

Rpt. 13.

No. 11481

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

WED. FEB. 14 1923

Date of writing Report

19

When handed in at Local Office

6.2.23

Port of

Middlesbrough

No. in Survey held at Haverton Hall on Date, First Survey 10.11.22 Last Survey 23.1.19.23
Reg. Book. (Number of Visits 5)

79776 upon the Steel Screw Steamer "London Commerce"

Tons { Gross
Net

Built at Haverton Hall on Date By whom built Furness S/B Co Ltd Yard No. 34 When built 1923

Owners Messrs Furness Withy & Co Ltd Port belonging to London

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

System of Distribution

Double Wire

Pressure of supply for Lighting 100 volts, Heating - volts, Power 100 volts.

Direct or Alternating Current, Lighting Direct Power Direct

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 No, 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 Generator compartment Port Side Tween Decks

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 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 Generators in Generator Comp. Port Side, Tween Decks

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, 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 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

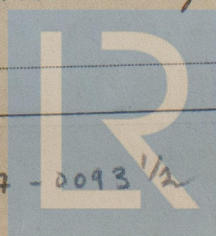
D.P. Switch & fuse for each Generator & outgoing circuit & D.P. Change Over Switch for connecting each generator alternatively to Bus Bars (Fuses, Porcelain H.V. Pattern

Instruments on main switchboard 2 ammeters 1 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 bus 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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Single
Insulation of Cables, state type of cables, single or twin *Twin* 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

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 *Near Fuel cables are run along strengthening girders, Twin Decks, all cables which are exposed or where moisture is likely to accumulate are lead covered armoured sheathed*

Support and Protection of Cables, state how the cables are supported and protected *lead covered armoured cables are supported by means of galvanneal iron clips, lead covered cables being supported by brass clips or busses*

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 *Porelun junction Boxes protected with 6 I busses*

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 *yes* state the material of which the bushes are made *lead*

Earthing Connections, state what earthing connections are fitted and their respective sectional areas *all w/d Handlamps are earthed by separate conductor having sectional area of .001" barge lights earthed by a separate conductor having a sectional area of .004"* 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

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*, is 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 (with exception of Stern Light)*

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 hinged 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 *no*, how are the cables led

where are the controlling switches situated *Wheel house*

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

Refrigerator 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 *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 axis of rotation fore and aft *yes*, 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 *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, distribution and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings —

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

[illegible]

1 Walkers log led through a changeover switch to battery in Chart Room or Ships Lighting Supply

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.

FURNESS SHIPBUILDING CO. LIMITED

P. S. Glover

Electrical Engineers.

Date 5th February 1923

COMPASSES.

Distance between electric generators or motors and standard compass 140 ft approx

Distance between electric generators or motors and steering compass 130 ft do

The nearest cables to the compasses are as follows:—

A cable carrying .6 Ampères 3 ft feet from standard compass 4 ft feet from steering compass.

A cable carrying .3 Ampères inside 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

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.

For Furness Shipbuilding Co Ltd
J. E. Governor
Director

Builder's Signature. Date 5.2.23

Is this installation a duplicate of a previous case yes If so, state name of vessel S.S. "Feliciano" Indt Rpt No 11282

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)

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 record is eligible for
THE RECORD. Elec. light.

W. D.
14/2/23

Total Capacity of Generators 27½ Kilowatts

The amount of Fee ... £ 21-5-0
Travelling Expenses (if any) £ :
When applied for, 13.2.19.23
When received, See debit book.

Wm Morrison
Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 16 FEB. 1923

Assigned

Im. 22. - Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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