

REPORT ON ELECTRIC FITTINGS

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

TUE. 31 JUL. 1923

Received at London Office

Date of writing Report 19 When handed in at Local Office 30.7.23 Port of Middleborough

No. in Survey held at Haverlon Hill-on-Tees Date, First Survey while Last Survey building 19
Reg. Book. S.S. "La Crescenta" (Number of Visits.....)

Built at Haverlon Hill-on-Tees By whom built Furness S/B Co Ltd Yard No. 8 When built 1923
Owners Crescent Navigation Co Ltd Port belonging to London

Electric Light Installation fitted by Messrs Furness Shipbuilding Co Ltd Contract No. _____ When fitted 1923

System of Distribution Double Wire Insulated 152
Pressure of supply for Lighting 100 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 overload yes, are they compound wound yes
are they over compounded 5 per cent. Level, 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 _____

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

Position of Generators after end Engine Room, are they clear of all inflammable material yes

is the ventilation in way of the generators satisfactory 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 axis 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 Near Generator in Engine Room
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, 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 _____, and is the insulated from the slab with mica or micanite and the slab similarly insulated from its framework yes

frame effectively earthed Not earthed Are the following fittings as per Rule, viz.:— spacing or shielding of live parts _____, 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 _____ switches

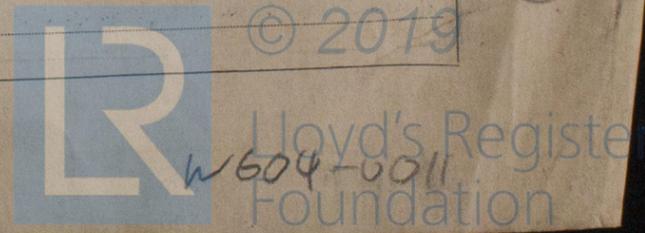
D.P. Switches & Fuses for Generator, and each outgoing feeder circuit
(Fuses) porcelain K.O. Pattern

Instruments on main switchboard one ammeters one voltmeters _____ 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 16 c/p lamps in series & middle point earthed, connected to each Bar Bar by means of Switch & Fuse

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



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

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load *5 Volts*

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 *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 *Main Feeder cables are run along the underside of the Fore and Aft Gangway. All cables which are exposed, or where moisture is likely to accumulate are lead covered, armoured and braided*

Support and Protection of Cables, state how the cables are supported and protected *Lead covered & armoured cables are supported by means of galvanized iron clips. Lead covered cables supported by means of brass clips*
 If cables are run in wood casings, are the casings and caps secured by screws _____, 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 *yes*

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

Joints in Cables, state if any, and how made, insulated, and protected *Porcelain junction boxes protected by cast iron covers*

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 Positions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed _____ state the material of which the bushes are made *lead*

Earthing Connections, state what earthing connections are fitted and their respective sectional areas _____ none

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 _____

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*, are separate screens provided for the use of oil and electric side lights _____ *yes*
 are separate oil lanterns provided for the mast head lights and side lights _____ *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 *Strong Ringed cast iron covers*

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *Gas tight fittings in Pump Room in No. 4 Conduit*, how are the cables led _____

where are the controlling switches situated *Forecastle Dist. Board*

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

Are 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 _____ *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*

PARTICULARS OF GENERATING PLANT.									
DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY.	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.		
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN	26546	872	100	85	360	Sunderland Forge Engine (Open Type)			
AUXILIARY						Generator by Sunderland Forge Co			
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.
				No.	Diameter.				
26646	MAIN GENERATOR...	2	.0937	19	.14	85	25 ft	U. S. R.	Iron Pipes
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM								
	BOILER ROOM	2	.0225	7	.064	15	20 ft	U. S. R.	L. b. Arm & Braid
	WIRELESS	2	.0225	7	.064	15	220 ft	U. S. R.	L. b. Arm & Braid
	SEARCHLIGHT	1	.002	3	.029	1.2	300 "		
	MASTHEAD LIGHT	1	.002	3	.029	.6	90 "		
	SIDE LIGHTS	2	.002	3	.029	.3	20 "		Lead covd only
	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. Amperes.	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.

F.P. FURNESS SHIPBUILDING CO. LIMITED

P.S. Glover

Electrical Engineers.

Date *27th July 1923*

COMPASSES.

Distance between electric generators or motors and standard compass *150 ft*

Distance between electric generators or motors and steering compass *150 ft*

The nearest cables to the compasses are as follows:—

A cable carrying *3* Amperes *Inside* feet from standard compass *3* 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 *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 *all* course in the case of the standard compass, and *nil* degrees on *all* course in the case of the steering compass.

F.P. FURNESS SHIPBUILDING CO. LIMITED,

Am Onarrie

Builder's Signature.

Date *27th July 23*

Is this installation a duplicate of a previous case *yes* If so, state name of vessel *SS Liss Mdr Ref 7211073*

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

This installation has been fitted in accordance with the Rules, is of good materials and workmanship and on completion was examined under full working conditions and found satisfactory.

It is submitted that this vessel is eligible for THE RECORD. *Clear light.*

J.M.
1-8-23

Total Capacity of Generators *8.5* Kilowatts

The amount of Fee ... £ *8* : *10* : { When applied for, *23.4.19.23*

Travelling Expenses (if any) £ : : { When received, *See debit book.*

C. E. Milks
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Im. 9.22.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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