

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 67590

Port of London Date of First Survey Apr 21 Date of Last Survey May 25 No. of Visits 6  
 No. in Reg. Book 63 sup on the Iron or Steel P. S. Boydell Port belonging to London  
 Built at London By whom James Iron Works Ltd. Co. When built 1905  
 Owners London County Council Owners' Address \_\_\_\_\_  
 Yard No. K83C Electric Light Installation fitted by James Iron Works Ltd. Co. When fitted 1905

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Simple single cylinder engine enclosed type with splash lubrication. Dynamo multipolar type (4 pole) compound wound with former wound armature  
 Capacity of Dynamo 30 Amperes at 100 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed In Engine Room. Starboard side  
 Position of Main Switch Board In Engine Room having switches to groups A, B, C of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each For Engine Room circuit one 8 way board with 8 switches fitted in Engine Room 2 for forward accommodation one, 6 way board with 6 switches fitted in Engine Room 3 for after accommodation one 6 way board with 6 switches fitted in bar in aft saloon  
 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 47 arranged in the following groups:—  
 A 20 lights each of 16 candle power requiring a total current of 12 Amperes  
 B 12 lights each of 16 candle power requiring a total current of 7 Amperes  
 C 15 lights each of 16 candle power requiring a total current of 9 Amperes  
 D \_\_\_\_\_ lights each of \_\_\_\_\_ candle power requiring a total current of \_\_\_\_\_ Amperes  
 E \_\_\_\_\_ lights each of \_\_\_\_\_ candle power requiring a total current of \_\_\_\_\_ Amperes  
 Mast head light with \_\_\_\_\_ lamps each of \_\_\_\_\_ candle power requiring a total current of \_\_\_\_\_ Amperes  
 Side light with \_\_\_\_\_ lamps each of \_\_\_\_\_ candle power requiring a total current of \_\_\_\_\_ Amperes  
2 Cargo lights of 64 candle power, whether incandescent or arc lights incandescent  
 If arc lights, what protection is provided against fire, sparks, &c. \_\_\_\_\_

Where are the switches controlling the masthead and side lights placed \_\_\_\_\_

## DESCRIPTION OF CABLES.

Main cable carrying 30 Amperes, comprised of 19 wires, each 18 L.S.G. diameter, 0.0044 square inches total sectional area  
 Branch cables carrying 12 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, 0.0127 square inches total sectional area  
 Branch cables carrying 9 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, 0.00713 square inches total sectional area  
 Leads to lamps carrying 6 Amperes, comprised of 3 wires, each 22 L.S.G. diameter, 0.00185 square inches total sectional area  
 Cargo light cables carrying 2.5 Amperes, comprised of 108 wires, each 0.006 L.S.G. diameter, \_\_\_\_\_ square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

The whole of the wiring is run in galvanized steel screwed barrel with draw in boxes and inspection pieces. The wires and cables are 2000 megohm grade vulcanized braided and compounded fittings watertight throughout with guards and outer glasses

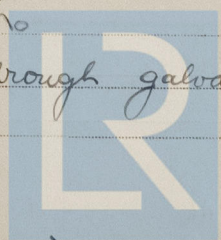
Joints in cables, how made, insulated, and protected \_\_\_\_\_

No joints made the sub-circuits being looped through lamp holder.

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 Cables run under beams through galvanized steel tubing as described above



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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 *Steel barrel and watertight fittings*

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

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

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

How are cables carried through beams *no cables through beams* through bulkheads, &c. *Watertight glands*

How are cables carried through decks *Special deck tube made watertight in deck*

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 *portable* How fixed \_\_\_\_\_

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

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 \_\_\_\_\_ an amperemeter, fixed *on the main switch board*

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 *2000* 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.

**THE THAMES IRON WORKS, SHIPBUILDING & ENGINEERING CO., LIMITED**

*W. H. Flood*

Electrical Engineers

Date *MAY 30 1905*

COMPASSES.

Distance between dynamo or electric motors and standard compass *no standard compass*

Distance between dynamo or electric motors and steering compass *about twelve feet*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>30</i>		<i>1 1/2</i>	<i>1 1/2</i>
<i>12</i>		<i>1 1/2</i>	<i>1 1/2</i>
<i>9</i>		<i>1 1/2</i>	<i>8</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 \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the standard compass and \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the steering compass.

*H. H. Hume*

Builder's Signature.

Date *MAY 30 1905*

GENERAL REMARKS.

*The above is fitted in accordance with the Society's rules, and the workmanship is good.*  
*C. Martell.*

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

Committee's Minute \_\_\_\_\_

*It is submitted that this installation appears to be satisfactory.*

*Lloyd's Register Foundation*

*2.6.05*

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 13.