

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

23 JUN 1952

Received at London Office

Date of writing Report 19... When handed in at Local Office 19... Port of **CALCUTTA**

No. in Survey held at **VIZAGAPATAM** Date, First Survey **13-1-** Last Survey **31-3** 19 **52**
Reg. Book. (Number of Visits **4**)

36207s on the **SS "JAG RANI"** Tons {Gross Net

Built at **VIZAGAPATAM** By whom built **Scindia Stm.Nav.Co.Ld** Yard No. **VC 108** When built

Owners **Great Eastern Shipping Co. Ltd.** Port belonging to **BOMBAY**

Electrical Installation fitted by **Scindia Steam Navigation Co. Ltd.,** Contract No. **VC 108** When fitted **5-52**

Is vessel fitted for carrying Petroleum in bulk **No** Is vessel equipped with D.F. **No** E.S.D. **No** Gy.C. **No** Sub. Sig. **No**

Have plans been submitted and approved System of Distribution **2-Wire** Voltage of supply for Lighting **110**

Heating - Power **110** Direct or Alternating Current, Lighting **D.C.** Power **D.C.** If Alternating Current state frequency - Prime Movers,

has the governing been tested and found efficient when the whole load is suddenly thrown on and off **YES** Are turbine emergency governors fitted with a

trip switch as per Rule - Generators, are they compound wound **YES**, are they level compounded under working conditions **YES**

if not compound wound state distance between generators - and from switchboard - Where more than one generator is fitted are they

arranged to run in parallel **NO**, 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 - Have certificates of

test for machines under 100 kw. been supplied **yes** and the results found as per Rule **yes** Are the lubricating arrangements and the construction

of the generators as per Rule **YES** Position of Generators **ENGINE ROOM. STARBOARD SIDE.**

is the ventilation in way of generators satisfactory **YES** are they clear of inflammable material **YES**, if situated

near unprotected combustible material state distance from same horizontally - and vertically - are the generators protected from mechanical

injury and damage from water, steam and oil - are the bedplates and frames earthed **YES.** and the prime movers and generators in metallic

contact **YES** Switchboards, where are main switchboards placed **ENGINE ROOM STARBOARD SIDE.**

are they in accessible positions, free from inflammable gases and acid fumes **YES**, are they protected from mechanical injury and damage from water, steam

and oil **YES**, if situated near unprotected combustible material state distance from same horizontally - and vertically - what insulation

material is used for the panels **SINDANYO**, 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 frame effectually earthed **YES**

Is the construction as per Rule **YES**, including accessibility of parts **YES**, absence of fuses on the back of the board **YES**, individual fuses

to pilot and earth lamps, voltmeters, etc., **YES** locking of screws and nuts **YES**, labelling of apparatus and fuses **YES**, fuses on the "dead"

side of switches **YES** Description of Main Switchgear for each generator and arrangement of equaliser switches **8 - CIRCUIT**

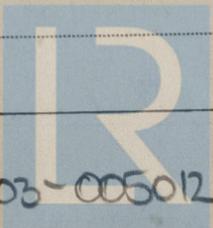
SWITCHBOARD, CONSISTING OF MAIN FUSES AND KNIFE SWITCHES D.P.D.T.

and for each outgoing circuit **PROVIDED WITH KNIFE SWITCHES D.P.D.T.**

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule - Instruments on main switchboard **2**

ammeters **2** voltmeters - synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection - Earth Testing, state means provided **EARTH LAMPS.**



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Switches, Circuit Breakers and Fuses, are they as per Rule YES, are the fuses an approved type YES, are all fuses labelled as per Rule YES, are the reversed current protection devices connected on the pole opposite to the equaliser connection YES, have they been tested under working conditions YES. Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule YES. Cables, are they insulated and protected as per the appropriate Tables of the Rules YES, if otherwise than as per Rule are they of an approved type YES, state maximum fall of pressure between bus bars and any point under maximum load 1 volt, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets YES. Are paper insulated and varnished cambric insulated cables sealed at the exposed ends YES with insulating compound YES or waterproof insulating tape 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 cables laid under machines or floorplates NO, if so, are they adequately protected YES. Are cables in machinery spaces, galleys, laundries, etc., lead covered YES or run in conduit YES. State how the cables are supported and protected FITTED ON M.S. TRAY. Are all lead sheaths, armouring and conduits effectually bonded and earthed YES. Refrigerated chambers, are the cables and fittings as per Rule YES. Are all cables passing through decks and watertight bulkheads provided with ~~XXXXXX~~ watertight glands YES, where unarmoured cables pass through beams, etc., are the holes effectively bushed YES and with what material LEAD. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule YES, Emergency Supply, state position YES and method of control YES. Navigation Lamps, are they separately wired YES controlled by separate double pole switches YES and fuses YES. Are the switches and fuses in a position accessible only to the officers on watch YES, is automatic indicator fitted YES. Secondary Batteries, are they constructed and fitted as per Rule YES, are they adequately ventilated YES. Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof YES. Are 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 NO. Are all fittings suitably ventilated YES and where are the controlling switches fitted YES. Searchlight Lamps, No. of NO, whether fixed or portable NO. Heating and Cooking, is the general construction as per Rule YES, are their fittings as per Rule YES. Motors, are all motors constructed as per Rule YES, are heaters in the accommodation of the convection type YES. Motors, are all motors constructed as per Rule YES and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from steam and oil YES, if situated near unprotected combustible material state minimum distance from same horizontally YES and vertically YES. Have motors of 100 B.H.P. and over been inspected by the Surveyors during manufacture and testing YES. Have certificates of test for motors of 100 B.H.P. intended for essential services been supplied and the results found as per Rule YES. Control Gear and Resistances, are they constructed as per Rule YES. Ships carrying Oil having a Flash Point NO. Lightning Conductors, where required are they fitted as per Rule YES. Are all fuses of the cartridge type YES. less than 150° F. Have all the special requirements of the Rules for such ships been complied with YES. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flame type YES. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule YES, are they suitably stored YES. Insulation Tests, has the insulation resistance of all circuits and apparatus been megger tested and found satisfactory YES.

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of
MAIN	2	20 KW EACH	110	182	400	STEAM ENGINE		
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet)	INSULATED WITH	HOW PROTECTED.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule			
MAIN GENERATOR	20	1	0.2	182	184	38	VIR L.C.	FITTED ON M.S.
EQUALISER	20.	1	0.2	182	184	34	VIR L.C.	PERFORATED. CHANNEL WITH BRASS CLAMPS.
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
GENERATOR								

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet)	INSULATED WITH	HOW PROTECTED.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule			
WIRELESS	1	.0225	10	37	424	LEAD	FITTED ON M.S.	
SALOON ACCOMODATION	1	.0225	26	37	380	COVERED	PERFORATED	
NAVIGATION	1	.007	6.9	19	434	ARMOURED &	CHANNEL WITH BRASS CLAMPS.	
CARGO	1	.0225	36	37	412	&		
MIDSHIP (ENGRS. ACC.)	1	.01	28	25	144	BRAIDED.		
VENTILATING FANS.	1	.06	63.7	66	150			
AFT. ACCOMODATION.	1	.0225	32	37	420			
ENG. RM. & BOILER ROOMS.	1	.01	40.	66.	50.			

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet)	INSULATED WITH	HOW PROTECTED.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule			
WIRELESS	1	.0225	10.	37	424	LEAD	FITTED ON M.S.	
NAVIGATION LIGHTS	1	.007	6.9	19	434	COVERED	PERFORATED	
LIGHTING AND HEATING						ARMOURED &	CHANNEL WITH BRASS CLAMPS.	
Stern light.	1	.002	0.5	5.	560	BRAIDED		

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet)	INSULATED WITH	HOW PROTECTED.
			No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule			
Midship ventilating motor	1	1.5	1	.007	14.2	19	9	VIR.	L.C. Cable in
Saloon "	1	1.5	1	.007	14.2	19	43	L.C.	G.I. pipe fitted on M.S. clamps.
Poop "	1	3	1	.0225	26.5	37	26		
WATER PUMP	1	.5	1	.003	5	10	10		
WASTE MOTOR.	1	1.5	1	.007	15	19	15		
EXHAUST MOTOR	1	.2	1	.002	1.75	5	15		
WINDMILL MOTOR	1	.5	1	.007	5.3	19.	12.		

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.

Hindustan Shipyard Ltd.,

Electrical Engineers.

Date

Chief Shipyard Manager.

COMPASSES.

Minimum distance between electric generators or motors and standard compass 28 feet

Minimum distance between electric generators or motors and steering compass 31 feet

The nearest cables to the compasses are as follows :-

A cable carrying 10 Ampères 28 feet from standard compass 31 feet from steering compass.

A cable carrying - Ampères - feet from standard compass - feet from steering compass.

A cable carrying - Ampères - feet from standard compass - feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power yes.

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted yes

The maximum deviation due to electric currents was found to be nil degrees on every course in the case of the

standard compass, and nil degrees on every course in the case of the steering compass.

Hindustan Shipyard Ltd.,

Builder's Signature.

Date

Chief Shipyard Manager.

Is this installation a duplicate of a previous case yes. If so, state name of vessel "JALAPUTRA"

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

The electrical equipment of this vessel has been installed under special survey in accordance with approved plans and the Secretary's letters. The workmanship is good.

On completion of the installation the insulation tested in accordance with Rule requirements, with satisfactory results.

The installation has been examined under full working conditions, special governors tried, with satisfactory results.

It is submitted that this installation be classed in the Register Book in accordance with the machinery class as now recommended.

Note sub 1577/52

Total Capacity of Generators 40 Kilowatts.

The amount of Fee Rs. 1,430/- When applied for, 19. Travelling Expenses (if any) £ - - - - - : When received, 19.

E. Griever.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 18 JUL 1952

Assigned See F.E. mch. npt.

Handwritten notes: # 33, 26.5.52