

Rpt. 13.

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

28 AUG 1953

Date of writing Report 10-4-1953 When handed in at Local Office 11 MAY 1953 Port of KOBE

No. in Survey held at Tamano, Japan Date, First Survey 12-1-53 Last Survey 3-4-1953
Reg. Book. (No. of Visits 9)

on the Steel Single Screw Motor Vessel "ASASHIO MARU" Tons Gross 7524.02 Net 4184.98

Built at Tamano, Japan By whom built Mitani S.B. & E. Co., Ltd. Yard No. 575 When built Apr. 53

Owners Nakamura Steam Ship Co., Ltd. Port belonging to KOBE

Installation fitted by Mitani Shipbuilding & Engineering Co., Ltd. Tamano Works When fitted Apr. 53

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 Two-Cond. Insul. 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 Engine Room port side built seat on the 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 Forward mid 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 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 Triple pole, air break 4-breaker with over current

& reverse current protection and a triple pole isolating switch

and the switch and fuse gear (or circuit breakers) for each outgoing circuit Double pole air Break 4-breaker with

over current protection, for circuits rated above 300 amperes

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

ammeters 5 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

Two lamps in series with mid-point earthed.

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

make of fuses Mitani XOF Cat. 2, are all fuses labelled Yes If circuit breakers are provided for the generators, at what

overload do they operate 1200 amperes - 10 sec, and at what current do the reversed current protective devices operate 80 amperes

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 10.1 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 Yes, if so, are they

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

or of the "HR" type - State how the cables are supported or protected

Clipped to solid or perforated steel tray, structured steel work or woodwork.

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

013728 - 013734 - 0160 1/2

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

2nd DK, port side (mid ship)

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... *1 x 32V, 200 AH; 2 x 8V, 80 AH; 2 x 150V, 2 AH; 2 x 24V, 174 AH; 2 x 108V, 12 AH*

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... *-* 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... *-* 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... *Nippon Electric Co., Ltd.* location of transmitter... *Fr. 149 port* and receiver... *Fr. 149 starboard*

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 ...	3	FUJI ELECTRIC MFG. CO.	180	225	800	450	OIL ENGINE	DAI NIPPON S. B. & E. CO. LTD.
EMERGENCY ... ROTARY TRANSFORMER	1	KUROSAKI MFG. CO.	15	225	66.6	600	OIL ENGINE	DAI NIPPON S. B. & E. CO. LTD.

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 ...	180	2	0.5"	800	1044	#	V.C.	L.S.A.
" " EQUALISER ...	-	1	0.5				"	"
			#1 = 37 M #2 = 37 M #3 = 54 M.					
EMERGENCY GENERATOR ...	15	1	0.03	66.6	84	14	V.C.	L.S.A.
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR...								

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

DESCRIPTION.	□"		M		INSULATION.	PROTECTIVE COVERING.
	No.	Sectional Area or No. and Dia. of Strands, Sq. ins. or sq. mm.	No.	Sectional Area or No. and Dia. of Strands, Sq. ins. or sq. mm.		
Emergency Switchboard	1	0.5	305	522	42	V.C. L.S.A.
Shore connection box	1	0.4	400	448	118	" "
Power panel #3 Cargo winch	1	0.25	303	331	131	" "
#4 "	1	0.25	277	331	86	" "
#5 "	1	0.25	320	331	117	" "
#7 E/R Vent. fan	1	0.0145	42	55	31	" "
#8 " Aux. (Cooling pumps)	1	0.0145	42	55	62	" "
#9 " " (Trans. & Shift pumps)	1	0.04	85	101	24	" "
#10 " " (Purifiers & filter)	1	0.06	84	130	30	" "
#11 " " (Machine tool)	1	0.01	26	41	38	" "
From Emergency switchboard						
Power panel #6 E/R AUX. (Boiler fan & pumps)	1	0.0045	8.4	11	65	VIR L.S.A.

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.			
Cargo light panel #1 & 2	1	0.0145	26	55	80	V.C.	L.S.A.
#3	1	0.0145	18	55	113	"	"
Navigation lighting	1	0.007	0.82	27	70	"	"
From Emergency switchboard (E/R B.R.)							
Lighting panel #2, #1 & navigation light DK	1	0.0225	33	72	35	V.C.	L.S.A.
#3 (Bridge DK)	1	0.03	58	84	30	"	"
#4 & 5 (Upper DK)	1	0.01	32	41	21	"	"
#6 (Upper DK Fore)	1	0.0045	4	11	112	VIR	"
#7 (Upper DK Aft)	1	0.007	11	27	133	V.C.	"
#8 (2nd DK port)	1	0.0045	5	11	8	VIR	"
#9 (Engine Room)	1	0.03	48	84	24	V.C.	"
Power panel #1 (Bridge instrument)	1	0.007	14.2	27	46	V.C.	L.S.A.
#2 (Gyro, Radar, Loran)	1	0.0225	31	72	37	"	"
Wireless switchboard	1	0.1	55	185	52	V.C.	L.S.A.
Battery switchboard	1	0.0145	26	55	50	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	□"			M		
Windlass	1	75	1	0.2	280✓	286	165	V.C. L.S.A
Steering gear	1	17	1	0.06	67✓	130	201	" "
Warping winch	1	60	1	0.2	225✓	286	168	" "
M/E L.O. pumps	2	90	1	0.3	333✓	372	67	" "
" Air Compressors	2	60	1	0.15	225✓	238	67	" "
" F.W. & S.W. Cooling pumps	3	30	1	0.1	114✓	185	70	" "
F.O. Transfer pump	1	15	1	0.03	59✓	84	5	" "
Diesel oil shift pump	1	4	1	0.007	17✓	27	8	" "
L.O. shift pump	1	2	1	0.007	9✓	27	39	" "
Aux. air compressor	1	6	1	0.01	25✓	41	52	" "
Ballast pump	1	35	1	0.1	132✓	185	70	" "
General service pump	1	35	1	0.1	132✓	185	74	" "
Aux. S.W. & F.W. Cooling pump	2	5	1	0.007	21✓	27	7	" "
Fuel valve cooling oil pumps	2	1.5	1	0.0045	7✓	11	18	V.I.R "
M/E Turning gear	1	12	1	0.0145	48✓	55	80	V.C. "
E/R Vent. fans	2	5	1	0.01	21✓	41	67	" "
Burning oil pumps for Boiler	2	0.5	1	0.0045	2.8✓	11	4	V.I.R "
Forced draft fan for Boiler	1	0.5	1	0.0045	2.8✓	11	18	" "
F.O. purifiers	2	6	1	0.01	25✓	41	20	V.C. "
F.O. Clarifiers	1	6	1	0.01	25✓	41	24	" "
L.O. Colloidal filter	1	2	1	0.007	9✓	27	27	" "
F.W. pump	1	4	1	0.01	17✓	41	97	" "
S.W. Sanitary pump	1	2	1	0.007	9✓	27	59	" "
Cool. W.P. for Emergency gen.	1	0.5	1	0.0045	2.8✓	11	53	V.I.R "
Provl. Refrig. compressor	1	7.5	1	0.01	30✓	41	23	V.C. "
Cool. W.P. for compressor	1	2	1	0.007	9✓	27	65	" "
Combined universal mach.	1	5	1	0.007	21✓	27	12	V.C. L.S.A
Emergency wheel	1	1	1	0.0045	5✓	11	28	V.I.R "
Oil firing fan for Range	1	1	1	0.0045	5✓	11	59	" "
Accom. Vent. fan	1	1.5 ^{kw}	1	0.007	9✓	27	48	V.C. "
Cargo winch	4	53	1	0.1	206✓	225	MAX MIN 28-2	V.C. L.S.A
"	12	36	1	0.06	140✓	151	70-5	" "

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.

H. Tanaka
Senior Managing Director.

Electrical Contractors.

Date 20-4-53

COMPASSES.

Have the compasses been adjusted under working conditions. *yes*

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

H. Tanaka
Senior Managing Director.

Builder's Signature.

Date 20-4-53

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. *10-3-53*

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

Materials and the workmanship are sound and good.

The Generators & motors etc. have been examined under full load working condition to Rules' requirements and found satisfactory.

Noted *18/9/53*

Total Capacity of Generators *555* Kilowatts.

The amount of Fee ... *£250.500*

When applied for,
13 AUG 1953

Travelling Expenses (if any) £

When received,

19

S. G. Johnson & R. G. Johnson
Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUESDAY 22 SEP 1953**

Assigned

See Rpt. 14/53



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