

31 OCT 1928

No. 6566

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office... 4 OCT 1928

Date of writing Report Oct 3rd 1928 When handed in at Local Office Oct 3rd 1928 Port of MANCHESTER.

No. in Survey held at MANCHESTER. Date, First Survey May 21st Last Survey Sept 7th 1928
Reg. Book. (Number of Visits... 2)

on the Twin Screw Double Ended Ferry M.O.P. 5 B A Tons { Gross 427
Net 155

Built at Glasgow. By whom built Messrs Yarrow & Co. Ltd Yard No. 1559 When built

Owners Director General of Navigation Port belonging to Buenos Ayres
& Harbours.

Electric Light Installation fitted by _____ Contract No. _____ When fitted

System of Distribution Two wire

Pressure of supply for Lighting 125 volts. Heating 125 volts. Power 125 volts.

Direct or Alternating Current, Lighting Direct Power DIRECT

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

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

Generators, do they comply with the requirements regarding over load Yes are they over compounded Yes

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

Are all terminals accessible and clearly marked Yes are they so spaced or shielded that they cannot be accidentally earthed, or short circuited Yes

Are the lubricating arrangements of the generators as per Rule Yes

Position of Generators _____ are they clear of all inflammable material _____

is the ventilation in way of the generators satisfactory _____ 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 _____

are their axis of rotation fore and aft _____

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

Main Switch Boards, where placed _____

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 _____ are they protected from mechanical injury and damage from water, steam or oil _____ 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, incombustible 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 connected to one pole insulated from the slab with mica or micanite and the slab similarly insulated from its framework Yes and is the frame effectively earthed Yes Are the following fittings as per Rule, viz. :— spacing or shielding of live parts Yes accessibility of all parts _____ 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. Triple pole C.B. with interlocked equalizer. D.P. switch fuses.

Instruments on main switchboard Necessary ammeters Necessary voltmeters Nil 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 Earth lamps.

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

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

Insulation of Cables, state type of cables, single or twin _____ are the cables insulated and protected as per Tables III or IV of the Rules _____

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

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.007 square inch and above provided with soldering sockets _____

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 _____

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 _____

Support and Protection of Cables, state how the cables are supported and protected _____

If cables are run in wood casings, are the casings and gaps covered by screens _____ are the cap screws of brass _____, are the cables run in separate grooves _____ If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VI _____

Refrigerated Chambers, if lights are fitted, are the sockets and fittings in accordance with the special requirements _____

Joints in Cables, state if any, and how made, insulated, and protected _____

Watertight Glands and Deck Tubes, are all wires passing through decks and watertight bulkheads provided with deck tubes or watertight glands _____

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

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

_____, are their connections made as per Rule _____

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

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven *In Engine Room, 1 = 10 KW 125 volt generator driven by Astor Pet. Car Engine.*

Navigation Lamps, are these separately wired _____, controlled by separate switch and separate fuses _____ are the fuses double pole _____, are the switches and fuses grouped in a position accessible only to the officers on watch _____

has each navigation lamp an automatic indicator as per Rule _____, are separate screens provided for the use of oil and electric side lights _____ are separate oil lanterns provided for the mast head lights and side lights _____

Fittings, are all fittings on weather decks, in stowholds and engine rooms and wherever exposed to drip or condensed moisture, watertight _____ 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 _____

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected _____, how are the cables led _____

where are the controlling switches situated _____

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

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

Motors, are their working parts readily accessible _____, are the coils self-contained and readily removable for replacement _____, are the brushes, brush holders, terminals and lubricating arrangements as per Rule _____, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material _____

are they protected from mechanical injury and damage from water, steam or oil _____ are their axis of rotation fore and aft _____, 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 _____, if not of this type, state distance of the combustible material horizontally or vertically above the motors _____ and _____

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

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

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 _____

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

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 ...	2	85 each	125	280	360	M.A.M. Diesels (Main Engines)		
AUXILIARY ...	1	10	125	80	1100	Astor Oil Engine.	Petrol-Paraffin	under 150°F
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. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR...								
	AUXILIARY GENERATOR...								
	EMERGENCY GENERATOR...								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS...								
	ENGINE ROOM...								
	BOILER ROOM...								
	WIRELESS...								
	SEARCHLIGHT...								
	MASTHEAD LIGHT...								
	SIDE LIGHTS...								
	COMPASS LIGHTS...								
	POOP LIGHTS...								
	CARGO LIGHTS...								
	ARC LAMPS...								
	HEATERS...								

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	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...								
	WORKSHOP MOTOR...								
	VENTILATING FANS...								

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.

METROPOLITAN-VICKERS ELECTRICAL
 CO. LTD.

[Signature]
 TREASURER

Electrical Engineers.

Date 28. 9. 28.

COMPASSES.

Distance between electric generators or motors and standard compass
 Distance between electric generators or motors and steering compass
 The nearest cables to the compasses are as follows:—
 A cable carrying Amperes feet from standard compass feet from steering compass.
 A cable carrying Amperes feet from standard compass feet from steering compass.
 A cable carrying Amperes feet from standard compass feet from steering compass.
 Have the compasses been adjusted with and without the electric installation, at work at full power
 Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted
 The maximum deviation due to electric currents was found to be degrees or course in the case of the standard
 compass, and degrees or course in the case of the steering compass.

Builder's Signature.

Date

Is this installation a duplicate of a previous case No. If so, state name of vessel

General Remarks (State quality of workmanship, reference to class, etc. The above auxiliary generators have been built under Special Survey. The materials of the armatures and spindles of the 35 kw machines have been tested in accordance with the Specification. The materials have been examined and found as far as could be seen sound and the workmanship generally is good. The machines proved satisfactory on full and overload tests. The above electrical machinery is in my opinion suitable for the rotation of + L.M.C with date when fitted on board the vessel in accordance with the Rule Requirements.

Total Capacity of Generators 80 Kilowatts

The amount of Fee £	✓	:	}	When applied for,
Travelling Expenses (if any): £	✓	:		When received,
				19
				19

[Signature]
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

1m. 3. 22.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)