

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

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19

Port of

KOBE

No. in Survey held at Tamano Japan
eg. Book.

Date, First Survey 6-6-50 Last Survey 12-12-1950
(No. of Visits)

on the Steel Single Screw Motor Vessel "AZUMASAN MARU"

Tons { Gross 6993.45
Net 5047.67

Built at Tamano By whom built Mitani Shipbuilding & Engineering Co., Ltd., Tamano Works, Yard No. 556 When built Dec. 1950

Owners Mitsui Senpaku K.K. Port belonging to TOKYO

Installation fitted by Mitsui Shipbuilding & Engineering Co., Ltd., Tamano Works When fitted DEC. 1950

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

Plans, have they been submitted and approved Yes System of Distribution TWO WIRE D.C. Voltage of Lighting 220

Heating 220 Power 220 D.C. or A.C. Lighting D.C. Power D.C. If A.C. state frequency —

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 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. 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 Port side in Engine room platform.

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 Fore end of 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 Synthetic material, 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

or each generator and arrangement of equaliser switches Main Switch gear has a 3 pole air circuit breaker with overload (positive & negative poles), reverse current trips (positive pole), and a single pole equalizer switch, and has a 3 pole disconnecting knife switch.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit Switch gears have 2 poles air circuit breaker with overload trip for outgoing circuit rated above 300 amperes and 2 poles linked switch with a fuse on each pole for outgoing circuit rated up to 300 amperes.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 9

ammeters 2 voltmeters — 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 Earth indicating

System is adopted 2 poles of the metal-filament type and a ohmmeter.

witches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes (Restricted)

ake of fuses Mitani Shipbuilding Co., Ltd., 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 reversed current protective devices operate 150%

Print 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

the maximum fall of pressure between bus bars and any point under maximum load Under 5 volts, 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 No, if so, are they

equally protected — Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit —

of the "HR" type — State how the cables are supported or protected Cables are run and securely crimped

on strong steel tray, and are protected by steel cover through cargo spaces

Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes Are all cables passing through decks and watertight

heads 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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Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule yes. Emergency Supply, state position 2nd Deck midship Starboard side

Navigation Lamps, are they separately wired yes controlled by separate double pole switches and fuses yes. Are the switches and fuses 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 174 Ah 2 sets, 32V 174 Ah 1 set, 8V 80 Ah 2 sets, 15.6V 2 Ah 2 sets.

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 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, and they constructed and fitted as per Rule yes. Lightning Conductors, where required are they fitted as per Rule —. 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 maker KELVIN & HUGHES location of transmitter Fy. No. 110~III Starboard side and receiver Fy. No. 110~III Port side From Center 1.400 mm.

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.	Amperes.	Revs. per Min.	TYPE.	MAKER.
MAIN	3	Mitsubishi Electric Mfg. Co., Ltd.	200	225	890	420	4 cycle Single acting	Mitsui Shipbuilding & Engineering Co., Ltd.
EMERGENCY ROTARY TRANSFORMER	1	Kuroasaki Mfg. Co., Ltd.	10	225	44.5	600	4 cycle Single acting	OSAKA Matsudoki K.K.

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.				
MAIN GENERATOR	200	2	0.5	890 ✓	1044	40	Varnished Cambric
" " EQUALISER ...		1	"				Lead-Alloy sheathed & Armored
EMERGENCY GENERATOR ...	10	1	0.0145	445 ✓	55	5	Varnished Cambric
ROTARY TRANSFORMER: MOTOR							Lead-Alloy sheathed & Armored
" " GENERATOR							

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

DESCRIPTION.

From Main Switchboard To Emergency Switchboard	1	0.25	247.64 ✓	331	52	Varnished Cambric	Lead-Alloy Sheathed & Armored
" Shore Connection Box	1	0.4	400 ✓	448	118	"	"
From Emergency Switchboard To Power Panel No.1	1	0.007	9.05 ✓	27	50	"	"
" " " No.2	1	0.0225	46 ✓	72	38	"	"
From Main Switchboard To Power Panel No.3	1	0.25	300 ✓	331	120	"	"
" " " No.4	1	0.15	220 ✓	238	78	"	"
" " " No.5	1	0.1	177.5 ✓	185	68	"	"
" " " No.6	1	0.25	300 ✓	331	120	"	"
" " " No.7	1	0.0225	39 ✓	72	56	"	"
From Emergency Switchboard To Power Panel No.8	1	0.0145	30 ✓	55	36	"	"
From Main Switchboard To Power Panel No.9	1	0.0145	42 ✓	55	17	"	"
" " " No.10	1	0.007	18 ✓	27	62	"	"
" " " No.11	1	0.06	111 ✓	130	30	"	"
" " " No.12	1	0.0225	57 ✓	72	18	"	"
" " " No.13	1	0.1	140 ✓	185	160	"	"
" " " No.14	1	0.06	34 ✓	130	120	"	"
" " " No.15	1	0.06	68 ✓	130	78	"	"
" " " No.16	1	0.06	68 ✓	130	120	"	"
From Emergency Switchboard To Light Panel No.1	1	0.01	171 ✓	41	37	"	"
" " " No.2	1	0.0145	19.6 ✓	55	35	"	"
" " " No.3	1	0.007	20.7 ✓	27	30	"	"
" " " Section Box No.3	1	0.0045	9.7 ✓	11	22	Vulcanized Rubber	"
From Section Box No.3 " Light Panel No.4	1	0.0045	4.4 ✓	11	42	"	"
From Emergency Switchboard To Light Panel No.6	1	0.0045	6.1 ✓	11	66	"	"
" " " No.7	1	0.0045	6.1 ✓	11	146	"	"
" " " No.8	1	0.0145	26.8 ✓	55	37	Varnished Cambric	"
From Main Switchboard To Section Box No.1	1	0.01	25.1 ✓	41	75	"	"
From Section Box No.1 To Cargo Light Panel No.1	1	0.007	14.2 ✓	27	50	"	"
From Main Switchboard To Section Box No.2	1	0.01	26.1 ✓	41	68	"	"
From Section Box No.2 To Cargo Light Panel No.4	1	0.007	13.1 ✓	27	52	"	"
From Main Switchboard To Room Heater Panel No.1	1	0.03	79.1 ✓	84	40	"	"
" " " No.2	1	0.06	100 ✓	130	36	"	"
" " " Cabin Fan Panel No.1	1	0.0045	3.64 ✓	11	40	Vulcanized Rubber	"
" " " No.2	1	0.0045	5.5 ✓	11	36	"	"
" " " Power Panel No.2	1	0.0225	46 ✓	72	45	Varnished Cambric	"
" " " Battery Switchboard	1	0.0145	22 ✓	55	52	"	"
From Emergency Switchboard To Wireless Switchboard	1	0.1	45 ✓	185	45	"	"
From Shore Connection Box To Switch Box for Elec. Welding	1	0.0145	40 ✓	55	20	"	"

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

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES. In the Circuit. Rule.	APPROX. LENGTH (lead plus return feet)	INSULAT- TION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.				
From Main Switchboard To Navi. Lamp Indicator	1	0.003	0.82 ✓ 7	56	Varnished Rubber	Lead-Alloy Sheathed & Armoured
From Light Panel No.1 To Navi. Lamp Indicator	1	0.003	0.82 ✓ 7	14	"	Lead-Alloy Sheathed
" " Wheelhouse & Gauge Lamp	1	0.003	0.41 ✓ 7	"	"	"
" " Sig. LT., Morse Lamp, Chart RM. LT.	1	0.003	2.94 ✓ 7	"	"	"
" " Chart RM & W/T RM. LT.	1	0.003	1.9 ✓ 7	"	"	"
" " Captain RM. LT.	1	0.003	1.91 ✓ 7	"	"	"
" " 3 RD. Off & 2 ND Ope. RM. LT.	1	0.003	1.09 ✓ 7	"	"	"
" " 2 ND Off, 3 RD Ope. & Clark Rm. LT.	1	0.003	1.23 ✓ 7	"	"	"
" " Gyro & 2-App. RM. LT.	1	0.003	1.23 ✓ 7	"	"	"
" " Chief Ope. & Doctor RM. LT.	1	0.003	1.72 ✓ 7	"	"	"
" " Passage & Fly. BR. DK. LT.	1	0.003	1.09 ✓ 7	"	"	"
" " Upper BR. DK. LT.	1	0.003	1.09 ✓ 7	"	"	"
From Light Panel No.2 To Saloon & Smoking RM. LT.	1	0.003	3.41 ✓ 7	"	"	"
" " Chief Off. & State RM. LT.	1	0.003	1.86 ✓ 7	"	"	"
" " Purser & Chief Stewd RM. LT.	1	0.003	1.41 ✓ 7	"	"	"
" " Pantry, Boat DK. Passage & Off's Bath & WC. LT. I	0.003	1.45 ✓ 7	"	"	"	"
" " M-GRM, Batt. RM. & Boat Deck (Port) LT.	1	0.003	3.27 ✓ 7	"	"	"
" " Boat Deck (Stard) LT.	1	0.003	2.55 ✓ 7	"	"	"
" " Pantry LT. & Heater	1	0.003	(18.99) ✓ 7	"	"	"
" " Refrigerater	1	0.003	(12.5) ✓ 7	"	"	"
From Light Panel No.3 To Chief Eng. & 4 TH Eng. RM. LT.	1	0.003	2.18 ✓ 7	"	"	"
" " 1 ST, 2 ND, 3 RD Eng. RM. LT.	1	0.003	1.95 ✓ 7	"	"	"
" " Off's Mess, Bath & W.C. RM. LT.	1	0.003	1.86 ✓ 7	"	"	"
" " Oilier's RM. LT.	1	0.003	1.91 ✓ 7	"	"	"
" " Tally Off., Boat n. & Capt. ST. K. P. RM. LT.	1	0.003	1.5 ✓ 7	"	"	"
" " Q/M RM. LT.	1	0.003	1.5 ✓ 7	"	"	"
" " Crew's Mess, Gallay & Cook RM. LT.	1	0.003	2.73 ✓ 7	"	"	"
" " Upper Deck Mid. Ship Passage (Port) LT.	1	0.003	1.36 ✓ 7	"	"	"
" " Upper Deck Mid. Ship Passage (Stard) LT.	1	0.003	1.09 ✓ 7	"	"	"
" " Upper Deck K (Port) LT.	1	0.003	1.27 ✓ 7	"	"	"
" " Upper Deck (Stard) LT.	1	0.003	1.09 ✓ 7	"	"	"
" " Funnel LT.	1	0.003	2.25 ✓ 7	"	"	"
From Light Panel No.4 To 2 ND Deck Mid. Ship Passage (Port) LT.	1	0.003	0.71 ✓ 7	"	"	"
" " Sailer RM. LT.	1	0.003	0.82 ✓ 7	"	"	"
" " Boy & Sailer RMLT.	1	0.003	1.36 ✓ 7	"	"	"
" " Wiper & Donk. RM. LT.	1	0.003	1.64 ✓ 7	"	"	"
From Light Panel No.5 To 2 ND Deck Mid. Ship Passage (Stard) LT.	1	0.003	0.73 ✓ 7	"	"	Lead-Alloy Sheathed & Armoured
" " Emerg. Dynamo & Refrig RM. LT.	1	0.003	1.45 ✓ 7	"	"	"
" " Stove & Passage LT.	1	0.003	1.64 ✓ 7	"	"	"
" " ELECTRIC WASHER	1	0.003	1.59 ✓ 7	"	"	"
From Light Panel No.6 To Windlass Cont. RM. & Store LT. (App. DK. For.)	1	0.003	1.27 ✓ 7	"	"	"
" " Cont. & Resist. RM. & STORE LT. (")	1	0.003	1.68 ✓ 7	"	"	"
" " Cont. & Resist. RM. & STORE LT. (")	1	0.003	1.27 ✓ 7	"	"	"
From Light Panel No.7 To Cont. & Resist RM. & STORE LT. (App. DK. Aft.)	1	0.003	1.27 ✓ 7	"	"	"
" " Deck LT. (App. DK. Aft.)	1	0.003	1.55 ✓ 7	"	"	"
" " Hospital & Passage (")	1	0.003	1.41 ✓ 7	"	"	"
" " Steering RM. & Refrig. RM. & STORE LT.	1	0.003	1.91 ✓ 7	"	"	"
From Light Panel No.8 To Eng. RM. Ceiling LT. (Upp. & 2 ND DK.)	1	0.003	1.55 ✓ 7	"	"	"
" " " (Boat, Upp. & 2 ND DK.)	1	0.003	2.09 ✓ 7	"	"	"
" " " (Partial DK.)	1	0.003	1.09 ✓ 7	"	"	"
" " " (Partial DK & STORE)	1	0.003	3.64 ✓ 7	"	"	"
" " " (Floor LT.)	1	0.0045	7. ✓ 11	"	"	"
" " " (Floor LT. Fore)	1	0.0045	7. ✓ 11	"	"	"
" " " Shaft Tunnel	1	0.003	1.82 ✓ 7	"	"	"
" " " Eng. RM. Portable Lamp	1	0.003	0.73 ✓ 7	"	"	"
" " " "	1	0.003	1.27 ✓ 7	"	"	"
" " " "	1	0.003	1.27 ✓ 7	"	"	"
" " " Eng. Cool. w. Alarm Circuit	1	0.003	1.05 ✓ 7	"	"	"
" " " Lubricator Heater	1	0.003	7	"	"	"
From Cargo Light Panel No.1 To Nat. Hatch LT.	1	0.003	3.64 ✓ 7	"	"	"
" " " Dk. Flood LT. (Fore Mast)	1	0.003	4.55 ✓ 7	"	"	"
" " " No.2 Hatch & Fore Mast	1	0.003	6. ✓ 7	"	"	"
From Cargo Light Panel No.2 To Dk. Flood LT. (King Post)	1	0.003	4.55 ✓ 7	"	"	"
" " " Mid. Winch Table Portable LT.	1	0.003	0.36 ✓ 7	"	"	"
" " " No.3 Hatch & King Post LT.	1	0.003	6. ✓ 7	"	"	"
From Cargo Light Panel No.3 To Projector (Compass Flat)	1	0.003	4.73 ✓ 7	"	"	"
" " " " (Boat DK. Aft.)	1	0.003	4.55 ✓ 7	"	"	"
" " " " Boat DK & Panel RM. Portable LT.	1	0.003	0.55 ✓ 7	"	"	"
" " " " No.4 Hatch LT.	1	0.003	3.27 ✓ 7	"	"	"
From Cargo Light Panel No.4 To Dk. Flood LT. (Main Mast)	1	0.003	4.55 ✓ 7	"	"	"
" " " Aft. Winch Table Portable LT.	1	0.003	0.36 ✓ 7	"	"	"
" " " No.5 Hatch & Main Mast LT.	1	0.003	6. ✓ 7	"	"	"
" " " Projector (Dock BR.)	1	0.003	2.27 ✓ 7	"	"	"
From Room Heater Panel No.1 To Chart RM. Heater	1	0.0045	7.29 ✓ 11	"	"	Lead-Alloy Sheathed
" " " Doctor & W/T RM. Heater	1	0.0045	9.09 ✓ 11	"	"	"
" " " 2 ND Off., 3 RD Ope. & App. RM. Heater	1	0.0045	9.09 ✓ 11	"	"	"
" " " Captain RM. Heater	1	0.0045	10.91 ✓ 11	"	"	"
" " " Chief Ope. RM. Heater	1	0.003	9.55 ✓ 7	"	"	"
" " " 2 ND Ope. & 3 RD Off. RM. Heater	1	0.0045	7.27 ✓ 11	"	"	"
" " " Purser & Stew. RM. Heater	1	0.0045	8.18 ✓ 11	"	"	"
" " " Chief Off. & Off's Smok. RM. Heater	1	0.0045	9.09 ✓ 11	"	"	"
" " " Saloon Heater	1	0.0045	9.09 ✓ 11	"	"	"
" " " State RM. Heater	1	0.003	4.55 ✓ 7	"	"	"
From Room Heater Panel No.2 To Off's Mess RM. Heater	1	0.0045	9.09 ✓ 11	"	"	"
" " " 3 RD & 4 TH Eng. RM. Heater	1	0.0045	7.27 ✓ 11	"	"	"
" " " 1 ST & 2 ND Eng. RM. Heater	1	0.0045	8.18 ✓ 11	"	"	"
" " " Chief Eng. RM. Heater	1	0.0045	8.18 ✓ 11	"	"	"
" " " Oil. RM. Heater	1	0.0045	10.91 ✓ 11	"	"	"
" " " Boy & Sal. RM. Heater	1	0.0045	10.91 ✓ 11	"	"	"
" " " Wiper & Donkey RM. Heater	1	0.0045	7.27 ✓ 11	"	"	"
" " " Boat N. Carp. & Tally RM. Heater	1	0.0045	10.91 ✓ 11	"	"	"
" " " Q/M & Cook RM. Heater	1	0.0045	10.91 ✓ 11	"	"	"
" " " Crew's Mess RM. Heater	1	0.0045	9.09 ✓ 11	"	"	"
" " " Hospital Heater	1	0.0045	7.27 ✓ 11	"	"	"
From Cabin Fan Panel No.1 To Upp. BR. DK. Cabin W/T RM. Fan	1	0.003	1.82 ✓ 7	"	"	"
" " " Boat DK. Cabin, Saloon & Smok. Fan	1	0.003	1.82 ✓ 7	"	"	"
From Cabin Fan Panel No.2 To Off's Mess & Engineer's RM. Fan	1	0.003	1.82 ✓ 7	"	"	"
" " " Wiper's, Boy's, Oil's & Sal's RM. Fan	1	0.003	1.45 ✓ 7	"	"	"
" " " Crew's Mess, Cook's, Oil's, Boat M.R.M. Fan	1	0.003	1.82 ✓ 7	"	"	"
" " " Hospital Fan	1	0.003	0.36 ✓ 7	"	"	"
From Power Panel No.1 To Rich Audio Fire Detector	1	0.003	5. ✓ 7	"	"	Lead-Alloy Sheathed & Armoured
" " " Fire Alarm Bell	1	0.003	2.25 ✓ 7	"	"	"
" " " Ship Log	1	0.003	0.3 ✓ 7	"	"	"
" " " Magnet Valve for Tyfan	1	0.003	1.5 ✓ 7	"	"	"
From Power Panel No.2 To Echo Sounder	1	0.007	3. ✓ 27	"	"	Varnished Cambric
" " " Radar	1	0.007	10. ✓ 27	"	"	"
" " " Gyro Compass	1	0.007	15. ✓ 27	"	"	"
" " " Gyro Pilot	1	0.007	15. ✓ 27	"	"	"
" " " Battery Charging Panel/gyro Comp.	1	0.007	3. ✓ 27	"	"	Lead-Alloy Sheathed & Armoured
From Navigation Lamp Indicator To Fore Mast LT.	1	0.003	0.164 ✓ 7	"	"	Varnished Rubber
" " " Main Mast LT.	1	0.003	0.164 ✓ 7	"	"	Lead-Alloy Sheathed & Armoured

MOTOR CABLES.

	From Switch Board To Main Engine	Turning MR.	1	8	1	0.0145	33	55	80	Varnished Cambric	Lead-Alloy-Sheathed & Armored	
"	" Air Compressor	MR.	2	80	1	0.25	295	✓	331	73	"	
"	" A.N.K.E. & S.W. Cool. Pump	MR.	2	10	1	0.0225	40	✓	72	85	"	
"	" M-G for Rudder Angle Ind.	1	0.3 kva.	1	0.0045	22	✓	11.	29	Vulcanized Rubber	"	
"	" Lub. Oil Pump	MR.	3	35	1	0.1	134	✓	185	68	Vulcanized Cambric	"
"	" Ballast Pump	MR.	1	40	1	0.1	156	✓	185	55	"	"
"	" General Service Pump	MR.	1	30	1	0.06	115	✓	130	54	"	"
"	" Universal Mach. Ind.	1	3	1	0.007	13	✓	27	32	"	"	
"	" Windlass	MR.	1	70	1	0.25	272	✓	331	185	"	"
"	" Electric Hoist	1	7.5	1	0.01	30	✓	41	36	"	"	
"	" Warping Winch	MR.	1	65.	1	0.2	252	✓	286	145	"	"
"	" Starter for Steering	MR.	1	606	80	✓	130	-	20	"	"	
From Starter To Steering	MR.	1	20.	1	0.06	80	✓	130	158	Vulcanized Rubber	"	
"	" "	"	1	1	0.0045	4.5	✓	11.	45	"	"	
From Emergency Switchboard To Accidental Fan	MR.	1	1	1	0.0045	4.5	✓	11.	45	"	"	
"	To Oil Firing Fuel Pump or Range	1	1	1	0.0045	4.5	✓	11.	66	"	"	
From Power Panel No.3-4-6 To 3" Cargo Winch	MR.	8	33	1	0.06	132	✓	130	13	Varnished Cambric	"	
From Power Panel No.5 To 3" Cargo Winch	MR.	2	36	1	0.06	136	✓	130	25	"	"	
From Power Panel No.3-6 To 5" Cargo Winch	MR.	4	50	1	0.1	195	✓	185.	13	"	"	
From Power Panel No.3-4-6 To Resist. Rm Ventilator	MR.	3	2	1	0.007	8.5	✓	27	6	"	"	
From Power Panel No.7 To Prod. Refrig. Comp.	MR.	1	7.5	1	0.01	30	✓	41	5	"	"	
"	" Prod. Refrig. Cool. P. MR.	1	2	1	0.007	8.8	✓	27	35	"	"	
From Power Panel No.8 To F.W. Sanitary Pump	MR.	1	4	1	0.007	17	✓	27	50	"	"	
"	" S.W. Sanitary Pump	MR.	1	3	1	0.007	13	✓	27	5	"	"
From Power Panel No.9 To Eng. Room Vent. Fan	MR.	2	5	1	0.01	20	✓	41	58	"	"	
From Power Panel No.10 To F.C. Valve Coal Pump	MR.	2	2	1	0.007	9	✓	27	5	"	"	
From Power Panel No.11 To L.G. P.A. B.C. Pump & Clamps	MR.	5	1	0.01	21	✓	41	12	"	"	"	
"	" Shift Pump	MR.	3	2	1	0.007	9	✓	27	14	"	"
From Power Panel No.12 To F.C. Transfer Pump	MR.	1	12	1	0.0145	45	✓	55	5	"	"	
"	" L.O. Shifting Pump	MR.	1	2	1	0.007	9	✓	27	5	"	"
From Power Panel No.13 To Co. Compressor	MR.	2	13	1	0.0145	52	✓	55	8	"	"	
"	" Brine Pump	MR.	2	2	1	0.007	9	✓	27	16	"	"
"	" Condenser Coal Pump	MR.	2	2	1	0.007	9	✓	27	30	"	"
From Power Panel No.14-15-16 To Gas Hold Vent Fan	MR.	10	4	1	0.007	18	✓	27	21	"	"	

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 & ENGI-
NEERING CO., LTD., TAMANO WORKS.

Electrical Contractors.

Date

K. Sakamaka
Director.

COMPASSES.

Have the compasses been adjusted under working conditions Yes

MITSUI SHIPBUILDING & ENGI-
NEERING CO., LTD., TAMANO WORKS.

Builder's Signature.

Date

K. Sakamaka
Director.

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

15th November,
~~1950~~

Plans. Are approved plans forwarded herewith No If not, state date of approval

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 workmanship and materials are sound and good.

The Electrical installation has been examined under working condition on full load to Rules' requirements and found satisfactory.

Noted 16/5/51

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

Total Capacity of Generators 610 Kilowatts.

The amount of Fee ... £ : When applied for,
Travelling Expenses (if any) £ : When received,

D. Burns
Surveyor to Lloyd's Register of Shipping.

MADE AND PRINTED AT KOBRI.

Committee's Minute TUES 22 MAY 1951

Assigned *See F. E. Murphy, rsl.*

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Lloyd's Register
Foundation