

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 19969

Port of Hull Date of First Survey Feb. 1st Date of Last Survey Apr. 15/08 No. of Visits 12
 No. in 43 on the Iron or Steel S.S. Kirkham Abbey Port belonging to Hull
 Reg. Book 43 Built at Hull By whom Earley & Co. Ltd When built 1908
 Owners Hull & Northfleet S.S. Co. Ltd Owners' Address Hull
 Yard No. 542 Electric Light Installation fitted by Clarke Chapman & Co When fitted 1908

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One single cylinder double acting open vertical Engine direct coupled to a continuous current compound wound dynamo.

Capacity of Dynamo 80 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Engine room. Bottom platform Whether single or double wire system is used double
 Position of Main Switch Board near dynamo having switches to groups A. B. C. D. of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Each light & group of lights provided with switches as required.

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-oxidisable 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, slate & porcelain

Total number of lights provided for 139 arranged in the following groups:—

A	<u>58</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>34.8</u>	Amperes
B	<u>31</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>18.6</u>	Amperes
C	<u>31</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>18.6</u>	Amperes
D	<u>19</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>11.4</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>32</u>	candle power requiring a total current of	<u>2.4</u>	Amperes
<u>2</u>	Side light with	<u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>2.4</u>	Amperes
<u>3</u>	Cargo lights of	<u>6</u> <u>16</u>		candle power, whether incandescent or are lights	<u>Incandescent.</u>	

If are lights, what protection is provided against fire, sparks, &c. none fitted.

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

DESCRIPTION OF CABLES.

Main cable carrying	<u>80</u>	Amperes, comprised of	<u>37</u>	wires, each	<u>16</u>	L.S.G. diameter,	<u>.1168</u>	square inches total sectional area
Branch cables carrying	<u>34</u>	Amperes, comprised of	<u>7</u>	wires, each	<u>14</u>	L.S.G. diameter,	<u>.0345</u>	square inches total sectional area
Branch cables carrying	<u>5</u>	Amperes, comprised of	<u>1</u>	wires, each	<u>14</u>	L.S.G. diameter,	<u>.00502</u>	square inches total sectional area
Leads to lamps carrying	<u>.6</u>	Amperes, comprised of	<u>1</u>	wires, each	<u>18</u>	L.S.G. diameter,	<u>.00181</u>	square inches total sectional area
Cargo light cables carrying	<u>3.6</u>	Amperes, comprised of	<u>176</u>	wires, each	<u>38</u>	L.S.G. diameter,	<u>.00507</u>	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

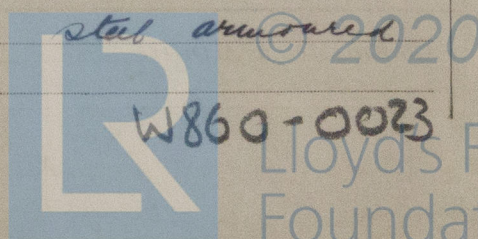
Vulcanized india-rubber taped & braided and lead covered overall, where exposed steel armoured over the lead covering.

Joints in cables, how made, insulated, and protected no joint except mechanical ones

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 yes, 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 Lead covered and steel armoured clipped up to underside of decks



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 and steel armoured*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead covered & armoured*

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

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

How are cables carried through beams *in lead bushes* through bulkheads, &c. *in Bld Glands.*

How are cables carried through decks *in galvanised iron deck tubes*

Are any cables run through coal bunkers *no* 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 steel 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 *C.I. fittings with Cast iron Covers.*

Where are the main switches and cut outs for these lights fitted *in N.C. fitted in Horse Steel Space*

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 *portable* How fixed *to Watertight Connection Boxes*

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

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 *main Switchboard*

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.

For Clarke, Chapman & Co. Ltd

H Walker

Director Electrical Engineers

Date *April 27th 1908*

COMPASSES.

Distance between dynamo or electric motors and standard compass *80 ft.*

Distance between dynamo or electric motors and steering compass *80 "*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>.6</i>	<i>12</i>	<i>6</i>	<i>6</i>
<i>.6</i>	<i>6</i>	<i>12</i>	<i>12</i>
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 *—* degrees on *—* course in the case of the standard compass and *—* degrees on *—* course in the case of the steering compass.

Builder's Signature. Date

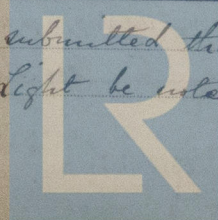
GENERAL REMARKS.

This vessel having been fitted with an Electric Light Installation, is eligible in my opinion to have same noted in Register Book

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

Committee's Minute

It is submitted that the Record Elec. Light be noted in the Reg. Book



Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.