

# REPORT ON ELECTRICAL EQUIPMENT.

No. 241

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

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Writing Report 30-9-1950 When handed in at Local Office 19

Port of Kobe

Survey held at Shimonoseki Date, First Survey 24-8-50 Last Survey 11-9-1950

(No. of Visits 4)

on the Steel Single Screw Steam Ship "BUNYO MARU"

Kawaminami Industry Ltd.

Tons { Gross 3769.48  
Net 2149.65

Nagasaki Japan By whom built Kagagishima Shipyard Yard No. 234 When built 1949

Togo Kisen K.K.

Port belonging to Tokyo

Equipment fitted by Kawaminami Industry Ltd. Kagagishima Shipyard When fitted 1949

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 no

Have they been submitted and approved Yes

System of Distribution Two wire with direct current Voltage of Lighting 100 V

100 V Power 100 V D.C. or A.C., Lighting D.C. Power D.C. If A.C. state frequency

Movers, has the governing been found as per Rule when full load is thrown on and off yes Are turbine emergency governors fitted

switch Generators, are they compound wound yes, and level compounded under working conditions yes

compound wound state distance between generators and from switchboard Are the generators arranged to run

Wor No, are shunt field regulators provided yes Is the compound winding connected to the negative or positive pole

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

machines under 100 kw. been supplied no certificates and the results found as per Rule yes

of Generators Starboard of engine room

lation in way of generators satisfactory yes are they clear of inflammable material and protected from mechanical injury and

n water, steam and oil yes Switchboards, where are main switchboards placed rear starboard of

accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water,

yes, what insulation is used for the panels marble insulated individually each

it an Approved Type switch gears on the sheet-steel panel, if of synthetic insulating

Is the construction as per Rule, including locking of screws and nuts N.K. finds its satisfactory Description of Main Switchgear

erator and arrangement of equaliser switches Two 400A manually operated trip-free type, double pole air

breakers with instantaneous trip.

100A double pole single throw disconnecting knife switch for main generator.

b and fuse gear (or circuit breakers) for each outgoing circuit 12-60A Double pole throw quick break type

switch with enclosed fuses per pole 1-120A D.O.

Single throw knife switch with enclosed fuses per pole for shore source.

ents containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 2-400A

-150V voltmeters synchronising devices. For compound machines in parallel are the ammeters and reversed current

es connected on the pole opposite to the equaliser connection Earth Testing, state means provided Earth

ing lamps of the metal-filament type of 20 watts between earth and each pole.

circuit Breakers and Fuses, are they as per Rule yes, are the fuses an Approved Type yes

Enclosed type, renewable element, are all fuses labelled yes If circuit breakers are provided for the generators, at what

Range, 100-175% of generator rated operate current, normal setting 150% do and at what current do the reversed current protective devices operate

Section Boards and Distribution Boards, is the construction as per Rule yes

they insulated and protected as per Rule yes, if otherwise than as per Rule are they of an Approved Type

fall of pressure between bus bars and any point under maximum load 6 V, are the ends of all cables having a sectional

square inch and above provided with soldering sockets yes Are all paper insulated and varnished cambric insulated

the ends no Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil,

or risk of mechanical damage yes, are any cables laid under machines or floorplates Generators cables, if so, are they

yes, protected by ed conduit tube Are cables in machinery spaces, galleys, laundries, etc., lead covered yes or run in conduit yes

R" type State how the cables are supported or protected Where exposed to risk of mechanical damage

machinery space cables are protected by steel conduit tubes, and in the cargo hatch

they are protected by sheet-iron plating.

Lloyd's cable are secured by metal clips without protection

Lloyd's sheaths, armouring and conduits effectually bonded and earthed yes Are all cables passing through decks and watertight

ed with deck tubes or watertight glands Deck tube, where unarmoured cables pass through beams, etc., are the holes

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 \_\_\_\_\_, Emergency Supply

Navigation Lamps, are they separately wired yes controlled by separate double pole switches and fuses yes Are the switches yes 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  
state battery capacity in ampere hours Installed 2 sets of 24 @ 120 ampere hours

*Fittings*, are all fittings on weather decks, in storerooms and engine rooms and wherever exposed to drip or condensed moisture, weatherproofed to prevent corrosion of the fittings and the materials on which they are attached. Fittings are also protected from ignitable materials or inflammable or explosive dust or gases are likely to be present.

Are any fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present.....  
if so, how are they protected.....

if so, how are they protected ..... Are all fittings suitably ventilated  
and where are the controlling switches fitted ..... of the filament type

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 \_\_\_\_\_, are the frames effectually earthed \_\_\_\_\_  
accommodation of the convection type \_\_\_\_\_. Motors, are all motors constructed and installed as per Rule and placed \_\_\_\_\_

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 compartment \_\_\_\_\_ 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 2

Control Gear and Resistances, and they constructed and fitted as per Rule Yes Lightning Conductors, where required a

Rule Lighting con. Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules  
 \_\_\_\_\_, make of fuse \_\_\_\_\_ Are \_\_\_\_\_

complied with \_\_\_\_\_, are all fuses of an Approved Cartridge Type \_\_\_\_\_, make of fuse \_\_\_\_\_  
rooms, tween deck spaces, etc., in accordance with the special requirements for such ships. Are the cables lead covered as per I  
inside the watertight compartment

rooms, tween deck spaces, etc., in accordance with the special requirements for such ships. *Inside the watertight compartment*  
E. S. D., if fitted state maker *Nippon Denki Co. Ltd.* location of transmitter *in double bottom (77-78)* and receiver *D.O.*

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.

## PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT				TYPE.
			Kilowatts per Generator.	Volts.	Amperes.	Revs. per Min.	
MAIN ... ..	2	Busch Electric Co. Ltd.	30 K.W.	105	286	550	Vertical type single cylinder horizontal steam engine
EMERGENCY ...							
ROTARY							
TRANSFORMER							

## GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (long plus return feet).	INSULATION.	PROT.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or Sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ... ..	30 KW.	2	2x68.99 mm <sup>2</sup>	286	310	60 ft	rubber	conv.
" " EQUALISER ... ..			Rpt g. state amendments have been carried out.					
EMERGENCY GENERATOR ... ..				3				
ROTARY TRANSFORMER: MOTOR GENERATOR...								

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

DESCRIPTION.								
From Main Switch Board to NO.1 Section Board	1	22.54	✓	52.6	85	356	Rubber	Co
" NO.1 Section Board to NO.2 Distribution Board	1	3.519	✓	10.36	23	525	"	
" " to NO.3 "		2.519	✓	18.3	23	130	"	
" " to NO.4 "		2.519	✓	12.9	23	13	"	
From Main Switch Board to NO.2 Section Board		15.08	✓	41.4	65	165	"	
" NO.2 Section Board to NO.5 Distribution Board		3.519	✓	17.8	26	295	"	
" " to NO.6 "		3.519	✓	11.2	26	50	"	
" " to NO.7 "		3.519	✓	4	23	820	"	
" " to NO.8 "		3.519	✓	3.4	26	420	"	
From Main Switch Board to NO.3 Section Board		15.08	✓	39.4	58	260	"	
" NO.3 Section Board to NO.9 Distribution Board		6.032	✓	21.2	32	13	"	
" " to NO.10		3.519	✓	12.2	22	295	"	

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

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet)	INSULA- TION.	PROTECTIVE COVERING.
	No. in Parallel per Cable.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Board to No 4 Section Board	1	23.54 mm ✓	54.8	85	250	rubber	
Board to No 11 Distribution Board	2	3.519 ✓	15.6	23	360	"	
to No 12 "	"	3.519 ✓	14.8	23	395	"	
h Board to No 5 Section Board	"	6.032 ✓	18.8	37	215	"	
Board to No 13 Distribution Board	"	3.519 ✓	10.4	26	13	"	
to No 14 "	"	3.519 ✓	8.4	26	65	"	
h Board to No 1 Distribution Board	"	3.519 ✓	7.9	23	475	"	
Board to Navigation Indicator	"	1.131 ✓	2	11	6	"	
board to "	"	1.131 ✓	2	11	480	"	
Board to Heater Socket	"	2.011 ✓	10	23	80	"	
Board to Cargo Lamps for No 3 Cargo Hatch	"	2.011 ✓	4.4	17	330	"	
to Projector (Compass bridge)	"	2.011 ✓	10	17	185	"	
to " (boil deck)	"	2.011 ✓	10	17	150	"	
Board to Projector (engine room)	"	2.011 ✓	3	15	90	"	
to " ( " )	"	2.011 ✓	3	15	120	"	
h Board to Wireless	"	35.63 ✓	68.8	115	460	"	
to Gyro Compass	"	6.032 ✓	10	37	395	"	

## MOTOR CABLES.

MOTORS TO BE LISTED.	No.	B.H.P.						
MS1 Board to Section Board	1	"	22.54 ✓	64	75	48	rubber	
to 2HP oil purifier	1	"	6.032 ✓	19	32	12	"	
to 5HP turning motor	1	"	15.08 ✓	45	58	1.5	"	Conduit tube
MS2 Board to Section Board	1	"	25.54 ✓	54	75	220	"	
to 5HP motor	1	"	15.08 ✓	45	58	40	"	
to for ref. machine	1	"	3.51 ✓	9	22	165	"	
to 1HP motor for ref. machine	1	"	15.08 ✓	49	58	275	"	
Section Board			9.55 ✓	30	42	265	"	
3.5HP battery	3.5	"	6.03 ✓	19	32	40	"	
to room Ventilator	1	"	9.55 ✓	30	42	200	"	conduit tube
to 2HP Battery	2	"						
to 2HP Battery	2	"						
Ventilator (Eng. room)	1	3.5						

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.

*Kawaminami Kayagishima Shipyard*

Electrical Contractors.

Date

#### COMPASSES.

Have the compasses been adjusted under working conditions *Yes*

*Kawaminami Kayagishima Shipyard*

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 *March 7 1950*

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith *no*

General Remarks. (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

*See Rpt 9 attached*

Total Capacity of Generators *60* ✓ Kilowatts.

The amount of Fee ... £ *21-0-0* : When applied for,

19

When received,

19

Travelling Expenses (if any) £ *-* :

*L. T. Williams - Mr. Lauakura*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUES. 25 SEP 1951

Assigned

*See F.E. Rpt.*