

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 17670

Port of Greenock. Date of First Survey 30<sup>th</sup> April, 1920. Date of Last Survey June 24<sup>th</sup> 1920. No. of Visits 19.  
 No. in on the Iron Steel 3/s "MONT AGEL." Port belonging to Marseille  
 Reg. Book Built at Greenock. By whom Greenock Dockyard Co. Ltd. When built 1920.  
 Owners Societe Generale de Transports Maritimes à Vapeur Owners' Address Marseille.  
 Yard No. 399. Electric Light Installation fitted by H. Y. Boothroyd & Co. (Port Glasgow) When fitted 1920

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

6½" x 5" Enclosed type forced lubrication engine by "Pobey" of Lincoln, direct coupled to compound wound dynamo by "Boothroyd" of Bootle. Steam pressure 100 lbs. per square inch.  
 Capacity of Dynamo 91 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 Double  
 Position of Main Switch Board Near Dynamo having switches to groups 5 & 1 for wireless lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each None fitted.

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 - 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-oxidizable 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 128 arranged in the following groups:—

A	<u>35</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>18</u>	Amperes
B	<u>30</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>15</u>	Amperes
C	<u>27</u>	lights each of	<u>12</u>	candle power requiring a total current of	<u>14</u>	Amperes
D	<u>✓</u>	lights each of	<u>✓</u>	candle power requiring a total current of	<u>✓</u>	Amperes
E	<u>✓</u>	lights each of	<u>✓</u>	candle power requiring a total current of	<u>✓</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>2.25</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>2.25</u> Amperes
<u>30</u>	Cargo lights of <u>5 - 6</u> lt. of <u>16</u>			candle power, whether incandescent or arc lights	<u>Incandescent</u>	

If arc lights, what protection is provided against fire, sparks, &c. No Arcs Fitted.

Where are the switches controlling the masthead and side lights placed In Chart Room.

## DESCRIPTION OF CABLES.

Main cable carrying	<u>91</u> Amperes, comprised of	<u>19</u> wires, each	<u>14</u> S.W.G. diameter, <u>.094</u> square inches total sectional area
Branch cables carrying	<u>18</u> Amperes, comprised of	<u>7</u> wires, each	<u>20</u> S.W.G. diameter, <u>.0070</u> square inches total sectional area
Branch cables carrying	<u>15</u> Amperes, comprised of	<u>7</u> wires, each	<u>22</u> S.W.G. diameter, <u>.0042</u> square inches total sectional area
Leads to lamps carrying	<u>½/2</u> Amperes, comprised of	<u>1</u> wires, each	<u>18</u> S.W.G. diameter, <u>.0018</u> square inches total sectional area
Cargo light cables carrying	<u>5</u> Amperes, comprised of	<u>3</u> wires, each	<u>20</u> S.W.G. diameter, <u>.0030</u> square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

V.I.P. taped, lead covered cables, and where exposed in machinery spaces and etc. armoured over the lead with galv. steel wire armour. And where necessary further protected in Steel tubing.

Joints in cables, how made, insulated, and protected No joints except mechanical ones.

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 Yes

Are there any joints in or branches from the cable leading from dynamo to main switch board No.

How are the cables led through the ship, and how protected Lead covered and armoured and efficiently clipped.



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 and armoured and where necessary in wrought iron tubing.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat ditto.

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 Lead & Fibre Bushes through bulkheads, &c. Watertight Glands.

How are cables carried through decks Watertight deck tubes.

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 As described above.

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage Yes

If so, how are the lamp fittings and cable terminals specially protected Specially guarded fittings.

Where are the main switches and fuses for these lights fitted In Engine Room.

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 Portable How fixed To Watertight Connectors.

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 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.

H. T. BOOTHROLD (PORT-GLASGOW) LTD.

*J. W. Whitehead*

Electrical Engineers

Date 24th June, 1920.

COMPASSES.

MANAGING DIRECTOR & SECRETARY.

Distance between dynamo or electric motors and standard compass

104 feet.

Distance between dynamo or electric motors and steering compass

100 feet.

The nearest cables to the compasses are as follows:—

A cable carrying	Ampères	In Instrument	feet from standard compass	In Instrument	feet from steering compass
<u>1</u>	<u>10</u>		<u>6</u>		<u>feet from steering compass</u>
<u>1</u>	<u>10</u>		<u>10</u>		<u>feet from steering compass</u>

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 any course in the case of the standard compass and Nil degrees on any course in the case of the steering compass.

THE GREENOCK DOCKYARD CO., LTD.

*W. H. L. L. L.*

Builder's Signature.

Date 24th June 1920

GENERAL REMARKS.

DIRECTOR

*The above Installation has been fitted in a satisfactory manner. The materials and Workmanship employed so far as could be seen are sound and good. It has been examined under full load and found to be satisfactory.*

*It is submitted that this vessel is eligible for*

THE RECORD. Elec. light: *Nil*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW 6 - JUL 1920

*Ele. Light*



Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.