

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 38564

Port of Glasgow Date of First Survey 23rd Dec. 1918 Date of Last Survey 1st Jan 1919 No. of Visits 3
 No. in on the Steel "La Place" Laplace Port belonging to Liverpool
 Reg. Book 1645 Built at Dumbarton By whom Messrs A. McMillan & Son When built 1919
 Owners Liverpool Brazil & Rio de Janeiro S.N. Co Owners' Address
 Yard No. 478 Electric Light Installation fitted by J. A. Holmes & Co When fitted

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1 9" x 8" Open Single Cylinder Engine coupled to 1 1/4" x 7" W. OPEN Type
Dynamo coupled and wound by J. A. Holmes & Co
 Capacity of Dynamo 163 1/2 Amperes at 110 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed In Engine Room Whether single or double wire system is used Single
 Position of Main Switch Board Near Dynamo having switches to groups A B C D E F G H of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each

see attached List

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

Are the fuses of non-oxidisable metal Yes and constructed to fuse at an excess of 100 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 241 arranged in the following groups:—

A	<u>42</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>21.5</u>	Amperes
B	<u>14</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>8.4</u>	Amperes
C	<u>43</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>38.5</u>	Amperes
D	<u>18</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>14.5</u>	Amperes
E	<u>10</u>	lights each of	<u>32</u>	candle power requiring a total current of	<u>20</u>	Amperes
	<u>2</u>	Mast head light with	<u>1</u> lamps each of <u>32</u>	candle power requiring a total current of	<u>2.05</u>	Amperes
	<u>2</u>	Side light with	<u>1</u> lamps each of <u>32</u>	candle power requiring a total current of	<u>2.05</u>	Amperes
	<u>6</u>	Cargo lights of	<u>11 x 32</u>	candle power, whether incandescent or arc lights	<u>Incandescent</u>	

If arc lights, what protection is provided against fire, sparks, &c.

Where are the switches controlling the masthead and side lights placed In Wheelhouse

DESCRIPTION OF CABLES.

Main cable carrying 163 1/2 Amperes, comprised of 34 wires, each 14 S.W.G. diameter, 182 square inches total sectional area
 Branch cables carrying 21.5 Amperes, comprised of 4 wires, each 16 S.W.G. diameter, 0.12 square inches total sectional area
 Branch cables carrying 8.4 Amperes, comprised of 4 wires, each 20 S.W.G. diameter, 0.04 square inches total sectional area
 Leads to lamps carrying 32 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, 0.018 square inches total sectional area
 Cargo light cables carrying 48 Amperes, comprised of 4 wires, each 22 S.W.G. diameter, 0.002 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All conductors are formed of H.C. Conductors (Tinned)
Insulated with Pure Para Rubber & Muleamised Rubber
Taped & Braided overall.

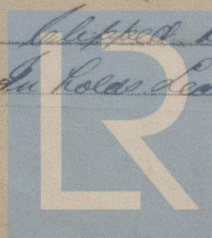
Joints in cables, how made, insulated, and protected

None.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances None 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 None

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 Lead covered & braided wire clipped to bulkheads at ceilings. In high spaces lead covered & armoured. In holds lead covered & armoured.



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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 *Lead covered & armoured*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead covered & armoured*

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 *Pushed with bitie through bulkheads, &c. Stuffing Glands*

How are cables carried through decks *In Lead or Iron Tubes, Flanges made Watertight*

Are any cables run through coal bunkers *Yes* or cargo spaces *Yes* or spaces which may be used for carrying cargo, stores, or baggage *Yes*

If so, how are they protected *Lead covered & armoured Clipped to underside of Deck*

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 *None*

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *W.H. Hooker connection*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *2 Large Sweated Rods with 2" Brass Bolts*

How are the returns from the lamps connected to the hull *Single Lamped with 2" Lead Brass Washers & 3/4" B.S. Brass Screws*

Are all the joints with the hull in accessible positions *Yes*

Is the installation supplied with a voltmeter *Yes* and with an ammeter *Yes*, fixed *On Main Board*

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.

COMPASSES.

Distance between dynamo or electric motors and standard compass *Approx. 96 ft.*

Distance between dynamo or electric motors and steering compass *90 ft.*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>51</i>	<i>Inside</i>	<i>Inside</i>	
<i>5.5</i>	<i>10</i>	<i>6</i>	
<i>14.5</i>	<i>approx 20 ft.</i>	<i>16</i>	

Have the compasses been adjusted with and without the electric installation at work at full power *Yes*

The maximum deviation due to electric currents, etc., was found to be *nil* degrees on *all* courses in the case of the standard compass and *nil* degrees on *all* courses in the case of the steering compass.

ARCHD McMILLAN & SON LTD.

Garrick

DIRECTOR

Builder's Signature.

Date

22nd Feb. 1919

GENERAL REMARKS.

This installation has been fitted on board under special survey tested under full working load for six hours & found satisfactory

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

AWD 13/3/19

J. Stanley Rantier

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW

11 MAR 1919

Elec. Lights



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

12.18

Total number of lights provided for 24 arranged in the following groups:—

A 42 lights each of 16 candle power requiring a total current of 21.5

32 LIGHTS EACH OF 1000 WATT C.P. REQUIRING CURRENT OF 20 AMPERES.

16

32

8

22

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1 Mast head light with 1 lamps each of 32 candle power requiring a total current of 2.05

2 Side light with 1 lamps each of 32 candle power requiring a total current of 2.05