

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 55378

Port of Newcastle Date of First Survey Aug 3<sup>rd</sup> Date of Last Survey 11<sup>th</sup> Sep 08 No. of Visits 6  
 No. in Reg. Book on the Iron or Steel S.S. "Roumanian" Port belonging to London  
 Built at Low Walker By whom Sir W. G. Armstrong Whitworth & Co. When built 1908  
 Owners Messrs Lane & McAndrew Owners' Address London  
 Yard No. 803 Electric Light Installation fitted by Messrs Clarke Chapman & Co Ltd When fitted 1908

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Single Cylinder double acting open type vertical Engine direct coupled to a continuous current compound wound dynamo  
 Capacity of Dynamo 165 Amperes at 100 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Engine room Bottom platform Whether single or double wire system is used Double  
 Position of Main Switch Board near dynamo having switches to groups A. B. C. D. E. of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Each light & group of lights provided with switches as required

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 50 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 Slate & porcelain

Total number of lights provided for 123 arranged in the following groups:-

|   |                      |                      |                        |  |   |            |
|---|----------------------|----------------------|------------------------|--|---|------------|
| A | <u>20" Projector</u> | lights each of       | <u>20000</u>           | candle power requiring a total current of        | <u>60</u>                                 | Amperes    |
| B | <u>14</u>            | lights each of       | <u>16</u>              | candle power requiring a total current of        | <u>11.4</u>                               | Amperes    |
| C | <u>14</u>            | lights each of       | <u>16</u>              | candle power requiring a total current of        | <u>10.2</u>                               | Amperes    |
| D | <u>14</u>            | lights each of       | <u>16</u>              | candle power requiring a total current of        | <u>28.2</u>                               | Amperes    |
| E | <u>40</u>            | lights each of       | <u>16</u>              | candle power requiring a total current of        | <u>24</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>2.4</u> |
|   | <u>2</u>             | Side light with      | <u>1</u> lamps each of | <u>32</u>  | candle power requiring a total current of | <u>2.4</u> |
|   | <u>2</u>             | Cargo lights of      | <u>6-16</u>            | candle power, whether incandescent or are lights | <u>incandescent</u>                       |            |

If are lights, what protection is provided against fire, sparks, &c. 1-15 amp Arc lamp totally enclosed in hexagonal clear glass lantern

Where are the switches controlling the masthead and side lights placed in Chartroom

## DESCRIPTION OF CABLES.

|                             |                                   |                        |   |
|-----------------------------|-----------------------------------|------------------------|---|
| Main cable carrying         | <u>165</u> Amperes, comprised of  | <u>34</u> wires, each  | <u>14</u> L.S.G. diameter, <u>.1824</u> square inches total sectional area  |
| Branch cables carrying      | <u>30.6</u> Amperes, comprised of | <u>4</u> wires, each   | <u>14</u> L.S.G. diameter, <u>.0345</u> square inches total sectional area  |
| Branch cables carrying      | <u>48</u> Amperes, comprised of   | <u>1</u> wires, each   | <u>14</u> L.S.G. diameter, <u>.00502</u> square inches total sectional area |
| Leads to lamps carrying     | <u>.6</u> Amperes, comprised of   | <u>1</u> wires, each   | <u>18</u> L.S.G. diameter, <u>.0018</u> square inches total sectional area  |
| Cargo light cables carrying | <u>36</u> Amperes, comprised of   | <u>176</u> wires, each | <u>38</u> L.S.G. diameter, <u>.00507</u> square inches total sectional area |

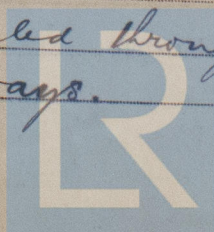
## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanized indiarubber taped, braided, and lead covered overall, where exposed steel armoured over the lead covering  
 Joints in cables, how made, insulated, and protected No joints except mechanical ones

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 Yes, 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 cables led through galvanized iron pipes fixed under fore & aft gangways.



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**DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.**

Are they in places always accessible no

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture Lead covered in

galvanized iron pipes.

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 do. do.

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

How are cables carried through beams in lead bushes through bulkheads, &c. in watertight glands

How are cables carried through decks through pipes & galvanized iron deck tubes.

Are any cables run through coal bunkers yes or cargo spaces — or spaces which may be used for carrying cargo, stores, or baggage yes.

If so, how are they protected Lead covered & armoured, also lead covered in pipes.

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 Watertight. C.T. Connection Boxes.

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

How are the returns from the lamps connected to the hull —

Are all the joints with the hull in accessible positions —

The installation is now supplied with a voltmeter and also 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 yes

Are any switches, cut outs, or joints of cables fitted in the pump room or companion no, all switches & cutouts in Steering Gear House

How are the lamps specially protected in places liable to the accumulation of vapour or gas Gastight, Guarded fittings.

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 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.

For **CLARKE, CHAPMAN & Co. LTD.**

**COMPASSES.**

Distance between dynamo or electric motors and standard compass Chairman. 90ft.

Distance between dynamo or electric motors and steering compass 80.

The nearest cables to the compasses are as follows:—

| Cable                      | Amperes   | feet from standard compass | feet from steering compass |
|----------------------------|-----------|----------------------------|----------------------------|
| A cable carrying <u>.6</u> | <u>12</u> | <u>6</u>                   | <u>6</u>                   |
| A cable carrying <u>.6</u> | <u>6</u>  | <u>12</u>                  | <u>12</u>                  |
| A cable carrying <u>—</u>  | <u>—</u>  | <u>—</u>                   | <u>—</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 all courses in the case of the standard compass and nil degrees on all courses in the case of the steering compass.

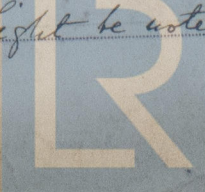
For **SIR W. G. ARMSTRONG, WHITWORTH & CO. LIMITED**

Builder's Signature. H. Saxon White Date 24 September 1908

GENERAL REMARKS. This installation has been examined & found satisfactory

Committee's Minute

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



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 13.—3m34.