

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 22965

Port of Hull Date of First Survey July 8th Date of Last Survey 14th Jan'y No. of Visits 20
 No. in Reg. Book 169 on the Iron or Steel Se. Sr. Darlington Port belonging to Hull
 Built at Hull By whom Messrs Earle's Co. Ltd When built 1910
 Owners Messrs North Eastern Ry. Shp. Co. Ltd Owners' Address Hull
 Yard No. 567 Electric Light Installation fitted by Messrs J. Wilson Sons Co. Ltd When fitted 1910

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Four pole compound wound Dynamo by The Brush Co. Ltd. Coupled direct to a vertical direct acting Engine by Messrs Robey Co. Ltd.

Capacity of Dynamo 120 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Starboard side of Eng. Room Whether single or double wire system is used double

Position of Main Switch Board near dynamo having switches to groups A B C D E of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each. Each light and group of lights provided with switches as necessary.

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		arranged in the following groups:-	
1. <u>Aqueducts</u>	<u>17</u> lights	<u>16</u> c.p.	requiring a total current of <u>8.5</u> Amperes
2. <u>Eng. Room</u>	<u>30</u> lights each of	<u>16</u>	candle power requiring a total current of <u>16</u> Amperes
3. <u>B. Cargo</u>	<u>26</u> lights each of	<u>16</u>	candle power requiring a total current of <u>13</u> Amperes
4. <u>Forecastle and</u>	<u>13</u> lights each of	<u>16</u>	candle power requiring a total current of <u>12.5</u> Amperes
5. <u>Aft Tunnels</u>	<u>12</u> lights each of	<u>16</u>	candle power requiring a total current of <u>18</u> Amperes
6. <u>Saloon</u>	<u>30</u> lights each of	<u>16</u>	candle power requiring a total current of <u>2</u> Amperes
7. <u>Mast head light with</u>	<u>2</u> lamps each of	<u>32</u>	candle power requiring a total current of <u>2</u> Amperes
8. <u>Side lights with</u>	<u>2</u> lamps each of	<u>32</u>	candle power requiring a total current of <u>2</u> Amperes
9. <u>4 side lights</u>	<u>Cargo lights of clusters</u>	<u>16</u>	candle power, whether incandescent or arc lights <u>incandescent</u>

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 Chart house

DESCRIPTION OF CABLES.

<u>Main cable carrying</u>	<u>68</u> Amperes, comprised of <u>19</u> wires, each <u>16</u> L.S.G. diameter, <u>.0612</u> square inches total sectional area
<u>Branch cables carrying</u>	<u>18</u> Amperes, comprised of <u>7</u> wires, each <u>16</u> L.S.G. diameter, <u>.0225</u> square inches total sectional area
<u>Branch cables carrying</u>	<u>12.5</u> Amperes, comprised of <u>7</u> wires, each <u>18</u> L.S.G. diameter, <u>.0225</u> square inches total sectional area
<u>Leads to lamps carrying</u>	<u>.5</u> Amperes, comprised of <u>1</u> wires, each <u>18</u> L.S.G. diameter, <u>.00322</u> square inches total sectional area
<u>Cargo light cables carrying</u>	<u>13</u> Amperes, comprised of <u>7</u> wires, each <u>16</u> L.S.G. diameter, <u>.0225</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

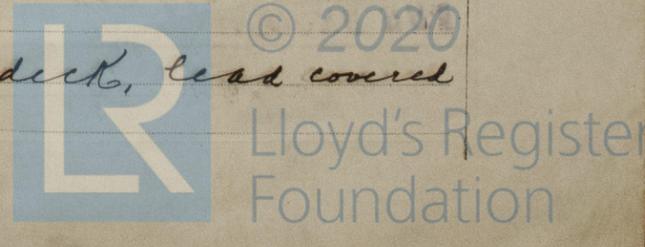
Pure rubber taped, braided, and lead covered in accommodation. Steel armoured where exposed.

Joints in cables, how made, insulated, and protected None

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 Clipped up under deck, lead covered and armoured.



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *No*

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

What special protection has been provided for the cables near galleys or oil lumps 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 *in holes* through bulkheads, &c. *W.I. glands*

How are cables carried through decks *in galvanised iron pipes*

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 *Brass guards, Iron caps*

Where are the main switches and cut outs for these lights fitted *in tween decks*

If in the spaces, how are they specially protected *C.I. boxes*

Are any switches or cut outs fitted in bunkers *No*

Cargo light cables, whether portable or permanently fixed *portable* How fixed *W.I. sockets*

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 *now* supplied with a voltmeter and *also* an amperemeter, fixed *on Main Sw. Box*

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.

W.S. Hidy

Electrical Engineers

Date *19th Dec 1910*

COMPASSES.

Distance between dynamo or electric motors and standard compass *112 feet*

Distance between dynamo or electric motors and steering compass *105 feet*

The nearest cables to the compasses are as follows:—

A cable carrying *3* Amperes *is led into* feet from standard compass *and into* feet from steering compass

A cable carrying *—* Amperes *—* feet from standard compass *—* feet from steering compass

A cable carrying *—* Amperes *—* feet from standard compass *—* 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* courses in the case of the

standard compass and *Nil* degrees on *all* courses in the case of the steering compass.

Builder's Signature. Date

GENERAL REMARKS.

This vessel has been fitted with an Electric Lighting Installation as above, now tested found satisfactory and eligible in my opinion to be

It is submitted that this vessel is eligible for THE RECORD. Elec. Light. JWD 20/11

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

Committee's Minute



Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.