

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

23 SEP 1958

Date of writing Report 22nd July, 1958. When handed in at Local Office 19 Port of Shimonoseki.

No. in Survey held at Hiroshima, Japan Date, First Survey 14-5-1958 Last Survey 14-7-1958.

Reg. Book.

(No. of Visits 6)

on the M. V. "OCEANIA MARU"

Tons {Gross 8906.05
Net 5414.01

Built at Hiroshima, Japan By whom built Mitsubishi SB & Eng. Co., Ltd., Hiroshima S.Y. Yard No. 137 When built 1958-7

Owners MITSUBISHI KAIUN K.K. Port belonging to Tokyo

Installation fitted by Mitsubishi SB & Eng. Co., Ltd., Hiroshima S.Y. When fitted 1958-7

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 5 phase, 3 wire, insulated Voltage of Lighting 110 V

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

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 -

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 Yes Position of Generators floor in the machinery space. 2 port outboard fore & aft, 1 port inboard aft.

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 At centre of fwd end, on platform level in machinery space

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 A triple pole linked air circuit breaker with an instantaneous overcurrent trip in each phase, overcurrent relays in two phases, a reverse power relay and a triple pole linked isolating switch fitted. Neutral insulated from earth. and the switch and fuse gear (or circuit breakers) for each outgoing circuit A triple-pole linked air circuit breaker with an over current trip on each insulated pole fitted. Non-fuse breaker of De-ion type was made by Terasaki Denki Seisakusho, Osaka, Japan.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Instruments on main switchboard 4 ammeters 6 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 2 sets of 110V 10W E-26 incandescent lamps Preference Tripping, state if provided Yes, 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 Plug" type, are all fuses labelled Yes If circuit breakers are provided for the generators, at what overload do they operate 123% (400A), 20 sec. and at what current do the reverse current protective devices operate 30 KW., 10 sec.

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 3.2 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, partly, if so, are they adequately protected Yes State type of cables (if in conduit this should also be stated) in machinery spaces Polychloroprene or lead sheathed, galleys Polychloroprene or lead sheathed

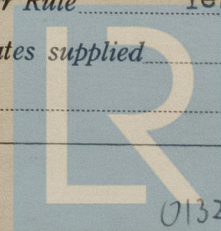
and laundries Polychloroprene sheathed State how the cables are supported or protected to be secured by metal clip on coated steel hangers or galvanized perforated steel plate.

Where exposed to risk of mechanical damage or under machines, floor plates in eng. room or on decks exposed to wheather, protected by sheet steel plates or heavy gauge 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

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

Are the motors accessible for maintenance at all times -



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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

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 (Supply...Wall Vent.

Secondary Batteries, are they constructed, fitted and adequately ventilated as per Rule Yes Exhaust..Mush Rm Vent. Yes (24Vx200A.H. ...2SetsForGeneralUse. Where required to do so does it comply with 1948 International Convention Yes 48Vx200A.H. ...1Set ForRadioSet.

Lighting, is fluorescent lighting fitted Yes If so, state nominal lamp voltage 110 V and compartments where lamps are fitted in dining saloon & smoking room on bridge deck.

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 1KWx1, whether fixed or portable fixed, are they of the carbon 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

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 - 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 all cables lead covered as per Rule -

E.S.D., if fitted state maker Tokyo Keiki location of transmitter and receiver D.B. F.119-120 in E.S. comp.

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.	
			Kw. per Generator.	Volts.	Amperes.	Revs. per Min.	TYPE.	MAKER.
MAIN	3	Mitsubishi Electric Mfg. Co.	250	445	324	514	Diesel	Mitsubishi Nippon Heavy Ind. Co., Ltd.
EMERGENCY ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	No. of	KVA	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	250	2(3C)	37/0.103	32.4	400	NO. 1 15 NO. 2 20 NO. 3 22	V.C.	Polychloroprene sheathed & steel wire braided.
" " EQUALISER						418			
EMERGENCY GENERATOR	-								
ROTARY TRANSFORMER: MOTOR	-								
" " GENERATOR	-								

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

DESCRIPTION.									
Main Switchboard to 3x25 KVA Transformer (primary)									
	3(2C)	19/0.052	46	✓	77	15	V.C.	Polychloroprene sheathed & steel wire braided.	
" (secondary)									
	3(2C)	37/0.083	184	✓	215	15	V.C.	"	
Main Switchboard to Shore Connection box (Bell)									
	1(3C)	37/0.103	200	✓	200	50	V.C.	"	

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.			
Power:-							
MSB to ER Section Board (p. & Aft, P-20)	1 (3C)	7/0.064	32	✓ 37 ³⁹	25	V. C.	Polychloroprene sheathed & steel wire braided.
MSB to Purifier Section Board (P-18)	1 (3C)	7/0.064	19	✓ 37 ³⁹	30	V. C.	"
MSB to ER Sec. Board (s. P-19)	1 (3C)	19/0.052	35	✓ 54 ⁵⁸	20	V. C.	"
MSB to Work Shop Sec. Board (P-21)	1 (3C)	19/0.064	30	✓ 70 ⁷³	20	V. C.	"
MSB to ER Vent. Fan Sec. Board (P-22)	1 (3C)	7/0.064	18	✓ 37 ³⁹	45	V. C.	"
MSB to Cargo Winch Sec. Board (Fore P-12)	2 (3C)	37/0.083	260	✓ 302 ³¹⁶	45	V. C.	"
(Aft P-13)	2 (3C)	37/0.083	220	✓ 302 ³¹⁶	60	V. C.	"
MSB to Hold Fan Sec. Board (P-23)	1 (3C)	7/0.064	32	✓ 37 ³⁹	40	V. C.	"
MSB to Ref. Mach. Sec. Board (P-24)	1 (3C)	7/0.052	15	✓ 29 ³⁰	18	V. C.	"
MSB to Acc. Fan Sec. Board (P-25)	1 (3C)	7/0.064	23	✓ 37 ³⁹	40	V. C.	"
MSB to Heater Distribu. Board (Bri. Dk L-4)	1 (3C)	19/0.064	53	✓ 70 ⁷³	35	V. C.	"
" (Upp. Dk L-5)	1 (3C)	19/0.064	53	✓ 70 ⁷³	40	V. C.	"
Lighting:-							
MSB to Cargo Light S.B. (L-3)	1 (3C)	19/0.083	63	✓ 99 ¹⁰³	43	V. C.	Polychloroprene sheathed & steel wire braided.
MSB to Navigation Light S.B. (L-7)	1 (2C)	7/0.036	1.8	✓ 19	45x2	V. C.	Lead sheathed & steel wire braided.
MSB to Nav. Bridge Light S.B. (L-8)	1 (3C)	19/0.064	43	✓ 70 ⁷³	50	V. C.	Polychloroprene sheathed & steel wire braided.
MSB to ER Light S.B. (L-9)	1 (3C)	19/0.052	24	✓ 54 ⁵⁸	13	V. C.	"
" (L-10)	1 (3C)	19/0.052	45	✓ 70	13	V. C.	Lead sheathed & steel wire braided.
MSB to Boat Dk & Bri. Dk Light SB (L-1)	1 (3C)	19/0.064	55	✓ 70 ⁷³	40	V. C.	Polychloroprene sheathed & steel wire braided.
MSB to Upper Dk Light S.B. (L-2)	1 (3C)	19/0.064	55	✓ 91	40	V. C.	Lead sheathed & steel wire braided.
Communication:-							
MSB to Radio Equipment (L-14)	1 (2C)	7/0.036	10	✓ 27	40x2	V. C.	Polychloroprene sheathed & steel wire braided.
" (P-26)	1 (3C)	7/0.052	10	✓ 29 ³⁰	40x2	V. C.	"
MSB to Gyro Compass (P-27)	1 (3C)	7/0.036	4	✓ 19 ²¹	40	V. C.	"
MSB to Radar (P-28)	1 (3C)	7/0.036	7	✓ 19 ²¹	40	V. C.	"
MSB to I. C. Distribu. Board (Dk L-11)	1 (3C)	7/0.064	15	✓ 37 ³⁹	40	V. C.	"
(ER L-12)	1 (2C)	7/0.036	5	✓ 17	7	R	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.		No.	B.H.P.																
Jacket & Piston Cooling F.W.P.		2	45	1(3C)	19/0.064	53	✓	70 73	18	20	V.C.	Polychloroprene sheathed & steel wire braided.							
Cooling Sea Water Pump		2	50	1(3C)	19/0.064	59	✓	70 73	15	15	V.C.	"							
Lub. Oil Pump		2	20	1(3C)	7/0.052	25	✓	29 30	18	18	V.C.	"							
Turbo Charger L.O. Pump		2	3	1(3C)	3/0.036	2.2	✓	7	15	15	R	"							
Steering Gear		2	20	1(3C)	7/0.064	34	✓	37 39	15	15	V.C.	"							
Aux. Blower		1	30	1(3C)	7/0.064	35	✓	37 39	35	35	V.C.	"							
Bilge & Ballast Pump		1	45	1(3C)	19/0.064	55	✓	70 73	35	35	V.C.	"							
Fire & G.S. Pump		1	45	1(3C)	19/0.064	53	✓	70 73	35	35	V.C.	"							
L.O. Purifier		1	3	1(3C)	3/0.036	4	✓	7	12	12	R	Lead sheathed & steel wire braided.							
Purifier Pump		2	2	1(3C)	3/0.036	2.7	✓	7	10	10	R	Polychloroprene sheathed & steel wire braided.							
F.O. Purifier		2	3	1(3C)	3/0.036	4	✓	7	10	10	R	"							
F.O. Clarifier		2	3	1(3C)	3/0.036	4	✓	7	10	10	R	"							
C.F.O. Transfer Pump		1	15	1(3C)	7/0.052	19.5	✓	19	8	8	R	"							
A.F.O. Transfer Pump		1	4	1(3C)	3/0.036	5.3	✓	7	15	15	R	"							
C.O. Shifting Pump		1	4	1(3C)	3/0.036	5.3	✓	7	25	25	R	"							
Forced Circulating Pump		2	4	1(3C)	3/0.036	5.5	✓	7	15	15	R	"							
Supplementary Feed Pump		1	1	1(3C)	3/0.036	1.5	✓	7	17	17	R	"							
Bilge Pump		1	7	1(3C)	7/0.029	9.5	✓	11	12	12	R	Lead sheathed & steel wire braided.							
Fresh Water Pump		1	4	1(3C)	3/0.036	5.5	✓	7	20	20	R	Polychloroprene sheathed & steel wire braided.							
Sanitary Pump		1	4	1(3C)	3/0.036	5.1	✓	7	20	20	R	"							
Engine Room Vent. Fan		2	7	1(3C)	7/0.029	8.6	✓	11	15	15	R	"							
Hold Exhaust Fan		3	2.5	1(3C)	3/0.036	3.5	✓	7	50	50	R	"							
"		3	5	1(3C)	7/0.029	7	✓	11	100	100	R	"							
Prov. Ref. Compressor		2	5	1(3C)	7/0.029	66	✓	11	10	10	R	Lead sheathed & steel wire braided.							
Prov. Ref. Cooling Water P.		1	1.5	1(3C)	3/0.036	2.1	✓	7	12	12	R	Polychloroprene sheathed & steel wire braided.							
Thermotank Fan		2	8/3	1(3C)	7/0.036	10.5/5.2	✓	12	15	15	R	"							
Exhaust Fan for Galley		2	1/4	1(3C)	3/0.029	0.7	✓	4	30	30	R	"							
Engine Turning Motor		1	10/5	1(3C)	7/0.036	12	✓	12	35	35	R	"							

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.

HIROSHIMA WORKS
MITSUBISHI SHIPBUILDING & ENGINEERING CO., LTD.

R. Jandzi Electrical Contractors. Date Aug. 5, 1958

COMPASSES.

Have the compasses been adjusted under working conditions

Yes

HIROSHIMA WORKS

MITSUBISHI SHIPBUILDING & ENGINEERING CO., LTD.

T. Kawate

Builder's Signature.

Date Aug. 5, 1958

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 13-5-1958

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

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

The electric equipment and installation of this ship have been made under Special Survey in accordance with the Rules, approved plans and the Secretary's letters.

The materials and workmanship are good.

All tests and trials required by the Rules have been completed with satisfactory results.

Total Capacity of Generators 750 K.V.A. Kilowatts.

The amount of Fee ... £279,000 :
* Less Gen. Construction 71,550
£207,450

When applied for,

SEP. 11 1958

LOCALLY

When received,

Travelling Expenses (if any) £ : : 19

* 3- 250KVA Generators Construction Fees rendered to Mitsubishi Elect. Mfg. Co., Nagasaki on the 27/3/58 & 25/4/58.

Committee's Minute

TUESDAY 21 OCT 1958

Assigned

See Rpt. 1

W. Kersey
M. Shindani K. Okada
Surveyor to Lloyd's Register of Shipping.



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