

Rpt. 13.

No. 48639

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

5 DEC 1928

Date of writing Report 3.11.1928 When handed in at Local Office 3.12.1928 Port of GLASGOW.

No. in Survey held at PAISLEY. Date, First Survey 12.9.28 Last Survey 33.11.1928
Reg. Book. S.S. "KALAVATI" (Number of Visits.....12.....)

90773 on the Built at PAISLEY. By whom built BOW McLAHLAN & CO Yard No. 479 When built 1928.

Owners THE BOMBAY STEAM NAV. CO LTD Port belonging to BOMBAY

Electric Light Installation fitted by MESSRS H. T. ROBERTSON & CO Contract No. 479 When fitted 1928.

System of Distribution Double Wire

Pressure of supply for Lighting 110 volts, Heating — volts, Power — volts.

Direct or Alternating Current, Lighting Direct Power —

If alternating current system, state frequency of periods per second —

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off Yes

Generators, do they comply with the requirements regarding rating Yes, are they compound wound Yes
are they over compounded 5 per cent. Yes, if not compound wound state distance between each generator —

Where more than one generator is fitted are they arranged to run in parallel —, is an adjustable regulating resistance fitted in series with each shunt field Yes

Are all terminals accessible, clearly marked, and furnished with sockets Yes, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched Yes Are the lubricating arrangements of the generators as per Rule Yes

Position of Generator Starting Platform Star Side
is the ventilation in way of the generators satisfactory Yes, are they clear of all inflammable material Yes
if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators — and —, are the generators protected from mechanical injury and damage from water, steam or oil Yes
are their axes of rotation fore and aft Yes

Earthing, are the bedplates and frames of the generating plant efficiently earthed Yes are the prime movers and their respective generators in metallic contact Yes

Main Switch Boards, where placed Alongside Generator
If the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard —

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes Yes
are they protected from mechanical injury and damage from water, steam or oil Yes, if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards — and —
are they constructed wholly of durable, non-ignitable non-absorbent materials Yes, is all insulation of high dielectric strength and of permanently high insulation resistance Yes, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework Yes
and is the frame effectively earthed Yes Are the fittings as per Rule regarding:— spacing or shielding of live parts Yes, accessibility of all parts Yes, absence of fuses on back of board Yes, proportion of omnibus bars Yes, individual fuses to voltmeter, pilot or earth lamp Yes, connections of switches Yes

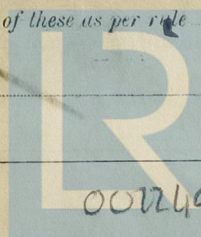
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches
D/P Main Switch & D/P Fuses
S/P Circuit Switches & " " "

Instruments on main switchboard 1 ammeter 1 voltmeter — synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system
Two lamps in series earthed

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules Yes

Joint Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule Yes



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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 Fuel.
MAIN ...	1	10	110	91	600	Enclosed Steam Eng.		
AUXILIARY ...								
EMERGENCY ...								
ROTARY TRANSFORMER								

LIGHTING AND HEATING CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.	Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	MAIN GENERATOR...	2	1	19 083	62.	16	India Rubber	Lead Cas.
	EQUALISER CONNECTIONS							
	AUXILIARY GENERATOR							
	EMERGENCY GENERATOR							
	ROTARY TRANSFORMER...							
	AUXILIARY SWITCHBOARDS							
	ENGINE ROOM	2	01	4 044	11	10	" "	" "
	BOILER ROOM							
	ACCOMMODATION	2	01	4 044	16	120	" "	" "
	Gen. Storey Deck	2	004	4 029	4	160	" "	Armoured
	apt	2	004	4 029	5	60	" "	Armoured
	WIRELESS							
	SEARCHLIGHT							
	MASTHEAD LIGHTS	4	003	1 064	1	200	" "	Lead Cas.
	SIDE LIGHTS	4	002	3 029	1	60	" "	" "
	COMPASS LIGHTS	4	002	3 029	6	24	" "	" "
	POOP LIGHTS	2	004	4 029	6	100	" "	Armoured
	CARGO LIGHTS	2	01	4 044	16	32	" "	Lead Cas.
	ARC LAMPS							
	HEATERS							

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.	Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	BALLAST PUMP							
	MAIN BILGE LINE PUMPS							
	GENERAL SERVICE PUMP							
	EMERGENCY BILGE PUMP							
	SANITARY PUMP							
	CIRC. SEA WATER PUMPS							
	CIRC. FRESH WATER PUMPS							
	AIR COMPRESSOR							
	FRESH WATER PUMP							
	ENGINE TURNING GEAR							
	ENGINE REVERSING GEAR							
	LUBRICATING OIL PUMPS							
	OIL FUEL TRANSFER PUMP							
	WINDLASS							
	WINCHES, FORWARD							
	WINCHES, AFT							
	STEERING GEAR							
	(a) MOTOR GENERATOR							
	(b) MAIN MOTOR							
	WORKSHOP MOTOR							
	VENTILATING FANS							

Cables: Single, twin, concentric, or multicore *Single & twin* are the cables insulated and protected as per Tables IV or V of the Rules *Yes*

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load *2 volts*

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets *Yes*

Paper Insulated Cables. If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound *Yes*

Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage *Yes*

Support and Protection of Cables, state how the cables are supported and protected *Armoured & Lead & Armoured in Gold Clips*

If cables are run in wood casings, are the casings and caps secured by screws *Yes*, are the cap screws of brass *Yes*, are the cables run in separate grooves *Yes*. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII *Yes*

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements *Yes*

Joints in Cables, state if any, and how made, insulated, and protected *No joints*

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands *Yes*

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed *Yes* state the material of which the bushes are made *Compo Tube*

Earthing Connections, state what earthing connections are fitted and their respective sectional areas *Yes*

are their connections made as per Rule *Yes*

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule *Yes*

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven *Yes*

Navigation Lamps, are these separately wired *Yes*, controlled by separate switch and separate fuses *Yes*, are the fuses double pole *Yes*, are the switches and fuses grouped in a position accessible only to the officers on watch *Yes*, has each navigation lamp an automatic indicator as per Rule *Yes*

Secondary Batteries, are they constructed and fitted as per Rule *Yes*

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight *Yes*, are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected *Lead & Tin fittings with cast iron shutter*, are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *Yes*, how are the cables led *Yes*, where are the controlling switches situated *Yes*

Searchlight Lamps, No. of *Yes*, whether fixed or portable *Yes*, are their fittings as per Rule *Yes*

Are Lamps, other than searchlight lamps, No. of *Yes*, are their live parts insulated from the frame or case *Yes*, are their fittings as per Rule *Yes*

Motors, are their working parts readily accessible *Yes*, are the coils self-contained and readily removable for replacement *Yes*, are the brushes, brush holders, terminals and lubricating arrangements as per Rule *Yes*, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material *Yes*, are they protected from mechanical injury and damage from water, steam or oil *Yes*, are their axes of rotation fore and aft *Yes*, if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type *Yes*, if not of this type, state distance of the combustible material horizontally or vertically above the motors *Yes* and *Yes*

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule *Yes*

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule *Yes*

Ships carrying Oil having a Flash Point less than 150 F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings *Yes*

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office *Yes*

All Conductors are of annealed copper conforming to British Standard Specification No. 7.

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

H. T. Robertson & Co. Electrical Engineers.

Date *26/11/28*

COMPASSES.

Distance between electric generators or motors and standard compass

100 ft.

Distance between electric generators or motors and steering compass

100 ft.

The nearest cables to the compasses are as follows:—

A cable carrying *6* Ampères *10* feet from standard compass *10* feet from steering compass.

A cable carrying *3* Ampères *into* feet from standard compass *2 into* 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

7 1/2

degrees on

every

course in the case of the standard

compass, and

7 1/2

degrees on

every

course in the case of the steering compass.

John R. R. R.
Director.

Builder's Signature.

Date *29/10/1928*

Is this installation a duplicate of a previous case

No

If so, state name of vessel

General Remarks

(State quality of workmanship, opinions as to class, &c.)

This installation

has been fitted on board under special survey. Tested under full working conditions and found satisfactory.

The materials and workmanship were found to be good and sound.

It is submitted that
this vessel is eligible for
THE RECORD. Elec Light.

(S)

7/12/28

Total Capacity of Generators

10.

Kilowatts.

The amount of Fee ...

£10-0-0

When applied for,
27 NOV 1928

Travelling Expenses (if any) £

:

When received,
29 NOV 1928

J. S. Rankin
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW 4-DEC 1928

Assigned

Elec. Light



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