

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 85042

Port of *London (Spanish)* Date of First Survey *8th April* Date of Last Survey *2 Sept.* No. of Visits
 No. in *on the Iron* *S.S. "Robert Double"* Port belonging to *London*
 Reg. Book *2880* Built at *Goole* By whom *Goole S.B. & Repairing Co.* When built *1918*
 Owners *The Admiralty* Owners' Address *Penmaen, Penmaen Transport S.B. Co.* When fitted *2/9/21*
 Yard No. Electric Light Installation fitted by

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Robey Engine - Dynamo Electromotors Openshaw Manchester
1KW. Compound Wound. 400 Revs No 30419 - 1918

Capacity of Dynamo *10* Amperes at *100* Volts, whether continuous or alternating current *Continuous*

Where is Dynamo fixed *Std Side of Engine Room.* Whether single or double wire system is used *Double Wire*

Position of Main Switch Board *Std Side of Engine Room* having switches to groups *Navigation & General Lighting* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *General Lighting Distribution Box fixed in Mess Room (aft) controlled by a main switch. - Navigation Distribution Box fixed in Wheel House & controlled by a main switch & with a separate switch to each group or individual light.*

If fuses 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 fuses fitted to both flow and return wires or cables of all circuits including lamp circuits *Yes*

Are the fuses of non-oxidizable metal *Yes* and constructed to fuse at an excess of *50* per cent over the normal current

Are all fuses 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 fuses constructed of incombustible materials and fitted on incombustible bases *Yes*

Total number of lights provided for *34* arranged in the following groups: - *Navigation - General Lighting*

Group	Description	Candle Power	Current (Amperes)
A	<i>Navigation Group lights each of 12th No Carbon Filament 4th No</i>	<i>5</i>	<i>6.32</i>
B	<i>General Lighting do lights each of 25th No Carbon Filament 4th No</i>	<i>24</i>	<i>8.08</i>
C	lights each of	candle power requiring a total current of	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
	<i>One Mast head light with one lamp each of 16 CP Carbon</i>	<i>16</i>	<i>6.4</i> included in above
	<i>One Port one</i>	<i>one</i>	<i>6.4</i> Navigation
	<i>One Std Side light with one lamp each of 32 CP do</i>	<i>32</i>	<i>2.8</i> Group Amperes

Cargo lights of candle power, whether incandescent or are lights

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

Where are the switches controlling the masthead and side lights placed *Wheel House*

DESCRIPTION OF CABLES.

Cable Type	Capacity (Amperes)	Wires	W.G. Diameter	Sectional Area (sq. in.)
Main cable carrying	<i>10.3</i>	<i>3</i>	<i>18</i>	<i>.00536</i>
Branch cables carrying	<i>5.4</i>	<i>1</i>	<i>14</i>	<i>.0025</i>
Branch cables carrying				
Leads to lamps carrying				
Cargo light cables carrying				

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All cables are of Admiralty Standard Patterns - Rubber & Cotton Tape covered over Conductor, with Lead casing over all.

Joints in cables, how made, insulated, and protected *No joints made, all branches being made in Terminal Boxes of Admiralty pattern watertight Loop in Boxes & permanent connections*

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances *None made, 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 *None*

How are the cables led through the ship, and how protected *Led in Galvanized Steel Conduit - clipped with Cleats to Bulkheads & where liable to damage covered in with casing.*



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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 *In alleyways, all cables are cased in with Iron casing; all fittings being watertight pattern.*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *All cables clear of sources of heat.*

What special protection has been provided for the cables near boiler casings *Cables run in Conduit as before mentioned.*

What special protection has been provided for the cables in engine room *Protected as before mentioned.*

How are cables carried through beams *Through holes lead bushed through bulkheads, &c. Through watertight glands where necessary.*

How are cables carried through decks *Deck pipes & conduit.*

Are any cables run through coal bunkers *Yes* or cargo spaces *or spaces which may be used for carrying cargo, stores, or baggage*

If so, how are they protected *In conduit & cleated to Deck; bulkheads being made watertight.*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *None*

If so, how are the lamp fittings and cable terminals specially protected *None*

Where are the main switches and fuses for these lights fitted *None*

If in the spaces, how are they specially protected *None*

Are any switches or fuses fitted in bunkers *None*

Cargo light cables, whether portable or permanently fixed *How fixed*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *None*

How are the returns from the lamps connected to the hull *None*

Are all the joints with the hull in accessible positions *None*

Is the installation supplied with a voltmeter *Yes* and with an amperemeter *Yes* *fixed on main switchboard in Engine Room on Starboard Side.*

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas *Yes*

Are any switches, fuses, or joints of cables fitted in the pump room or companion *Yes*

How are the lamps specially protected in places liable to the accumulation of vapour or gas *None*

The copper used is guaranteed to have a conductivity of not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than *3100* megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

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.

SHIPBUILDING CO. LIMITED

Electrical Engineers Date

COMPASSES.

Distance between dynamo or electric motor and standard compass *60 feet (approx)*

Distance between dynamo or electric motor and steering compass *do -*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>24</i>	<i>4</i>	<i>4</i>	<i>4</i>
<i>/</i>	<i>/</i>	<i>/</i>	<i>/</i>
<i>/</i>	<i>/</i>	<i>/</i>	<i>/</i>

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.

The Electric lighting installation examined whilst being fitted in the vessel, tried under working conditions found satisfactory

Elec. Log. 14/12/21

A.B. Farmer
Surveyor to Lloyd's Register of Shipping

Committee's Minute

FRI 16 JAN. 1922



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