

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 15251

Port of Greenock. Date of First Survey 8th Oct. Date of Last Survey 6th Nov No. of Visits 9
 the Iron or Steel Is "Kooyong." Port belonging to Melbourne.
 Built at Port Glasgow. By whom Clyde & Co. Eng. When built 1904.
 Owners' Address
 Yard No. 276. Electric Light Installation fitted by Haddon When fitted 1904.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Compound Wound Dynamo coupled direct on same bed-plate to one double acting open framed Steam Engine.
 Capacity of Dynamo 40 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Engine Room Whether single or double wire system is used Double wire
 Position of Main Switch Board Alongside Dynamo having switches to groups A. B. C. D. of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Pantry - ten circuits, Engineers Quarters - six circuits. Aft - four circuits, Engine Rm. six circuits.
 If cut outs 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 cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits Yes
 Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of 25 per cent over the normal current
 Are all cut outs 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 cut-outs constructed of incombustible materials and fitted on incombustible bases Yes
 Total number of lights provided for 99 arranged in the following groups:—

A	<u>44</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>28-2</u>	Amperes
B	<u>22</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>13-2</u>	Amperes
C	<u>11</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>6-6</u>	Amperes
D	<u>19</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>11-4</u>	Amperes
E		lights each of		candle power requiring a total current of		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>2-4</u> Amperes
	<u>2</u>	Side light with	<u>1</u> lamp each of	<u>"</u>	candle power requiring a total current of	<u>2-4</u> Amperes
	<u>5</u>	Cargo lights of	<u>6-16 C.P. lamps</u>	candle power, whether incandescent or arc lights	<u>Included in above</u>	

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

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

DESCRIPTION OF CABLES.

Main cable carrying 62 Amperes, comprised of 19 wires, each 15 L.S.G. diameter, 0.04650 square inches total sectional area
 Branch cables carrying 28-2 Amperes, comprised of 4 wires, each 15 L.S.G. diameter, 0.02822 square inches total sectional area
 Branch cables carrying 13-2 Amperes, comprised of 4 wires, each 14 L.S.G. diameter, 0.01706 square inches total sectional area
 Leads to lamps carrying 0-6 Amperes, comprised of 3 wires, each 20 L.S.G. diameter, 0.03016 square inches total sectional area
 Cargo light cables carrying 3-6 Amperes, comprised of 3 wires, each 19 L.S.G. diameter, 0.03725 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure Rubber, Vulcanized Rubber, Tape.
Braiding & Compounding over all
 Joints in cables, how made, insulated, and protected Insulated with pure Para Rubber, vulcanized tape & rubber solution. Conductors soldered.
 Are all the joints of cables thoroughly soldered, resin only having been used as a flux Yes 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 No
 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.



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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 Iron tubes

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

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

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

How are cables carried through beams Vulcanized fibre tubes through bulkheads, &c. Brass stuffing glands

How are cables carried through decks Iron tubes flanged to deck

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

If so, how are they protected Armoured

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 cut outs for these lights fitted

If in the spaces, how are they specially protected

Are any switches or cut outs fitted in bunkers

Cargo light cables, whether portable or permanently fixed Portable How fixed Brass sockets + plugs.

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

How are the returns from the lamps connected to the hull

Are all the joints with the hull in accessible positions

The installation is supplied with a voltmeter and an amperemeter, fixed Main Switch B?

VESSELS BUILT FOR CARRYING PETROLEUM.

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

Are any switches, cut outs, 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 99 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 2500 megohms per statute mile after 24 hours' immersion in seawater.

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.

Waddan & Co, Glasgow

Electrical Engineers

Date Nov 12th 1907

COMPASSES.

Distance between dynamo or electric motors and standard compass 120 ft-

Distance between dynamo or electric motors and steering compass 130 "

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>28.2</u>	<u>20</u>	<u>25-</u>	<u>25-</u>
<u>13.2</u>	<u>50</u>	<u>55-</u>	<u>55-</u>
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

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

THE CLYDE SHIPBUILDING & ENGINEERING CO. LIMITED,

Archibald Welch

Director

Builder's Signature.

Date Nov 14th 1907

GENERAL REMARKS.

The materials and workmanship are good
When completed the installation was tried and found
to work satisfactorily.

Wm. Austin

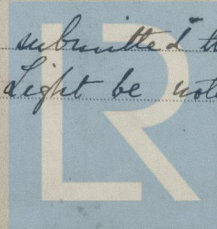
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

Glasgow 18 NOV 1907

Record Electric Light

It is submitted that the Record
Elec. Light be noted in Reg. Books.



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19.11.07

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.