

FROM ACCTS.	194
FROM ADMIN/F	
MS Rpt. 13.	
MS RECD.	
MS DEPT.	

# REPORT ON ELECTRICAL EQUIPMENT

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

No. FE-6482

9 APR 1959

MAR 27 1959

Received at London Office

Date of writing Report 25th Feb., 19 59 When handed in at Local Office 19 Port of KOBE

No. in Survey held at Tamano, Japan Date, First Survey 24-2-58 Last Survey 9-2-19 59.  
Reg. Book. (No. of Visits 34)

on the M.V. "OHMINESAN MARU"

Tons Gross 20,201.82  
Net 12,855.54

Built at Tamano, Japan By whom built Mitsui S.B. & Eng., Co., Ltd. Yard No. 635 When built 1959-2

Owners Mitsui Steamship Co., Ltd. Port belonging to Tokyo, Japan

Installation fitted by Mitsui Shipbuilding & Engineering Co., Ltd. When fitted 1959-2.

Is vessel equipped for carrying Petroleum in bulk. Yes Is vessel equipped with D.F. Yes E.S.D. Gy.C. Yes Sub.Sig. - Radar Yes

Plans, have they been submitted and approved. Yes System of Distribution Three & Two conduit insulation 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

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 - and level compounded under working conditions. -

Are the generators arranged to run in parallel. Yes Is the compound winding connected to the negative or positive pole. -

Have machines 100 kw. and over been inspected by the Surveyors during manufacture and testing. Yes Have certificates of test for machines

under 100 kw. been supplied and the results found as per Rule. - Position of Generators. Engine Room

Port side built. Seat on No. 3 F.O. Tank top.

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. Engine Room

Port side Built. Sea on 3rd Deck

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. Syntheticresin 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. Triple-pole air-break circuit breaker with over current and

reverse power protection and a triple poles isolating switch

and the switch and fuse gear (or circuit breakers) for each outgoing circuit. Triple-pole air-break circuit breaker with over

current protection and two pole air-break circuit breaker with over current protection

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. Yes Instruments on main switchboard. 10

ammeters. 5 voltmeters. 1 synchronising devices. For compound machines in parallel are the ammeters and reverse current

protection devices connected on the pole opposite to the equaliser connection. - Earth Testing, state means provided. 3 - Lamps

in parallel with 440V busbar \* Preference Tripping, state if provided. current time delay and tested. Yes

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

make of fuses. Fuji Electric Co., are all fuses labelled. Yes If circuit breakers are provided for the generators, at what

overload do they operate. 630A 20 second. and at what current do the reverse current protective-

devices operate. 42A 10 second. 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. 17.0 volts. 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 State

type of cables (if in conduit this should also be stated) in machinery spaces. Lead sheathed, galleys. Lead sheathed armoured

and laundries. - State how the cables are supported or protected.

Clipped to solid or perforated steel tray structure, steel work or wood work

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. -

Have refrigeration fan motors been constructed under survey. - and test certificates supplied. -

Are the motors accessible for maintenance at all times. -

\* 3 - Lamps in parallel with 440V feeder and earth.  
3 - lamps in parallel with 110V feeder and earth.

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Lloyd's Register  
Foundation



Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes Emergency Supply, state position

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, fitted and adequately ventilated as per Rule Yes state battery capacity in ampere hours 24V 120AH 2 sets Where required to do so does it comply with 1948 International Convention Yes

Lighting, is fluorescent lighting fitted Yes If so, state nominal lamp voltage 110 and compartments where lamps are fitted All accommodation room, saloon & smoking room

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof Yes

Searchlights, 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 earthen 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

Lightning Conductors, where required are they fitted as per Rule Yes

Ships carrying Oil having a Flash Point of 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 make of fuse Fuji Electric Co. Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships Yes Are all cables lead covered as per Rule Yes

E.S.D., if fitted state maker Nippon Electric Co., Ltd. location of transmitter and receiver Bottom of Fr.105-Fr.106

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.
			Kw. per Generator	Volts.	Ampères.	Revs. per Min.		
MAIN	3	Tokyo Shibaura Electric Co., Ltd.	320	440	420	450	Mitsui B. & W.	Mitsui Shipbuilding & Eng., Co., Ltd.
EMERGENCY ROTARY TRANSFORMER								

#### GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	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	3	320	2	0.25	420	✓ 462	*	V.C.	L.S.A.
" EQUALISER					#1 12				
					#2 12				
					#3 12				
EMERGENCY GENERATOR									
ROTARY TRANSFORMER: MOTOR									
" GENERATOR									

#### MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.).

DESCRIPTION.	No. of	Kw.	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.
Power Panel No.1	1			3c0.01	18.5	✓ 32	12	V.C.	L.S.
Power Panel No.2	1			3c0.007	10.6	✓ 19	35	"	L.S.A.
Power Panel No.3	1			3c0.06	50	✓ 100	55	"	"
Power Panel No.4	1			3c0.0045	4.46	✓ 15	48	V.I.R.	"
Power Panel No.5	1			3c0.0225	40.9	✓ 56	55	V.C.	"
Power Panel No.6	1			3c0.04	59	✓ 70	7	"	"
Power Panel No.7	1			3c0.0045	6	✓ 11	50	V.I.R.	"
Power Panel No.8	1			3c0.0225	43.4	✓ 51	32	V.C.	"
Power Panel No.9	1			3c0.04	58.4	✓ 70	40	"	"
Power Panel No.10	1			3c0.01	18.9	✓ 29	35	"	"
Power Panel No.11	1			3c0.0145	23.1	✓ 38	6	"	"
Power Panel No.12	1			3c0.0225	39.7	✓ 51	5	"	"
Power Panel No.13	1			3c0.0145	13.5	✓ 38	30	"	"
Light Panel No.1	1			3c0.0225	37.4	✓ 56	12	"	L.S.

#### DISTRIBUTION CABLES (to Section-Boards and Distribution-Fuse-Boards, etc.).

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.			
Light Panel No.2	1	3c0.01	19.1	✓ 32	6	V.C.	L.S.
Light Panel No.3	1	3c0.0225	42.5	✓ 56	8	"	"
Light Panel No.4	1	3c0.01	8.7	✓ 32	60	"	L.S.A.
Light Panel No.5	1	3c0.03	40.6	✓ 58	55	"	L.S.A.
Light Panel No.6	1	3c0.0145	29.2	✓ 38	23	"	"
Light Panel No.7	1	3c0.01	16.2	✓ 29	52	"	"
Light Panel No.8	1	3c0.01	21.3	✓ 29	18	"	"
Light Panel No.9	1	3c0.06	71.5	✓ 91	6	"	"
Light Panel No.10	1	3c0.0145	25.2	✓ 38	20	"	"
Wireless switchboard	1	3c0.007	13.1	(32) ✓	8	"	"
Navigation light indicator	1	2c0.01	1.8	✓ 24	130	V.I.R.	L.S.A.
Suez canal search light	1	2c0.007	11.3	✓ 32	85	V.C.	L.S.A.

#### MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	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.
Spare air compressor	1	70	1	3c0.1	85	✓ 128	50	V.C.	L.S.A.
Spare Lub. oil pump	1	160/190	1	3c0.3	260	✓ 260	40	"	"
Fire & General service P.	1	55	1	3c0.06	64.5	✓ 91	25	"	"
Main Cooling water pump	3	50	1	3c0.04	59	✓ 70	45,47,40	"	"
Aux. cooling water pump	2	4	1	3c0.0045	5	✓ 11	14,13	V.I.R.	"
Lub. oil shift pump	1	4	1	3c0.0045	5.9	✓ 11	5	"	"
L.O. pump for turbo charger	2	2	1	3c0.003	3	✓ 7	5,5	"	"
F.O. daily supply pump	1	6	1	3c0.007	8.6	✓ 19	10	V.C.	"
F.O. circulating pump	1	3	1	3c0.0045	4.3	✓ 11	6	V.I.R.	"
Fuel valve cool. pump	1	3	1	3c0.0045	4.3	✓ 11	7	V.I.R.	"
Bilge & Ballast pump	1	2.5	1	3c0.0145	31	✓ 38	22	V.C.	"
Bilge pump	1	5	1	3c0.0045	7.3	✓ 15	20	V.I.R.	"
Fresh water pump	1	5	1	3c0.0045	6.3	✓ 11	4	"	"
Sanitary pump	2	5	1	3c0.0045	6.3	✓ 11	6,10	"	"
F.O. transfer pump	1	20	1	3c0.0225	39	✓ 51	10	V.C.	"
Condensate pump	2	6	1	3c0.007	7.7	✓ 19	15,18	"	"
Superjector	2	8.5	1	3c0.007	12	✓ 19	18,32	"	"
F.O. clarifier	3	6	1	3c0.007	7.7	✓ 19	12,11,10	"	"
L.O. purifier	1	7.5	1	3c0.007	9.5	✓ 19	9	"	"
Forced draft fan	2	65/15	1	3c0.06	77.5/22	✓ 91	33,20	"	"
Burning oil pump	2	10	1	3c0.007	13.9	✓ 19	12,12	"	"
Boiler water circulat. p.	2	5	1	3c0.0045	6.3	✓ 11	6,6	V.I.R.	"
Absord. fan for cargo desiccator	1	32	1	3c0.0225	40	✓ 56	10	V.C.	"
React. fan for cargo desiccator	1	8	1	3c0.007	10	✓ 21	10	"	"
Steering gear	2	40	1	3c0.04	68	✓ 77	63,45	"	"
Engine Room vent. fan	2	7	1	3c0.007	10.4	✓ 19	32,30	"	"
Engine Room vent. fan	2	6	1	3c0.007	9.6	✓ 19	34,38	"	"
Boiler Room vent. fan	2	4	1	3c0.0045	5.5	✓ 11	56,56	V.I.R.	"
Accom. vent. fan	3	4	1	3c0.0045	5.3	✓ 11	16,8,10	"	"
Pump room exh. vent. fan	1	5	1	3c0.0045	8	✓ 11	30	"	"
Prov. ref. compressor	1	8	1	3c0.007	12	✓ 21	10	V.C.	"
Air cond. & prov. ref. comp.	1	13	1	3c0.01	17.5	✓ 29	10	"	"
Air condition Ref. comp.	1	5	1	3c0.0045	7	✓ 15	10	V.I.R.	"
Cool. W.pump for air cond.	2	4,2	1	3c0.0045	5	✓ 15	24	"	"
				3c0.003	2.7	✓ 7	18	"	"

NOTE.—Use Rpt. 13 Continuation Sheet if the above space is insufficient.



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. MITSUI SHIPBUILDING & ENGINEERING CO., LTD., TAMANO WORKS.

S. Takato  
Senior Managing Director.

Electrical Contractors. Date

#### COMPASSES.

Have the compasses been adjusted under working conditions. MITSUI SHIPBUILDING & ENGINEERING CO., LTD., TAMANO WORKS.

S. Takato  
Senior Managing Director.

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. No If not, state date of approval. 19-11-1958

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

General Remarks. (State quality of workmanship and materials, opinions as to class, etc.)

The electrical installation of this ship has been constructed under Special Survey in accordance with the Rules, approved plans and Secretary's letters.

The materials and workmanship are sound and good.

The generators and motors etc., have been tested under full working condition to Rule requirements with satisfactory results.

Total Capacity of Generators. 960 kVA. Kilowatts.

3 x 320KVA Generators. ¥45,000.- Nishishiba Denki K.K.; 12-7-58.

The amount of Fee ... ¥255,000. When applied for,

10.4.59

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When received,

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Travelling Expenses (if any) £

A. Jacobs & K. Tabuchi  
Surveyor to Lloyd's Register of Shipping.  
A. Jacobs & K. Tabuchi.

FRIDAY 24 APR 1959

Committee's Minute

Assigned

See Rpt. 1.