

THUR, 2 FEB 1899

Received at London Office

18

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 37815

Port of *Newcastle-on-Tyne* Date of First Survey *4 Jan/99* Date of Last Survey *24 Jan/99* No. of Visits *2*
 No. in Reg. Book on the Iron or Steel *"Politician"* Port belonging to *Liverpool*
 Built at *Wallaseid* By whom *Swan & Hunter Ltd* When built *1898/9*
 Owners *J. & J. Harrison* Owners' Address *Mercy Chambers, Liverpool*
 Yard No. *240* Electric Light Installation fitted by *W. H. Allen Son & Co.* When fitted *1898/9*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One single cylinder engine direct coupled to 1 pole dynamo, the whole mounted on cast iron baseplate.
 Capacity of Dynamo *100* Amperes at *62* Volts, whether continuous or alternating current *continuous*
 Where is Dynamo fixed *in engine room at starting platform*
 Position of Main Switch Board *near dynamo having switches to groups three* of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each *one at starting platform in engine room for lights in machinery spaces & poop; one 2-way switch in bridge wheelhouse for projector & arc lamps.*
 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*
 Total number of lights provided for *100* arranged in the following groups:—
 A *32* lights each of *16* candle power requiring a total current of *32* Amperes
 B *26* lights each of *16* candle power requiring a total current of *26* Amperes
 C *39* lights each of *16* candle power requiring a total current of *39* Amperes
 D lights each of candle power requiring a total current of Amperes
 E lights each of candle power requiring a total current of Amperes
 1 Mast head light with 1 lamp each of *32* candle power requiring a total current of *2* Amperes
 2 Side lights with 1 lamp each of *32* candle power requiring a total current of *4* Amperes
 6 Cargo lights of *96* candle power, whether incandescent or arc lights *incandescent 25 amp. arc lamps.*
 If arc lights, what protection is provided against fire, sparks, &c. *they are completely enclosed in glazed lanterns, with wire netting externally.*
 Where are the switches controlling the masthead and side lights placed *in bridge wheelhouse*

DESCRIPTION OF CABLES.

Main cable carrying *100* Amperes, comprised of *19* wires, each *14* L.S.G. diameter, *.095* square inches total sectional area
 Branch cables carrying *32* Amperes, comprised of *19* wires, each *18* L.S.G. diameter, *.034* square inches total sectional area
 Branch cables carrying *4* Amperes, comprised of *7* wires, each *22* L.S.G. diameter, *.004* square inches total sectional area
 Leads to lamps carrying *1* Ampere, comprised of *1* wire, each *16* L.S.G. diameter, *.0018* square inches total sectional area
 Cargo light cables carrying *6* Amperes, comprised of *145* wires, each *38* L.S.G. diameter, *.003* square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

pure & vulcanized rubber, I.R. proofed tape, & either braided, lead covered & armoured or both armoured & braided.

Joints in cables, how made, insulated, and protected *joints made in the usual manner & soldered with resin then insulated with felt tape, pure I.R. tape, ozokerite tape & finally varnished*

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 *except in upper cargo*

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 strong wood casing and along open deck fore & aft lead cov. & armoured & braided clipped to bulwarks*

W300-0176

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 & armoured

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *lead covering & armouring*

What special protection has been provided for the cables near boiler casings *lead covering & armouring*

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

How are cables carried through beams *holes bushed with fibre through bulkheads, &c. brass glands fitted*

How are cables carried through decks *by deck pipes bushed with fibre & watertight in deck*

Are any cables run through coal bunkers *no* or cargo spaces *yes* or spaces which may be used for carrying cargo, stores, or baggage *yes*

If so, how are they protected *by strong wood casing*

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 *no*

Cargo light cables, whether portable or permanently fixed *portable* How fixed *by brass sockets & comp*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *through holding down bolt*

How are the returns from the lamps connected to the hull *soldered to 3/8" brass screws*

Are all the joints with the hull in accessible positions *yes*

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 installation is *now* supplied with a voltmeter *but not* an amperemeter, fixed *on switches*

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 *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 W. H. ALLEN, SON & Comp^y

W. H. Allen

Electrical Engineers

Date *25th Jan 1899*

COMPASSES.

Distance between dynamo or electric motors and standard compass *136 feet approx.*

Distance between dynamo or electric motors and steering compass *130 " "*

The nearest cables to the compasses are as follows:— *all double wire d.*

A cable carrying	<i>6</i>	Amperes	<i>9</i>	feet from standard compass	<i>6</i>	feet from steering compass
A cable carrying	<i>53</i>	Amperes	<i>9</i>	feet from standard compass	<i>6</i>	feet from steering compass
A cable carrying	<i>17</i>	Amperes	<i>16</i>	feet from standard compass	<i>11</i>	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 *any* course in the case of the standard compass and *nil* degrees on *any* course in the case of the steering compass.

For O. S. SWAN & HUNTER, LIMITED.

O. S. Swan

Builder's Signature.

Date *25th Jan 99*

GENERAL REMARKS.

This installation has been fitted in accordance with the Rules & found satisfactory

Robert Haig

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

Committee's Minute

This installation appears to be fitted in accordance with the Rules