

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 75586

Port of Liverpool Date of First Survey October 10th Date of Last Survey October 16th No. of Visits 3
 No. in Reg. Book 983 on the Iron or Steel SS. Mercedes-de-Larinaga Port belonging to Liverpool
 Built at Port Glasgow By whom Russell & Co When built 1902/9
 Owners Miguel de Larrinaga SS Co. Ltd. (Larrinaga & Co. Ltd.) Owners' Address _____
 Yard No. _____ Electric Light Installation fitted by Campbell & Isherwood Ltd When fitted Oct/1916

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two sets each consisting of a vertical single cylinder open type engine direct coupled to a compound wound protected type dynamo + both mounted on cast iron baseplate.

Capacity of Dynamo 75 Amperes, at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Platform engine room top Whether single or double wire system is used double
 Position of Main Switch Board Near dynamos having switches to groups six of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each One 6 way D.B. in Pastry, one 6 way DB in engine room + One 4 way D.B. in Engineer's Mess room

If fuses are fitted on main switch board to the cables of main circuit yes and on each auxiliary switch board to the cables of auxiliary circuits yes and at each position where a cable is branched or reduced in size yes and to each lamp circuit yes
 If vessel is wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits yes
 Are the fuses of non-oxidisable metal yes and constructed to fuse at an excess of 80 per cent over the normal current
 Are all fuses fitted in easily accessible positions yes Are the fuses of standard dimensions yes If wire fuses are used are permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit yes

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes
 Total number of lights provided for 150 approx arranged in the following groups:—
 A 10 lights each of 16 candle power requiring a total current of 6 Amperes
 B 12 lights each of 16 candle power requiring a total current of 7.2 Amperes
 C 12 lights each of 16 candle power requiring a total current of 7.2 Amperes
 D 4 lights each of 16 candle power requiring a total current of 2.4 Amperes
 E _____ lights each of _____ candle power requiring a total current of _____ Amperes
 Mast head light with _____ lamps each of _____ candle power requiring a total current of _____ Amperes
2 Side light with 1 lamps each of 32 candle power requiring a total current of 7.2 Amperes
 Cargo lights of _____ candle power, whether incandescent or arc lights _____

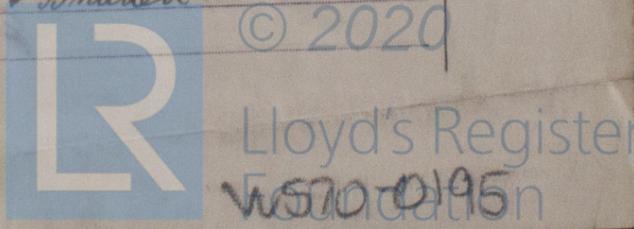
If arc lights, what protection is provided against fire, sparks, &c. None
 Where are the switches controlling the masthead and side lights placed Chart room

DESCRIPTION OF CABLES.

Main cable carrying 75 Amperes, comprised of 19 wires, each 16 S.W.G. diameter, .060 square inches total sectional area
 Branch cables carrying 15 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .007 square inches total sectional area
 Branch cables carrying 15 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .007 square inches total sectional area
 Leads to Marsou lamps carrying 30 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, .0125 square inches total sectional area
 Cargo light cables carrying _____ Amperes, comprised of _____ wires, each _____ S.W.G. diameter, _____ square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanized India Rubber Galvanised Wire Armoured + Braided.
 Joints in cables, how made, insulated, and protected None
 Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances _____ Are all joints in accessible positions, none being made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage
 Are there any joints in or branches from the cable leading from dynamo to main switch board None
 How are the cables led through the ship, and how protected Galvanised wire Armoured + Braided



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible yes

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture None so exposed

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Galv. wire Armouring Braided

What special protection has been provided for the cables near boiler casings ditto

What special protection has been provided for the cables in engine room ditto

How are cables carried through beams Fibre bashed through bulkheads, &c. Glands

How are cables carried through decks deck pipes

Are any cables run through coal bunkers yes or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage no

If so, how are they protected Galvanised wire Armoured & Braided

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage No

If so, how are the lamp fittings and cable terminals specially protected —

Where are the main switches and fuses for these lights fitted —

If in the spaces, how are they specially protected —

Are any switches or fuses fitted in bunkers No

Cargo light cables, whether portable or permanently fixed None How fixed —

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel —

How are the returns from the lamps connected to the hull —

Are all the joints with the hull in accessible positions —

Is the installation supplied with a voltmeter yes and with an amperemeter yes, fixed on Main Switchboard

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas

Are any switches, fuses, or joints of cables fitted in the pump room or companion

How are the lamps specially protected in places liable to the accumulation of vapour or gas

The copper used is guaranteed to have a conductivity of not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than 600 megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

The foregoing statements are a correct description of the Electric Light installation fitted by us on this vessel and we declare that it is at this date in good order and safe working condition.

Campbell & Isherwood Ltd Booth Electrical Engineers Date Oct 17/16

COMPASSES.

Distance between dynamo or electric motors and standard compass Approx. 80ft.

Distance between dynamo or electric motors and steering compass do.

The nearest cables to the compasses are as follows:—

| | | | | | | | |
|------------------|-----------|---------|---------------|-----------|----------------------------|-----------|----------------------------|
| A cable carrying | <u>30</u> | Amperes | <u>Approx</u> | <u>15</u> | feet from standard compass | <u>15</u> | feet from steering compass |
| A cable carrying | <u>5</u> | Amperes | " | <u>10</u> | feet from standard compass | <u>10</u> | feet from steering compass |
| A cable carrying | <u>10</u> | Amperes | " | <u>15</u> | feet from standard compass | <u>15</u> | feet from steering compass |

Have the compasses been adjusted with and without the electric installation at work at full power No.

The maximum deviation due to electric currents, etc., was found to be _____ degrees on _____ course in the case of the standard compass and _____ degrees on _____ course in the case of the steering compass.

Builder's Signature. Date

GENERAL REMARKS.

This installation has been fitted under survey and tried under working conditions. Same, in my opinion, is eligible to be recorded in the Register Book.

this vessel is eligible for THE RECORD. Elec light: [Signature] B. G. Oxford.
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute LIVERPOOL 20 OCT 1916

Electric Light.

[Signature]



© 2020

Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.