

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 11398

Port of *Aberdeen* Date of First Survey *7th Jan* Date of Last Survey *28th Jan* No. of Visits *7*
 No. in *on* ~~the~~ *Steel* *S. S. "BEGA."* Port belonging to *Fleetwood*
 Reg. Book *Built at* *Aberdeen* By whom *Messrs J. Guthrie & Son S. S. B.* When built *1914*
 Owners *Messrs The New Dock Steam Trawling Co* Owners' Address *Fleetwood*
 Card No. *398* Electric Light Installation fitted by *Messrs Pratt & Keith* When fitted *1914*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Vertical, double acting engine, direct coupled to a four pole semi-enclosed dynamo

Capacity of Dynamo *30* Amperes at *100* Volts, whether continuous or alternating current *Continuous*

Where is Dynamo fixed *Engine room* Whether single or double wire system is used *double*

Position of Main Switch Board *In engine room near dynamo* having switches to groups *—* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *The whole of the lights throughout the vessel except in Cabin, Forecastle & Chartroom are controlled from the main switchboard on which are 14 switches. The Cabin, Forecastle & Chartroom have local switches*

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 *—* 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 *55* arranged in the following groups:—

A	<i>21</i>	lights each of	<i>50</i>	candle power requiring a total current of	<i>12.6</i>	Amperes
B	<i>2</i>	lights each of	<i>50</i>	candle power requiring a total current of	<i>1.6</i>	Amperes
C	<i>9</i>	lights each of	<i>32</i>	candle power requiring a total current of	<i>5.4</i>	Amperes
D	<i>15</i>	lights each of	<i>25</i>	candle power requiring a total current of	<i>6.0</i>	Amperes
E	<i>5</i>	lights each of	<i>16</i>	candle power requiring a total current of	<i>1.5</i>	Amperes
1	Mast head light with	1 lamps each of	<i>25</i>	candle power requiring a total current of	<i>.4</i>	Amperes
2	Side light with	1 lamps each of	<i>25</i>	candle power requiring a total current of	<i>.8</i>	Amperes
One	Cargo lights of	<i>6 lamps each of</i>	<i>32</i>	candle power, whether incandescent or are lights	<i>incandescent</i>	

If are lights, what protection is provided against fire, sparks, &c. *—*

Where are the switches controlling the masthead and side lights placed *On main switch board*

DESCRIPTION OF CABLES.

Main cable carrying *28.3* Amperes, comprised of *7* wires, each *16* L.S.G. diameter, *.02214* square inches total sectional area
 Branch cables carrying *—* Amperes, comprised of *—* wires, each *—* L.S.G. diameter, *—* square inches total sectional area
 Branch cables carrying *—* Amperes, comprised of *—* wires, each *—* L.S.G. diameter, *—* square inches total sectional area
 Leads to lamps carrying *3* Amperes, comprised of *1* wires, each *18* L.S.G. diameter, *.00181* square inches total sectional area
 Cargo light cables carrying *4.8* Amperes, comprised of *64* wires, each *38* L.S.G. diameter, *.02214* square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All wires & cables insulated with pure & vulcanized india rubber; taped & lead covered in Cabin, Forecastle & Chartroom, and in all other parts of the vessel as above with the addition of a coating of tape & armoring of galvanized iron wire
 Joints in cables, how made, insulated, and protected *—*

Are all the joints of cables thoroughly soldered, resin only having been used as a flux *No joints* 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*

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 *Through holes bored in beams bushed with lead cables protected by armoring.*



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *except in coal bunkers.*

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

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

What special protection has been provided for the cables near boiler casings *— " —*

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

How are cables carried through beams *Holes bushed with lead* through bulkheads, &c. *at deck level, holes bushed with lead*

How are cables carried through decks *Galvanized iron tubes, filled in with pitch.*

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

If so, how are they protected *Lead covered and armoured.*

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

If so, how are the lamp fittings and cable terminals specially protected *Strong wire guards*

Where are the main switches and cut outs for these lights fitted *On main switch board*

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 *✓*

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 *—* supplied with a voltmeter and *with* an amperemeter, fixed *on main switch board.*

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 *100* 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.

pro Pratt & Keith. J. Thomson Electrical Engineers Date *5th February 1914*

COMPASSES.

Distance between dynamo ~~or electric motor~~ and standard compass *about 40 feet*

Distance between dynamo ~~or electric motor~~ and steering compass *— " — 46 —*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>2.88</i>	<i>two</i>	<i>one</i>	<i>one</i>
<i>12</i>	<i>—</i>	<i>for compass light</i>	<i>—</i>
<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>

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.

THE JOHN DUTHIE TORRY SHIPBUILDING COY

John Lidder Builder's Signature. Date *12th Feb 1914*

GENERAL REMARKS.

The various parts of the installation were examined while fitting on board. The materials and workmanship are good, and on completion the light was tried under full power and found satisfactory.

It is submitted that this vessel is eligible for

THE RECORD. Elec. light.

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

Committee's Minute



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