

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 61631

Port of London Date of First Survey _____ Date of Last Survey 7/11/99 No. of Visits _____
 No. in Reg. Book 98 on the ~~Iron or Steel~~ 88" Manxshire Port belonging to Glasgow
 Built at Newcastle By whom Hawthorn Leslie & Co When built 1894-11
 Owners El derbe & Co Ltd Owners' Address London
 Yard No. _____ Electric Light Installation fitted by Thrup Curtis & Co When fitted _____

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One continuous current direct coupled Engine & Dynamo on Combination bed plate

Capacity of Dynamo 200 Amperes at 60 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Top platform Engine room

Position of Main Switch Board Engine room having switches to groups four of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each one in pantry

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 varies with amps 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

Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 180 arranged in the following groups:—

A	<u>45</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>45</u>	Amperes
B	<u>45</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>45</u>	Amperes
C	<u>45</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>45</u>	Amperes
D	<u>45</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>45</u>	Amperes
E		lights each of		candle power requiring a total current of		Amperes

1 Mast head light with 1 lamp each of 32 candle power requiring a total current of 1.8 Amperes

2 Side light with 1 lamps each of 32 candle power requiring a total current of 3.6 Amperes

5 Cargo lights of 7-16 & 5-16 candle power, whether incandescent or are lights incandescent

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

Where are the switches controlling the masthead and side lights placed Chart room

DESCRIPTION OF CABLES.

Main cable carrying 180 Amperes, comprised of 19/11 wires, each .116 L.S.G. diameter, .1166 square inches total sectional area

Branch cables carrying 45 Amperes, comprised of 19/16 wires, each .064 L.S.G. diameter, .0624 square inches total sectional area

Branch cables carrying 45 Amperes, comprised of 19/16 wires, each .064 L.S.G. diameter, .0624 square inches total sectional area

Leads to lamps carrying 1 Amperes, comprised of 1 wires, each .016 L.S.G. diameter, .0032 square inches total sectional area

Cargo light cables carrying 7 Amperes, comprised of 60/30 wires, each .20 L.S.G. diameter, .015625 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All cables are lead covered & armoured run in wood casing Insulation Resistance 1000 Megohms
Branch cables 2000 Megohms

Joints in cables, how made, insulated, and protected By best known methods

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 In wood casing & insulated with Ebonite bushes where led through bulkheads

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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 *none exposed in alleyways*

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

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

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

How are cables carried through beams *through insulated holes* through bulkheads, &c. *Do*

How are cables carried through decks *" " & 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 piping & wood casing*

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 *In cast iron special Bunker fittings*

Where are the main switches and cut outs for these lights fitted *Engine room*

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 *"*

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 *yes* supplied with a voltmeter and *yes* an amperemeter, fixed *Engine room*

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 *1000 Megohms* 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.

Troop Curtis & Co Electrical Engineers Date *20 Sept 1909*

COMPASSES.

Distance between dynamo or electric motors and standard compass

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
A cable carrying	<i>100</i>	<i>10</i>	<i>10</i>
A cable carrying	<i>100</i>	<i>10</i>	<i>10</i>
A cable carrying	<i>100</i>	<i>10</i>	<i>10</i>

Have the compasses been adjusted with and without the electric installation at work at full power

The maximum deviation due to electric currents, etc., was found to be *0* degrees on *0* course in the case of the standard compass and *0* degrees on *0* course in the case of the steering compass.

Builder's Signature. Date

GENERAL REMARKS.

Committee's Minute

APR 1910

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

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.