

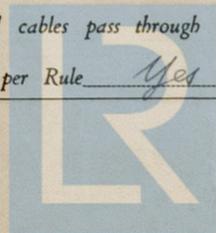
REPORT ON ELECTRICAL EQUIPMENT.

(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 19 MAY 1954
 No. in Survey held at Kobe Date, First Survey 16, 10, 51 Last Survey 6th Dec., 1951
 Reg. Book. (No. of Visits 12)
 on the Single screw steel steam ship "Nippon Maru" Tons { Gross 6209.88
 Net 3614.10
 Built at Kobe By whom built Kawasaki Dockyard Co., Ltd. Yard No. 913 When built Dec. 51
 Owners Nippon Kaiun Kaisha, Ltd. Port belonging to Kobe
 Installation fitted by Kawasaki Dockyard Co., Ltd. When fitted Dec. 51
 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. No Radar Yes

Plans, have they been submitted and approved Yes System of Distribution Two wire circuit Voltage of Lighting 220 V
 Heating 220 V Power 220 V 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 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. 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 S. B. side in engine room. Frame No. 72-74,
 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 S. B. side in engine room,
Frame No. 64-66
 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 (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 tripple pole linked air circuit breaker (two pole for main
 with overload & reverse current trips arranged with equalizer circuit being closed before
 one pole for equalizer)
 main circuits and opened after main circuits, and a tripple 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, and for steering engine circuits and for circuits
 having rating capacity above 200A double pole linked air circuit breaker is used.
 Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes. Instruments on main switchboard 5
 ammeters 3 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 2 earth
 lamps with metal filament
 Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Siemens type
 approval now contemplated.
 make of fuses Fuji Electric 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 100 A
 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 5V. for power
 1.5V for Wireless. 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 (Part), if so, are they
 adequately protected Yes. Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit Yes
 or of the "HR" type —. State how the cables are supported or protected Generally supported by metal
 clips and protected by lead alloy-sheathed with armouring. In engine room, carried
 on galvanized perforated plating; where exposed to mechanical damage protected
 by strong sheet iron plating or 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



Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes. Emergency Supply, state position S.B. side in engine room Frame No. 70-75 2nd deck

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 144AH. 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 4, whether fixed or portable fixed, are they of the carbon arc or of the filament type filament

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, 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 Nippon Electric Co. Ltd. Location of transmitter Shell plan F. No. 84-85 and receiver Shell plan F. No. 84-85

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.	
MAIN	2	Kawasaki Rockyard Co Ltd	160	230.	696	1500.	Steam Turbin Kawasaki Rockyard Co Ltd
EMERGENCY ROTARY TRANSFORMER	1	Kawasaki Rockyard Co Ltd	25	230	109	600	Diesel Osaka Hatando Making 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 No. 1	160	2	0.75	676	461x2	40x2	Rubber	Lead covered and steel armoured
" " EQUALISER		1	0.75	461	461	40	"	"
Main generator No. 2	160	2	0.75	676	461x2	40x2	"	"
" " Equaliser		1	0.75	461	461	40	"	"
EMERGENCY GENERATOR	25	1	0.3	109	240	60x2	Rubber	Lead covered and steel armoured
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

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

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.			
ES-1 From Main Switchboard to Emergency Switchboard		1	0.5	332	60x2	60x2	Rubber	Lead covered and steel armoured
ES-2 From Emergency Switchboard to Main Switchboard		2	0.5	332x2	60x2	60x2	"	"
From Main Switchboard to Spare connection box		1	0.3	240	75x2	75x2	"	"
From Main Switchboard to Power Dist. Box (PD-1)		1	0.0225	37	46	60x2	"	"
Do (PD-3)		1	0.01	19	31	80x2	"	"
Do (PD-5)		1	0.01	26	36	45x2	Varnished Cambric	"
Do (PD-7)		1	0.007	14	24	30x2	"	"
From Emergency Switchboard to Section Box (L-1)		1	0.0225	43	46	15x2	"	"
Do (L-3)		1	0.0225	23	46	60x2	"	"
Do (L-5)		1	0.01	13	31	150x2	"	"
Do (L-7)		1	0.0145	23	37	100x2	"	"
Do (L-9)		1	0.0145	23	37	60x2	"	"

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.				
From Emergency Switchboard to -								
Nautical Instruments Dist. Box	1	0.003	5	10	120x2	Rubber	Lead covered and steel armoured	(Room temp) 40°C
Navigation-light Dist. Box	1	0.003	1	10	150x2	"	"	"
Electric fan Dist. Box	1	0.007	6	24	75x2	"	"	"
Battery charging switchboard	1	0.0145	17	37	120x2	"	"	"
Wireless switchboard	1	0.3	60	184	120x2	"	"	"
Wye switchboard	1	0.007	20	24	120x2	"	"	"
From Lighting Section Box to -								
Lighting Distribution Box (Engine room)	1	0.01	29.5	31	20x2	"	"	"
Do (Boiler room)	1	0.01	13.8	37	45x2	Varnished cambric	"	(Room temp) 50°C
Do (Bridge deck lighting)	1	0.007	7.8	24	45x2	Rubber	"	(Room temp) 40°C
Do (Bridge deck S.B. light)	1	0.007	5.5	24	45x2	"	"	"
Do (Upper deck lighting)	1	0.007	9.9	24	30x2	"	"	"
Do (Navigation bridge deck lighting)	1	0.007	7.1	24	30x2	"	"	"
Do (Boat deck lighting)	1	0.007	6.3	24	15x2	"	"	"
Do (Foreship cargo lighting)	1	0.01	11.6	31	45x2	"	"	"
Do (Aftership cargo lighting)	1	0.01	11.6	31	45x2	"	"	"
Do (Aftership deck lighting)	1	0.01	11.8	31	120x2	"	"	"
Do (Aftership deck lighting)	1	0.01	11.8	31	120x2	"	"	"
From Battery Switchboard to Upper spare-light	1	0.03	10	53	45x2	"	"	"
Do to Lower spare-light	1	0.03	7	53	60x2	"	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	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.				
From Main Switchboard to -										
Steering engine motor	1	10	1	0.1	40	118	200x2	Rubber	Lead covered and steel armoured	(Room temp) 40°C
Do	1	10	1	0.1	40	118	240x2	"	"	"
Main circulating pump	1	65	1	0.5	242	332	160x2	"	"	"
Lub. oil pump No. 1	1	20	1	0.1	77	118	60x2	"	"	"
Lub. oil pump No. 2	1	20	1	0.1	77	118	60x2	"	"	"
Induced fan No. 1	1	15	1	0.03	59	60	60x2	"	"	(Room temp) 40°C
Induced fan No. 2	1	15	1	0.03	59	60	70x2	"	"	"
General service pump	1	35	1	0.25	132	214	90x2	Rubber	"	(Room temp) 40°C
Fire & bilge pump	1	35	1	0.25	132	214	90x2	"	"	"
Fuel oil transfer pump	1	10	1	0.0225	40	65	75x2	Varnished cambric	"	(Room temp) 50°C
Condensate pump No. 1	1	10	1	0.04	40	64	75x2	Rubber	"	(Room temp) 40°C
Condensate pump No. 2	1	10	1	0.04	40	64	75x2	"	"	"
Forced draft fan	1	35	1	0.25	132	155	75x2	"	"	(Room temp) 45°C
Ballast pump	1	30	1	0.2	114	184	85x2	"	"	(Room temp) 40°C
Twinning motor	1	5	1	0.01	21	31	60x2	"	"	"
Ventilating fan	1	35	1	0.007	15	24	120x2	"	"	"
Do	1	3.5	1	0.007	15	24	120x2	"	"	"
Do (Boiler room)	1	3.5	1	0.007	15	24	130x2	Varnished cambric	"	(Room temp) 50°C
Fresh water pump	1	2	1	0.0045	9	15	60x2	Rubber	"	(Room temp) 40°C
Universal machine	1	3	1	0.007	13	24	75x2	"	"	"
Generator turbine condensate pump (No. 1)	1	2	1	0.0045	9	15	45x2	"	"	"
Do (No. 2)	1	2	1	0.0045	9	15	45x2	"	"	"
Refrigerating machine (No. 1)	1	5	1	0.0225	21	46	60x2	"	"	"
Do (No. 2)	1	5	1	0.0225	21	46	60x2	"	"	"
From Power Distribution Box to Boiler pump No. 1	1	4	1	0.01	17	31	15x2	"	"	"
Do No. 2	1	4	1	0.01	17	31	15x2	"	"	"
From Power Distribution Box to Lub. oil pump for main feed pump	1	1	1	0.003	5	10	40x2	"	"	"
Ventilating fan	1	2	1	0.007	9	24	90x2	"	"	"
Oil burning fan	1	1	1	0.003	5	10	45x2	"	"	"
Oil burning pump No. 1	1	3	1	0.007	13	24	15x2	Varnished cambric	"	(Room temp) 50°C
Oil burning pump No. 2	1	3	1	0.007	13	24	15x2	"	"	"
Lub. oil purifier	1	2	1	0.0045	9	15	15x2	Rubber	"	(Room temp) 40°C
Evaporator pump	1	1	1	0.003	5	10	24x2	"	"	"

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

COMPASSES.

Have the compasses been adjusted under working conditions *yes*

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

Have the foregoing descriptions and schedules been verified and found correct

Is this installation a duplicate of a previous case *—* If so, state name of vessel *—*

Plans. Are approved plans forwarded herewith *no* If not, state date of approval *20, June, 1951*

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 were found to be sound and free from defects and the workmanship is good.

The Generators, Motors etc. have been examined under full load working conditions to Rules requirements and found Satisfactory.

Total Capacity of Generators *345* Kilowatts.
 (Included Emergency Generator)

The amount of Fee ... £ *220.580* When applied for, _____
 _____ 19 _____
 When received, _____
 Travelling Expenses (if any) £ _____ : _____ : _____ 19 _____

H. Burnie & K. Takashi
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI, 20 JUN 1952*

Assigned *Su F.E. mch, rpt.*

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



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