

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 67.405.

Port of London Date of First Survey Apr 18 Date of Last Survey May 25/05 No. of Visits 6
 No. in Reg. Book 1166 on the Iron or Steel SS. Brunel Port belonging to London
 Built at London By whom Thames Iron Works & Co. Ltd When built 1905
 Owners London County Council Owners' Address _____
 Yard No. _____ Electric Light Installation fitted by The Thames Iron Works & Co. Ltd 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 1 In 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	<u>20</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>12</u>	Amperes
B	<u>12</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>7</u>	Amperes
C	<u>15</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>9</u>	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		Amperes
		Side light with		lamps each of		Amperes
	<u>2</u>	Cargo lights of	<u>64</u>	candle power, whether incandescent or arc lights	<u>incandescent</u>	

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	<u>30</u>	Amperes, comprised of	<u>19</u>	wires, each	<u>18</u>	L.S.G. diameter,	square inches total sectional area
Branch cables carrying	<u>12</u>	Amperes, comprised of	<u>7</u>	wires, each	<u>18</u>	L.S.G. diameter,	square inches total sectional area
Branch cables carrying	<u>9</u>	Amperes, comprised of	<u>7</u>	wires, each	<u>20</u>	L.S.G. diameter,	square inches total sectional area
Leads to lamps carrying	<u>6</u>	Amperes, comprised of	<u>3</u>	wires, each	<u>22</u>	L.S.G. diameter,	square inches total sectional area
Cargo light cables carrying	<u>25</u>	Amperes, comprised of	<u>108</u>	wires, each	<u>0.06</u>	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 and all

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

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
<u>30</u>		<u>12</u>	<u>14</u>
<u>12</u>		<u>10</u>	<u>12</u>
<u>9</u>		<u>10</u>	<u>8</u>

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.

J. H. Hussey

Builder's Signature.

Date MAY 30 1905

GENERAL REMARKS.

The above has been fitted in accordance with the Society's rules. The workmanship is good

Charles E. H.

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

Committee's Minute

TUES. 6 JUN 1905

This installation appears to be fitted in accordance with the Rules

MACHINERY CERTIFICATE
WRITTEN

Lloyd's Register
Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 13.