

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 17720

Port of *Glasgow* Date of First Survey Date of Last Survey No. of Visits
 No. in Reg. Book on the *Iron or Steel* *Steel SS. "Custodian"* Port belonging to *Liverpool*
 Built at *Glasgow* By whom *C Connell & Co.* When built *1900*
 Owners _____ Owners' Address _____
 Yard No. *82* Electric Light Installation fitted by *W. H. Allen Son & Co* When fitted *1900*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Dynamo Compound Wound, Coupled direct to a Vertical Engine, Single Cylinder

Capacity of Dynamo *130* Amperes at *62* Volts, whether continuous or alternating current *Continuous*

Where is Dynamo fixed *Engine room bottom platform Starboard side*

Position of Main Switch Board *Thrust recess* 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 _____

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 _____

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 ~~*282*~~ *154* arranged in the following groups:—

A	<i>Night Forward</i>	<i>38</i> lights each of	<i>16</i>	candle power requiring a total current of	<i>38</i>	Amperes
B	<i>" aft</i>	<i>57</i> lights each of	"	candle power requiring a total current of	<i>57</i>	Amperes
C		lights each of		candle power requiring a total current of		Amperes
D		lights each of		candle power requiring a total current of		Amperes
E	<i>Ordinary forward</i>	<i>14</i> lights each of	<i>16</i>	candle power requiring a total current of	<i>14</i>	Amperes
	<i>" aft</i>	<i>48</i> lights each of	"	candle power requiring a total current of	<i>48</i>	Amperes
	Mast head light with	lamps each of		candle power requiring a total current of		Amperes
	Side light with	lamps each of		candle power requiring a total current of		Amperes
	Cargo lights of			candle power, whether incandescent or arc lights		

If arc lights, what protection is provided against fire, sparks, &c. _____

Where are the switches controlling the masthead and side lights placed _____

DESCRIPTION OF CABLES.

Main cable carrying	<i>130</i> Amperes, comprised of	<i>37</i> wires, each	<i>16</i> L.S.G. diameter,	<i>119</i> square inches total sectional area
Branch cables carrying	<i>43</i> Amperes, comprised of	<i>19</i> wires, each	<i>17</i> L.S.G. diameter,	<i>0477</i> square inches total sectional area
Branch cables carrying	<i>34</i> Amperes, comprised of	<i>19</i> wires, each	<i>18</i> L.S.G. diameter,	<i>0351</i> square inches total sectional area
Leads to lamps carrying	<i>1</i> Amperes, comprised of	<i>1</i> wires, each	<i>16</i> L.S.G. diameter,	<i>0032</i> square inches total sectional area
Cargo light cables carrying	Amperes, comprised of	wires, each	L.S.G. diameter,	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

as described on accompanying reports

Joints in cables, how made, insulated, and protected *Spliced & soldered then re-insulated with Felt Tape several layers of Rubber Tape, Waterproof Tape & 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 *No joints in Bunkers*

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 *Fore & Aft thro' the Tween Decks, Armoured Cables fixed to wood battens with Galv'd Iron Clips.*



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *yes while in A M Service*

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

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 *Armoured*

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

How are cables carried through beams *in Fibre Ferrules* through bulkheads, &c. *Fibre Ferrules*

How are cables carried through decks *Galv'd Iron pipes bushed with Fibre*

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 *Armoured*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *Baggage spaces only*

If so, how are the lamp fittings and cable terminals specially protected *Cast Brass + Iron guards*

Where are the main switches and cut outs for these lights fitted *in Engine room*

If in the spaces, how are they specially protected *Branch fuses in strong lock fast Boxes*

Are any switches or cut outs fitted in bunkers *no*

Cargo light cables, whether portable or permanently fixed _____ How fixed _____

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *Brass socket on Dynamo Pole piece*

How are the returns from the lamps connected to the hull *By 3/8" Brass Screw*

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 _____ supplied with a voltmeter and *two* _____ amperemeters fixed *on Switch-board*

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 & Compy*
J. Kempster

Electrical Engineers

Date *21/3. 1900*

COMPASSES.

Distance between dynamo or electric motors and standard compass *160 Feet*

Distance between dynamo or electric motors and steering compass *160 Feet*

The nearest cables to the compasses are as follows:—

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 *Every* course in the case of the standard compass and *nil* degrees on *Every* course in the case of the steering compass.

Charles Connell H.
H. Connell

Builder's Signature.

Date *7th April 1900*

GENERAL REMARKS.

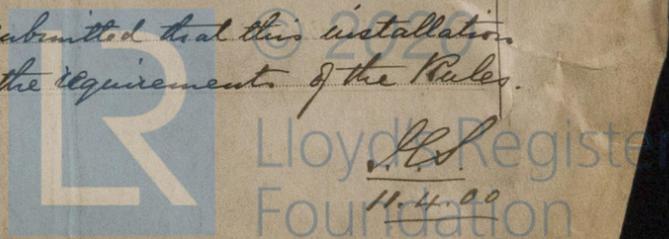
This portion of the installation has been fitted for use while the vessel is employed as a transport for troops. It is similar in character to the permanent installation.

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

Committee's Minute

Already posted

It is submitted that this installation meets the requirements of the Rules.



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 12.