

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 55237

Port of *Newcastle-on-Tyne* Date of First Survey *1.8.08* Date of Last Survey *7.8.08* No. of Visits *4*
 No. in *1176* on the *Iron or Steel* *S.S. Sir Walter Scott* Port belonging to *Newcastle-on-Tyne*
 Reg. Book *1176* Built at *Blyth* By whom *Blyth Sh. & Dr. Sh. Co. Ltd* When built *1908*
 Owners *Messrs J. O. Scott* Owners' Address *Newcastle*
 Yard No. *143* Electric Light Installation fitted by *Siemens Bros Dynamis Works Ltd - W/C* When fitted *August 1908*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Single Cylinder Double Acting Open 2 type by Messrs. Robey. Speed 125 R.P.M. Steam Pressure 90 lb sq

Capacity of Dynamo *45.5* Amperes at *110* Volts, whether continuous or alternating current *Continuous*
 Where is Dynamo fixed *Starboard side of Engine Room* Whether single or double wire system is used *Double wire*
 Position of Main Switch Board *Do* having switches to groups *4* Circuits of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each *one 8 Way Distribution Box situated in Chart Room, two 4 Way Dist Boxes in Engineers Passage - Star Side, one 2 Way Dist Box in Fore-cabin, & one 4 Way Dist Box in Engine Room*
 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
 Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases *yes*

Total number of lights provided for *77* arranged in the following groups:—

A	<i>13</i>	lights each of <i>6-32 & 7-16</i>	candle power requiring a total current of <i>9</i>	Amperes
B	<i>15</i>	lights each of <i>16</i>	candle power requiring a total current of <i>7½</i>	Amperes
C	<i>25</i>	lights each of <i>16</i>	candle power requiring a total current of <i>13</i>	Amperes
D	<i>24 &</i>	lights each of <i>16</i> <i>32</i>	candle power requiring a total current of <i>11½</i>	Amperes
E		lights each of	candle power requiring a total current of	Amperes
<i>2</i>	<i>Mast head light with</i>	<i>1</i> lamps each of <i>32</i>	candle power requiring a total current of <i>2</i>	Amperes
<i>2</i>	<i>Side light with</i>	<i>1</i> lamps each of <i>32</i>	candle power requiring a total current of <i>2</i>	Amperes
<i>4</i>	<i>Cargo lights of</i>	<i>6-16</i>	candle power, whether incandescent or arc lights. <i>Incandescent</i>	

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

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

DESCRIPTION OF CABLES.

Main cable carrying *41* Amperes, comprised of *19* wires, each *14* L.S.G. diameter, *.00372* square inches total sectional area
 Branch cables carrying *9* Amperes, comprised of *7* wires, each *20* L.S.G. diameter, *.007* square inches total sectional area
 Branch cables carrying *13½* Amperes, comprised of *7* wires, each *20* L.S.G. diameter, *"* square inches total sectional area
 Leads to lamps carrying *5* Amperes, comprised of *1* wires, each *18* L.S.G. diameter, *.0018* square inches total sectional area
 Cargo light cables carrying *3½* Amperes, comprised of *7* wires, each *22* L.S.G. diameter, *.00423* square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

*When run in conduit the cables are insulated with vulcanised india rubber then tapes. Braided & compounded overall 600 megohm grade. These cables are not run in tubing. They are insulated as above and lead covered 600 megohm grade. Joints in cables, how made, insulated, and protected *Soldered & Thoroughly Taped**

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*

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 *Lubing & 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 in tubing

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

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

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

How are cables carried through beams Bushes through bulkheads, &c. Flanges

How are cables carried through decks Iron deck tubes

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

If so, how are they protected Tubing

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

If so, how are the lamp fittings and cable terminals specially protected ✓

Where are the main switches and cut outs for these lights fitted On Lintellboard in Engine Room

If in the spaces, how are they specially protected Jboxes in Deckwood Boxes

Are any switches or cut outs fitted in bunkers No

Cargo light cables, whether portable or permanently fixed Portable How fixed ✓

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 both supplied with a voltmeter and also an amperemeter, fixed on main Lintellboard in Engine Room

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 98 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.

Messrs. Siemens Bros. Dynamo Works Electrical Engineers Date Sept 1st 1908

COMPASSES.

Distance between dynamo or electric motors and standard compass about 40 feet

Distance between dynamo or electric motors and steering compass 60

The nearest cables to the compasses are as follows:—

Cables carrying	Amperes	feet from standard compass	feet from steering compass
2 A cables carrying <u>1/2</u>	<u>connects to lamp holder in compass head</u>	<u>✓</u>	
A cable carrying		feet from standard compass	feet from steering compass
A cable carrying		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 lie degrees on lie course in the case of the standard compass and lie degrees on lie course in the case of the steering compass.

Per Pro THE BLYTH SHIPBUILDING & DRY DOCK CO. LD

Builder's Signature. Date

GENERAL REMARKS.

This installation has, as far as can be seen, been fitted in accordance with the Rules & Circulars of this Society

G. A. Dryden Joyce

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

Committee's Minute

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

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