

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 5016

Port of *Falmouth* Date of First Survey *1st May* Date of Last Survey *16th May* No. of Visits *14*
 No. in *on the Iron or Steel S.S. "The Mer"* Port belonging to *London*
 Reg. Book *Supplement Falmouth* Built at *Falmouth* By whom *Messrs Cox & Co* When built *1908*
 Yard No. *128* Electric Light Installation fitted by *Group, Curtis & Co* When fitted *1908*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Lisson Patent Enclosed High Speed Engine 570 R.P.M. fitted with Expansion Governor direct coupled to Mawdsleys Patent Zone Dynamo all on one bedplate

Capacity of Dynamo *6 Kilowatts* Amperes at *- 105 -* Volts, whether continuous or alternating current *continuous*

Where is Dynamo fixed *Starboard Side Engine Room (Dynamo Forward Engine aft)*

Position of Main Switch Board *Aft Bulkhead Engine Room* having switches to groups *approx 20* of lights, &c., as below

Positions of auxiliary *D.P. Fuse Boards* boards and numbers of switches on each *1 aft Bulkhead Engine Room Switches*

2 Midship Saloon aft 1 Midship Saloon Forward, both Starboard Side

If cut outs are fitted on main switch board to the cables of main circuit *Yes, D.P.* and on each auxiliary switch boards to the cables of auxiliary circuits *Yes, D.P.* and at each position where a cable is branched or reduced in size *25 Amp* and to each lamp circuit *5 Amp*

If cessel 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 *approx 25* 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 *(Cartridge fuses standard type)*

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

Total number of lights provided for *63* arranged in the following groups :-

A	Engine Room lights each of	16	candle power requiring a total current of	4	Amperes
B	Saloons lights each of	16	candle power requiring a total current of	8	Amperes
C	Shelter Deck lights each of	16	candle power requiring a total current of	7	Amperes
D	4 D. Filament lights each of	32	candle power requiring a total current of	4.8	Amperes
E	lights each of		candle power requiring a total current of		Amperes
	1 Mast head light with <i>double filament</i> lamps each of	32	candle power requiring a total current of	1.2	Amperes
	2 Side light with <i>one double filament</i> lamps each of	32	candle power requiring a total current of	1.2	Amperes
	4 <i>gangway</i> lights of <i>3.32 C.P.</i>		candle power, <i>each</i> whether incandescent or lights	12.32 C.P. lamps	<i>all</i>

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

Where are the switches controlling the masthead and side lights placed *on Steering or Navigation Bridge*

DESCRIPTION OF CABLES.

Main cable carrying *75.6* Amperes, comprised of *19* wires, each *16* L.S.G. diameter, *.320* square inches total sectional area

Branch cables carrying *20.6* Amperes, comprised of *7* wires, each *18* L.S.G. diameter, *.144* square inches total sectional area

Branch cables carrying *20.6* Amperes, comprised of *7* wires, each *18* L.S.G. diameter, *.144* square inches total sectional area

Leads to lamps carrying *6.4* Amperes, comprised of *3* wires, each *20* L.S.G. diameter, *.078* square inches total sectional area

Cargo light cables carrying *6.4* Amperes, comprised of *3* wires, each *20* L.S.G. diameter, *.078* square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables 2.500 Mv grade made by Siemens Bros & Co Woolwich, Insulation Pure & Vulcanized Rubber whole vulcanized together tape braided & compounded, mechanical protection in Engine Room W.I. of Steel Pipe Saloons &c hard Wood Casings

Joints in cables, how made, insulated, and protected *No joints made all work done on loop in and out system*

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 *No. 11 in Bulkhead*

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 *W.I. Iron Pipe in E. Room and on Deck, Wood Casings in Saloons all Pipes and Casings Painted, Enamelled or Galvanized*

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 Conduit Sealed with Gas Whitewash Threads*

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

What special protection has been provided for the cables near boiler casings *Steel Conduit as above (5 feet away from main point)*

What special protection has been provided for the cables in engine room *Steel Conduit as above*

How are cables carried through beams *holes bushed with Fibre* through bulkheads, &c. *Water-tight glands*

How are cables carried through decks *Deck Pipes with Flanges and Red Lead joints*

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 *No*

gangway
Cargo light cables, whether portable or permanently fixed *Permanently* How fixed *on 7/8 Iron Brackets 1/2" gas pipe in Water-tight fittings*

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 *no joints*

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

The copper used is guaranteed to have a conductivity of ~~95~~ *98%* per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than *2.500* 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.

Group. Curtis & Co. London. E. Electrical Engineers Date *May 16th 1908*
P. G. W. Fowler.

COMPASSES.

Distance between dynamo or electric motors and standard compass *No Compasses fitted*

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	Amperes	feet from standard compass	feet from steering compass
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

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.

Cox & Co Builder's Signature Date _____

GENERAL REMARKS.

The materials and workmanship are good, and at the 6 hours trial the lights were bright and efficient

Committee's Minute

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

It is submitted that the Record Rec. light be noted in the Reg. Book.

Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.