

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 31197

Port of Glasgow Date of First Survey 9.2.12 Date of Last Survey 5.3.12 No. of Visits 6
 No. in SS. Mascara on the Iron or Steel SS. Mascara Port belonging to Glasgow
 Reg. Book Glasgow Built at Glasgow By whom Stephen & Son When built 1912
 Owners MacLay & McIntyre Owners' Address Glasgow
 Yard No. 447 Electric Light Installation fitted by Telford Grier & MacLay When fitted 1912

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Single Cylinder Engine direct Coupled
To Compound wound Dynamo four Pole
 Capacity of Dynamo 50 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Engine room Port Side Whether single or double wire system is used Double
 Position of Main Switch Board Engine room having switches to groups — of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each No. Auxiliary Switch boards

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 none and at each position where a cable is branched or reduced in size yes and to each lamp circuit yes
 If cessel 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 5% 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 At Switchboard

Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases yes. Slate Bases
 Total number of lights provided for 105 arranged in the following groups:—

A	Forward	18	lights each of	16	candle power requiring a total current of	7	Amperes
B	Navigation	7	lights each of	5-32 CP 2-16	candle power requiring a total current of	4.8	Amperes
C	Midships	40	lights each of	16	candle power requiring a total current of	16	Amperes
D	Engines	33	lights each of	16	candle power requiring a total current of	13.2	Amperes
E	Aft	7	lights each of	16	candle power requiring a total current of	2.8	Amperes
2	Mast head lights with	2	lamps each of	32	candle power requiring a total current of	.8	Amperes
2	Side lights with	2	lamps each of	32	candle power requiring a total current of	.8	Amperes
4	Cargo lights of	5-16 CP each	candle power, whether incandescent or arc lights	<u>Incandescent</u>			

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

Where are the switches controlling the masthead and side lights placed Chart House

DESCRIPTION OF CABLES.

Main cable carrying <u>50</u> Amperes, comprised of <u>37</u> wires, each <u>18</u> L.S.G. diameter, <u>.066</u> square inches total sectional area
Forward <u>7</u> Amperes, comprised of <u>7</u> wires, each <u>20</u> L.S.G. diameter, <u>.007</u> square inches total sectional area
Branch cables carrying <u>4.8</u> Amperes, comprised of <u>1</u> wires, each <u>14</u> L.S.G. diameter, <u>.005</u> square inches total sectional area
Midships <u>16</u> Amperes, comprised of <u>7</u> wires, each <u>16</u> L.S.G. diameter, <u>.022</u> square inches total sectional area
Branch cables carrying <u>13.2</u> Amperes, comprised of <u>7</u> wires, each <u>17</u> L.S.G. diameter, <u>.017</u> square inches total sectional area
Aft <u>2.8</u> Amperes, comprised of <u>1</u> wires, each <u>16</u> L.S.G. diameter, <u>.003</u> square inches total sectional area
Leads to lamps carrying <u>1.6</u> Amperes, comprised of <u>1</u> wires, each <u>18</u> L.S.G. diameter, <u>.001</u> square inches total sectional area
Cargo light cables carrying <u>2</u> Amperes, comprised of <u>130</u> wires, each <u>40</u> L.S.G. diameter, <u>.002</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

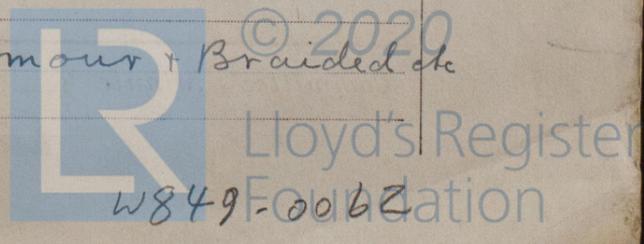
Vulcanized India rubber Taped Braided
Steel Armour Braided & Compounded. For Mains, Forward Engines etc
Vulcanized India rubber Taped Braided & Lead Covered for Saloon etc

Joints in cables, how made, insulated, and protected No joints in Cables

Are all the joints of cables thoroughly soldered, resin only having been used as a flux 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 no joints

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 Clipped up Steel Armour & Braided etc



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 & Braided + Compounded

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Steel Armour Braided, + Compounded

What special protection has been provided for the cables near boiler casings Steel Armour Braided + Compounded

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

How are cables carried through beams Steel Armour through bulkheads, &c. Water tight glands

How are cables carried through decks Galvanized Deck Tubes

Are any cables run through coal bunkers none or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage yes

If so, how are they protected Steel Armour + Braided Compounded

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage none fitted

If so, how are the lamp fittings and cable terminals specially protected none fitted

Where are the main switches and cut outs for these lights fitted none fitted

If in the spaces, how are they specially protected none fitted

Are any switches or cut outs fitted in bunkers none fitted

Cargo light cables, whether portable or permanently fixed Portable How fixed To Cast Iron Connection Boxes

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 "

The installation is yes supplied with a voltmeter and yes an amperemeter, fixed Main Switchboard

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 100 % per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 600 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.

Telford GARDNER & MACKAY, LTD. Electrical Engineers Date 4/4/12

COMPASSES.

Distance between dynamo or electric motors and standard compass 80 ft

Distance between dynamo or electric motors and steering compass 70 ft

The nearest cables to the compasses are as follows:—

A cable carrying	<u>4.8</u>	Amperes	<u>12</u>	feet from standard compass	<u>10</u>	feet from steering compass
A cable carrying	<u>1.6</u>	Amperes	<u>6</u>	feet from standard compass	<u>8</u>	feet from steering compass
A cable carrying	<u>1.6</u>	Amperes	<u>8</u>	feet from standard compass	<u>12</u>	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.

Alex. Stephen & Sons Ltd. Builder's Signature. Date 9th May, 1912

GENERAL REMARKS.

This installation has been fitted under special survey & tested under full working conditions & found satisfactory.

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

J.W.D. APR 17/5/12 Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

GLASGOW 14 MAY 1912

Elec. Light



Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.