

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 5643

5628

Port of Belfast Date of First Survey 23/6/03 Date of Last Survey 28/8/03 No. of Visits 13
 No. in Reg. Book SS Star of Ireland on the Iron or Steel Port belonging to Belfast
 Built at Belfast By whom Workman Clark & Co When built 1903
 Owners Star Line Ltd Owners' Address London
 Yard No. 200 Electric Light Installation fitted by Robert Wilson When fitted 1903

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One single cylinder direct acting engine 9x7 complete to radial pole compound wound dynamo.

Capacity of Dynamo 125 Amperes at 100 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Starting Platform

Position of Main Switch Board Star bulkhead having switches to groups 4 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 4 DP and on each auxiliary fuse 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 5.0 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 163 arranged in the following groups:—

| | | | | | | |
|---|-----------|----------------------|------------------------|---|--|----------------------|
| A | <u>36</u> | lights each of | <u>16</u> | candle power requiring a total current of | <u>23</u> | Amperes |
| B | <u>70</u> | lights each of | <u>16</u> | candle power requiring a total current of | <u>44</u> | Amperes |
| C | <u>40</u> | lights each of | <u>16</u> | candle power requiring a total current of | <u>26</u> | Amperes |
| D | <u>19</u> | lights each of | <u>16</u> | candle power requiring a total current of | <u>12</u> | Amperes |
| E | | lights each of | | candle power requiring a total current of | | Amperes |
| | <u>2</u> | Mast head light with | <u>1</u> lamps each of | <u>16</u> | candle power requiring a total current of | <u>1 1/2</u> Amperes |
| | <u>2</u> | Side light with | <u>1</u> lamps each of | <u>16</u> | candle power requiring a total current of | <u>1 1/2</u> Amperes |
| | <u>5</u> | Cargo lights of | <u>4</u> | <u>32</u> | candle power, whether incandescent or arc lights | <u>McAlister</u> |

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

Where are the switches controlling the masthead and side lights placed in wheelhouse forward

DESCRIPTION OF CABLES.

Main cable carrying 108 Amperes, comprised of 19 wires, each 13 L.S.G. diameter, .126 square inches total sectional area
 Branch cables carrying 23 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .025 square inches total sectional area
 Branch cables carrying 26 Amperes, comprised of 7 wires, each 14 L.S.G. diameter, .035 square inches total sectional area
 Leads to lamps carrying .64 Amperes, comprised of 1 wires, each 16 L.S.G. diameter, .003 square inches total sectional area
 Cargo light cables carrying 10 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, .014 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure Rubber & vulcanized tapes

Joints in cables, how made, insulated, and protected

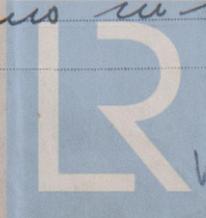
without joints

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 No

How are the cables led through the ship, and how protected

through beams in bulkheads
wire covering



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 *car sheathing*

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 *do*

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

How are cables carried through beams *head frames* through bulkheads, &c. *Glands.*

How are cables carried through decks *Iron pipes*

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

If so, how are they protected *Galv wire*

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 *Water tight boxes*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *Double wire*

How are the returns from the lamps connected to the hull *—*

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

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 *with* an amperemeter, fixed *S 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 *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.

Robert Wilson Electrical Engineers Date *2/10/03*

COMPASSES.

Distance between dynamo or electric motors and standard compass *300 ft.*

Distance between dynamo or electric motors and steering compass

The nearest cables to the compasses are as follows:—

| A cable carrying | Amperes | feet from standard compass | feet from steering compass |
|------------------|--------------|----------------------------|----------------------------|
| <i>1/2</i> | <i>6 ft.</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 *✓* course in the case of the standard compass and *nil* degrees on *✓* course in the case of the steering compass.

PRO WORKMAN, CLARK & CO., LIMITED

Builder's Signature. Date *5th October 1903*

GENERAL REMARKS.

This installation is of good description, and has been fitted in accordance with the Rules.

R. J. Pennington

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

Committee's Minute

It is submitted that this installation appears to meet the Rule requirements



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 13.