

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 11941

Port of *Greenock* Date of First Survey *30 Dec 1897* Date of Last Survey *25 Feb 1898* No. of Visits *20*
No. in Reg. Book *37* on the *Iron or Steel* *screw Steamer "Beveric"* Port belonging to *Glasgow*
Built at *Port Glasgow* By whom *Russell & Co* When built *1898*
Owners *Steam Ship Beveric Co. (Limd)* Owners Address *102 Hope Street Glasgow*
Yard No. *412* Electric Light Installation fitted by *A Hunter & Jack* When fitted *July 1898*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Electric Construction Co's dynamo & Robey vertical engine

Capacity of Dynamo *85* Amperes at *60* Volts, whether continuous or alternating current *continuous*

Where is Dynamo fixed *Engine Room*

Position of Main Switch Board *Engine room bulkhead* having switches to groups *(five)* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *none*

If cut outs are fitted on main switch board to the cables of main circuit *yes* and on each auxiliary switch boards to the cables of auxiliary circuits *none* and at each position where a cable is branched or reduced in size *reduction* and to each lamp circuit *yes*

If cessel 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 *single wire*

Are the cut outs of non-oxidizable metal *tin free wire* and constructed to fuse at an excess of *100* per cent over the normal current

Are all cut outs fitted in easily accessible positions *distribution boxes* Are the fuses of standard dimensions *20.18.16.15.5* 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 *(porcelain)*

Total number of lights provided for *87* arranged in the following groups:—

A Forecastle	16 lights each of 12-16 cp & 4-8 cp	candle power requiring a total current of	<i>14½</i>	Amperes
B Engineers	10 lights each of 8- " & 2- " " "	candle power requiring a total current of	<i>9</i>	Amperes
C Chart room &c	14 lights each of 12- " & 2- " " "	candle power requiring a total current of	<i>13½</i>	Amperes
D Gallery	2 lights each of 2- " " "	candle power requiring a total current of	<i>2</i>	Amperes
E Engine room &c	19 lights each of 19- " " "	candle power requiring a total current of	<i>19</i>	Amperes
1 Mast head light with	2 lamps each of 16 cp	candle power requiring a total current of	<i>2</i>	Amperes
2 Side light with	2 lamps each of - " " "	candle power requiring a total current of	<i>4</i>	Amperes
4 Cargo lights of each	5- 16 c.p.	candle power, whether incandescent or arc lights	<i>20</i>	
			<i>84</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 *at distribution boxes under lock & key*

DESCRIPTION OF CABLES.

Main cable carrying *84* Amperes, comprised of *37* wires, each *14* L.S.G. diameter, *.19* square inches total sectional area
Branch cables carrying *14½* Amperes, comprised of *7* wires, each *17* L.S.G. diameter, *.017* square inches total sectional area
2 Branch cables carrying *9 & 8* Amperes, comprised of *7* wires, each *18* L.S.G. diameter, *.012* square inches total sectional area
Leads to lamps carrying *13½* Amperes, comprised of *7* wires, each *17* L.S.G. diameter, *.017* square inches total sectional area
2 Cargo light cables carrying *20 & 19* Amperes, comprised of *7* wires, each *16* L.S.G. diameter, *.022* square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Insulated pure & vulcanizing rubber, then taped, the whole thoroughly vulcanized together, then covered with warps & strong patent binding well served with preservative & weather resisting compound
Joints in cables, how made, insulated, and protected *Insulation resistance 1000 megohms per mile*
no joints

Are all the joints of cables thoroughly soldered, resin only having been used as a flux *—* 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 *—*

Are there any joints in or branches from the cable leading from dynamo to main switch board *—*

How are the cables led through the ship, and how protected *Iron pipes in Engine room Tunnel, Stoker's Steering Gear Fiddley, other parts casing with heavy cover, & in bunkers iron covers*

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 *pipes (Iron)*

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

What special protection has been provided for the cables near boiler casings *Iron pipes*

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

How are cables carried through beams *Hard wood & vulcanite plugs through bulkheads, &c. Brass watertight glands and iron tubes.*

How are cables carried through decks *Deck pipes with insertion rubber washers*

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

If so, how are they protected *Bunkers casing with iron cover, Cargo space with wood casing*

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

If so, how are the lamp fittings and cable terminals specially protected *heavy metal cover*

Where are the main switches and cut outs for these lights fitted *at distribution boxes on deck above*

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 *cables fixed, & piece of flexible to lamp* How fixed *Tapped & screwed to beam*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *Large brass socket screwed to steel*

How are the returns from the lamps connected to the hull *3/8" Brass tapped studs*

Are all the joints with the hull in accessible positions *close to casing & all to sight*

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 *fitted* supplied with a voltmeter and *no* an amperemeter, fixed *Voltmeter*

fixed on main switchboard.

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 *1000* 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.

Hunter & Jack

Electrical Engineers

Date *25th July/98*

COMPASSES.

Distance between dynamo or electric motors and standard compass *47 feet*

Distance between dynamo or electric motors and steering compass *about 55 feet*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>one</i>	Amperes	<i>17 feet</i> feet from standard compass	<i>25 feet</i> feet from steering compass
A cable carrying	<i>Two</i>	Amperes	<i>17 feet</i> feet from standard compass	<i>25 feet</i> feet from steering compass
A cable carrying		Amperes		

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 *no deviation* degrees on course in the case of the standard compass and *no deviation* degrees on course in the case of the steering compass.

Russell
Mr. G. Taylor

Builder's Signature

Date *26th Feb. 1898.*

GENERAL REMARKS.

The Electric light installation has been fitted in this vessel under our inspection and to our satisfaction.

A. B. H. Brown, J. J. Howell

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

Committee's Minute

This installation appears to be fitted in accordance with the Rules

Lloyd's Register
Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.