

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 39816

Port of Glasgow. Date of First Survey 5-10-19. Date of Last Survey 11-14-20. No. of Visits 11.  
 in on the Iron or Steel H.M. Lug. "Jaunty" Port belonging to London.  
 Book Built at Whiteinch By whom Wm. Ritchie Graham & Milne men built 1920.  
 Owners The Admiralty Owners' Address London.  
 No. 373 Electric Light Installation fitted by Messrs Saddow & Co When fitted 1920.

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Compound wound, open type Phoenix Dynamo, coupled direct to Sisson  
Landem Forced Lubrication Engine

Capacity of Dynamo 130 Amperes at 105 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Engine Room Whether single or double wire system is used Double

Position of Main Switch Board C.R. near 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 A. Engine Room and aft;  
B. Forward Accommodation; C. Navigation  
D. Yard Arm Clusters. E. Spare.

Fuses are fitted on main switch board to the cables of main circuit Yes and on each auxiliary Fuse 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-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 there 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 105 arranged in the following groups:—

<u>36</u>	lights each of <u>16</u>	candle power requiring a total current of <u>18</u>	Amperes
<u>41</u>	lights each of <u>16</u>	candle power requiring a total current of <u>20</u>	Amperes
<u>12</u>	lights each of <u>8, 16 and 32 D.F.</u>	candle power requiring a total current of <u>10</u>	Amperes
<u>16</u>	lights each of <u>50</u>	candle power requiring a total current of <u>20</u>	Amperes
<u>3</u>	Mast head light with <u>1</u> lamp each of <u>32 D.F.</u>	candle power requiring a total current of	Amperes
<u>2</u>	Side light with <u>1</u> lamp each of <u>32 D.F.</u>	candle power requiring a total current of	Amperes
<u>2</u>	Cargo lights of <u>8-50 C.P. in each</u>	candle power, whether incandescent or arc lights <u>Incandescent</u>	included in above total as <u>16</u>

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 <u>68</u> Amperes, comprised of <u>19</u> wires, each <u>14</u> S.W.G. diameter, <u>.0944</u> square inches total sectional area
Branch cables carrying <u>20</u> Amperes, comprised of <u>7</u> wires, each <u>16</u> S.W.G. diameter, <u>.0222</u> square inches total sectional area
Branch cables carrying <u>10</u> Amperes, comprised of <u>7</u> wires, each <u>16</u> S.W.G. diameter, <u>.0222</u> square inches total sectional area
Leads to lamps carrying <u>1</u> Amperes, comprised of <u>7</u> wires, each <u>17</u> S.W.G. diameter, <u>.0024</u> square inches total sectional area
Cargo light cables carrying <u>8</u> Amperes, comprised of <u>3</u> wires, each <u>18</u> S.W.G. diameter, <u>.0055</u> square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure Rubber; Vulcanized Rubber; Taped;  
Lead Covered overall; admiralty Pattern.

Points in cables, how made, insulated, and protected No joints on vessel.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances 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 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 In S.F. tube through Bunkers, Perforated  
Steel Trays, in stokehold and Engine Room, Clipped to Bulkheads in Accommodation.  
Lead covered wires throughout.

510-6010



**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 In G.I. tubes

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

What special protection has been provided for the cables near boiler casings Mounted on Perforated Trays

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

How are cables carried through beams Lead Bushes through bulkheads, &c. W.T. Packing Glands

How are cables carried through decks Steel Deck Tubes with W.T. Packing Gland at Top

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 Through G.I. Tube with W.T. Gland on each end.

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 Portable How fixed A.P. 394 A. Switch & Terminal Box

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 2,500 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.

Haddock & Co Ltd 107 Douglas St Glasgow Electrical Engineers Date 12<sup>th</sup> March 1920

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 100 feet

Distance between dynamo or electric motors and steering compass 95 feet

The nearest cables to the compasses are as follows:—

A cable carrying	<u>10</u>	Amperes	<u>10</u>	feet from standard compass	<u>5</u>	feet from steering compass
A cable carrying	<u>12</u>	Amperes	<u>14</u>	feet from standard compass	<u>8</u>	feet from steering compass
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.

Ritchie Graham Milne Builder's Signature. Date 25<sup>th</sup> March 1920

**GENERAL REMARKS.**

This installation has been fitted on board under special survey. Tested under full working conditions in presence of an Admiralty Inspecting Officer & found satisfactory in every way.

J.S. Rankin

Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 13 APR 1920

Elec. Light

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

