

Rpt. 13.

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 5586

Port of Belfast Date of First Survey Feb 4 1903 Date of Last Survey 21 Feb 1903 No. of Visits 4
 No. in Reg. Book 135 on the Iron Steel Port belonging to Liverpool
 Built at Quilley Ferry By whom Liverpool When built 1903
 Owners Birkenhead Corporation Owners' Address Birkenhead When fitted 1903
 Yard No. 52 Electric Light Installation fitted by W. Holmes & Co.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One $6\frac{1}{2} \times 6$ simple eng by "Yule" $13\frac{1}{2}$ HP 100 lbs 325 Revs coupled to one No 13 "Castle" dynamo gramme patt comp & wound by G.A.A. Revs
 Capacity of Dynamo 135 Amperes at 60 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed engine room of lights, &c., as below

Position of Main Switch Board new dynamo having switches to groups A B C D

Positions of auxiliary switch boards and numbers of switches on each 1-2 way section box in Ladies Saloon
1-4 way section box in engine room port side 1-3 way in crew space port
1-6 way in general saloon aft bulkhead port side

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 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 116 arranged in the following groups :-

A Ladies Saloon 18 lights each of	16	candle power requiring a total current of	16.2	Amperes
B Eng room 21 lights each of	16	candle power requiring a total current of	18.9	Amperes
C Muster Saloon 34 lights each of	16	candle power requiring a total current of	28.9	Amperes
D General Saloon 42 lights each of	16	candle power requiring a total current of	37.8	Amperes
E lights each of		candle power requiring a total current of	1.8	Amperes
1 Mast head light with 1 lamp each of	32	candle power requiring a total current of	7.8	Amperes
2 Side lights with 1 lamp each of	32	candle power, whether incandescent or arc lights		
✓ Cargo lights of ✓				

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

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

DESCRIPTION OF CABLES.

Main cable carrying <u>107</u> Amperes, comprised of <u>37</u> wires, each <u>16</u> L.S.G. diameter, <u>.119</u> square inches total sectional area
Branch cables carrying <u>16.2</u> Amperes, comprised of <u>7</u> wires, each <u>17</u> L.S.G. diameter, <u>.0170</u> square inches total sectional area
Branch cables carrying <u>28.9</u> Amperes, comprised of <u>7</u> wires, each <u>15</u> L.S.G. diameter, <u>.0282</u> square inches total sectional area
Leads to lamps carrying <u>.9</u> Amperes, comprised of <u>3</u> wires, each <u>22</u> L.S.G. diameter, <u>.0018</u> square inches total sectional area
Cargo light cables carrying <u>✓</u> Amperes, comprised of <u>✓</u> wires, each <u>✓</u> L.S.G. diameter, <u>✓</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables are insulated with pure rubber vulc'd taped & braided & compounded

Joints in cables, how made, insulated, and protected Spliced soldered & insulated and protected by approved rubber tapes

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

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 Iron pipes & wood casing

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 iron pipes

or of sheen of wood casing for

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

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 } iron pipes

How are cables carried through beams insulating bushes through bulkheads, &c. stuffing boxes

How are cables carried through decks deck tube

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

If so, how are they protected ✓

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 ✓

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 ✓

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 main led

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.

J. H. Holmes & Co

Electrical Engineers

Date 17-4-03

COMPASSES.

Distance between dynamo or electric motors and standard compass about 70 ft -

Distance between dynamo or electric motors and steering compass 60 -

The nearest cables to the compasses are as follows:—

A cable carrying	<u>about 15</u> Amperes	<u>about 15</u> feet from standard compass	<u>5 ft</u> feet from steering compass
A cable carrying	<u>1</u> Amperes	<u>4</u> feet from standard compass	<u>20</u> feet from steering compass
A cable carrying	<u>1</u> Amperes	<u>10</u> feet from standard compass	<u>10</u> 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 all course in the case of the standard compass and Nil degrees on all course in the case of the steering compass.

FOR THE LONDONERBY SHIPBUILDING & ENGINEERING Co. Ltd.

W. H. G. Smith

Builder's Signature.

Date April 20, 1903

GENERAL REMARKS.

Managing Director.

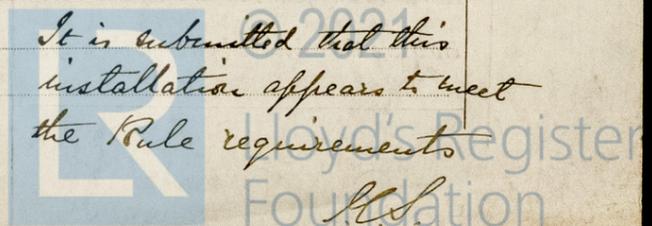
The of good description, and has been fitted in accordance with the Rules.

R. J. Bennett

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



30.14.03

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 11.