

REPORT ON ELECTRIC LIGHTING INSTALLATION.

Port of Belfast

Received at London Office WED. 3 DEC 1893

No. 4316 *

No. in Reg. Book. No. 13 Sup. Name of Ship Ormiston

Built at Belfast

When built 1893-11 m.

Electric Light Installation fitted by W. C. Martin & Co when fitted 1893-11 m.

DESCRIPTION OF DYNAMO AND ENGINE.—

Clydesdale Dynamo by W. C. Martin & Co
Open type engine Link belt drive.

Capacity of Dynamo 100 Amperes at 65 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed In special platform in Engine Room.

LAMPS.—

Is vessel wired on single or double wire system Double Total number of lights 81 ~~87~~ ^{1 search lt & 1 arc-lamp.} 16 ~~22~~ arranged in the following groups:—

A	<u>39</u>	lights each of	<u>Sixteen</u>	candle power requiring a total current of	<u>39</u>	Amperes
B	<u>19</u>	lights each of	<u>Sixteen</u>	candle power requiring a total current of	<u>19</u>	Amperes
C	<u>23</u>	lights each of	<u>Sixteen</u>	candle power requiring a total current of	<u>23</u>	Amperes
D	<u>1 Search light</u>	lights each of	<u>alt 6000</u>	candle power requiring a total current of	<u>50</u>	Amperes
E	<u>1 arc</u>	lights each of	<u>1200</u>	candle power requiring a total current of	<u>10</u>	Amperes

Included in above

1	Mast head light with	2	lamps each of	<u>Sixteen</u>	candle power requiring a total current of	<u>2</u>	Amperes
2	Side light with	2	lamps each of	<u>Sixteen</u>	candle power requiring a total current of	<u>4</u>	Amperes
<u>16</u>	Cargo lights of				candle power, whether incandescent or arc lights		

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

Run at bottom of globe of arc-lamp to catch any pieces of heated carbon falling

SWITCHES AND CUT-OUTS—

Position of Main Switch Board Over dynamo in Engine Room having switches to groups the above 81 lamps of lights as above

Positions of other switch boards and numbers of switches on each

One switch 1 fuse board under fore-castle head for search light.

If ~~cut-outs~~ ^{fuses} are fitted to main circuit Yes. and to each auxiliary circuit Yes.

and at each position where cable is branched or reduced in size Yes.

If vessel is wired on the double wire system are ~~cut-outs~~ ^{fuses} fitted on each wire Yes.

Are the ~~cut-outs~~ ^{fuses} of non-oxidizable metal yes. and constructed to fuse at an excess of 50 per cent over the normal current

Are all ~~cut-outs~~ ^{fuses} fitted in easily accessible positions Yes.

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 Yes.

How are the lamps specially protected in places liable to the accumulation of vapour or gas heavily insulated wires in Galvanized iron pipes

Are all switches and ~~cut-outs~~ ^{fuses} constructed of unflammable materials and fitted on unflammable bases Yes

DESCRIPTION OF CABLES.—

Main cable carrying 39 Amperes, comprised of 19 wires, each 16 legal standard wire gauge diameter

Branch cables carrying 19 Amperes, comprised of 7 wires, each 18 legal standard wire gauge diameter

Branch cables carrying 23 Amperes, comprised of 19 wires, each 18 legal standard wire gauge diameter

Leads to lamps 2-3 Amperes, comprised of 1 wire, each 18 legal standard wire gauge diameter

Cargo light cables carrying 4 Amperes, comprised of 225 wires, each 40 legal standard wire gauge diameter

The copper used has a conductivity of 100 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 750 megohms per statute mile after 24 hours' immersion in seawater

DESCRIPTION OF INSULATION, PROTECTION, &c.—

Wires insulated with pure rubber, vulcanized taped & lapped.

Joints in cables, how made, insulated, and protected

Soldered using resin as flux.

Insulated with 2 layers pure rubber strip, rubber solution, 2 layers prepared preservative tape & the whole coated with pure rubber solution.

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

Yes.

How are cables led throughout the ship

In wood-casing & cover or in Galvanized iron pipes —

What special protection has been provided for the cables in open alleyways

Run in heavy wood casings

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

protected in special heavy wood casings

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

none near

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

run in Galvanized iron pipes heavy wood casings

How are cables carried through decks

in Galvanized iron deck tubes and through bulkheads through hard-wood plugs & bulk

Are any cables run through coal bunkers

no

or cargo spaces

no

If so, how are they protected

Are any lamps fitted in coal bunkers or spaces which may be used for cargo

no but flexibles used for these

If so, how are they specially protected

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

none

TESTING, &c.—

Has the installation been thoroughly tested to its full capacity during a trial of

36

hours' duration

The insulation resistance of the whole installation was not less than

0.123

meg ohms

The installation is

X

supplied with a voltmeter and

marine type

an amperemeter, fixed

on switchboard

General Remarks.—

All work carried out in accordance with Phoenix Fire Office Rules for 1893.

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.

W. B. Martin

& Co.

Electrical Engineers

Date

2nd Dec/93.

COMPASSES.—

Distance between dynamo and standard compass

about 95 feet.

Distance between dynamo and steering compass

ditto

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
10	att 10	6 or 8	12 or 13
2	att 15	3	
1	att 8		

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

not appreciable

on either course in the case of the standard compass

and not appreciable on either course in the case of the steering compass.

J. W. S. M. S.

Builder's Signature

Date

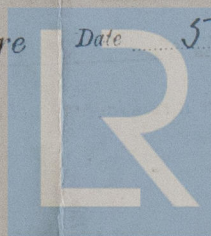
5th December 1893

M. Jones

Surveyor's Signature

Date

5 December 1893



Lloyd's Register Foundation