan.

#### COMPASSES.

Have the compasses been adjusted under working conditions..... YES

Takeo. Morimoto Builder's Signature. Date.....  
Standing Director of Kawasaki Dockyard, Kobe, Japan.

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..... No If not, state date of approval..... 6th June, 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 of this vessel has been constructed under Special  
Survey in accordance with the Rules, Approved Plans, and Secretary's letters.

The Materials and Workmanships were found sound and good.

The Generators and Motors etc., have been examined under full load working  
condition to rule's requirements and found satisfactory.

Total Capacity of Generators..... 800 ✓ Kilowatts.

The amount of Fee ... £ 2284.000 When applied for, 19

Travelling Expenses (if any) £ : : When received, 19

Committee's Minute.....

Assigned.....

S. G. Johnson K. Sakuchi  
Surveyor to Lloyd's Register of Shipping.

FRIDAY - 4 DEC 1953

See minute on  
hull fe. rlt



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