

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 29791

Port of Glasgow Date of First Survey 5/12/10 Date of Last Survey 17/2/11 No. of Visits 11
 No. in 64 on the Iron or Steel Trip 1/2 Angora Port belonging to Glasgow
 Reg. Book 64 Sup. Built at Dumbarton By whom Wm Denny Bros When built 1911
 Owners British India Steam Nav Co. Owners' Address London
 Yard No. 925 Electric Light Installation fitted by Denny Bros. When fitted 1911

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two Siemens compound wound, 4 pole, direct current dynamos, Engine by Paul & Co enclosed type

Capacity of Dynamo 420 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Upper platform of Engine Room Whether single or double wire system is used double
 Position of Main Switch Board In Engine Room near Dynamohaving switches to groups 11 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each A (Chart Room) 8. B 2nd Class Vestibule 12. C 2nd Class Vestibule & D 2nd Class Vestibule 10. E in passage shade deck 12. F stair 6. G outside Officers store 10. H Upper Dk 10. J. Engine Room 10
 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 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 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 550 - 3 fans & 5 Motor arranged in the following groups :-

Lights	Fans	Lights	Fans			
A 38	-	F 41	-	lights each of 16	candle power requiring a total current of 24.32	26.24 Amperes
B 54	-	G 12	-	lights each of 16	candle power requiring a total current of 36.48	12.48-46.08 Amperes
C 33	-	H 57	-	lights each of 16	candle power requiring a total current of 21.12	6.72-36.48 Amperes
D 47	-	I 93	-	lights each of 16	candle power requiring a total current of 30.08	14.72-59.52 Amperes
E 64	-	J 48	-	lights each of 16	candle power requiring a total current of 40.96	1.92-30.72 Amperes
2 Mast head lights with 2 lamps each of 32					candle power requiring a total current of 2.56	Amperes
2 Side light with 2 lamps each of 32					candle power requiring a total current of 2.56	Amperes
6 clusters 8 lamps Cargo lights of 16					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 Chart Room

DESCRIPTION OF CABLES.

Main cable carrying 401.84 Amperes, comprised of 61 wires, each No 12 L.S.G. diameter, .5120 square inches total sectional area
 Branch cables carrying 73.52 Amperes, comprised of 19 wires, each " 14 L.S.G. diameter, .09442 square inches total sectional area
 Branch cables carrying 1.68 Amperes, comprised of 7 wires, each " 20 L.S.G. diameter, .007052 square inches total sectional area
 Leads to lamps carrying .64 Amperes, comprised of 3 wires, each " 22 L.S.G. diameter, .001825 square inches total sectional area
 Cargo light cables carrying 5.12 Amperes, comprised of 7 wires, each " 20 L.S.G. diameter, .007052 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Wire armoured in machinery space - Lead covered in passage ways and rooms in wood casings Distribution box system - one fuse per light

Joints in cables, how made, insulated, and protected none

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 Lead covered in passage ways and rooms, wire armoured in machinery and emigrants' spaces

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 *Lead covered*

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 *Armoured*

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

How are cables carried through beams *Fibre bushes* through bulkheads, &c. *Watertight glands*

How are cables carried through decks *18" Deck tubes*

Are any cables run through coal bunkers *NO* or cargo spaces *NO* or spaces which may be used for carrying cargo, stores, or baggage *yes*

If so, how are they protected *Wire Armoured*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, stores, or baggage *yes*

If so, how are the lamp fittings and cable terminals specially protected *Iron deck fittings with hinged iron covers*

Where are the main switches and cut outs for these lights fitted *Upper deck stairways*

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 *✓*

The installation is supplied with a voltmeter and an amperemeter, fixed *Main switch Board*

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 copper used is guaranteed to have a conductivity of *99%* per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than *Branch wires 600* megohms per statute mile after 24 hours' immersion in seawater. *Main " 2500*

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.

Wm Drury & Bros Dumbarton Electrical Engineers

Date *24/3/11*

COMPASSES.

Distance between dynamo or electric motors and standard compass *201 ft.*

Distance between dynamo or electric motors and steering compass *201 ft.*

The nearest cables to the compasses are as follows:—

A cable carrying *64* Amperes *fitted in* feet from standard compass and in 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 *yes*

The maximum deviation due to electric currents, etc., was found to be *nil* degrees on *all* course in the case of the

standard compass and *nil* degrees on *all* course in the case of the steering compass.

Wm Drury & Bros

Builder's Signature.

Date

25th March 1911

GENERAL REMARKS.

This installation has been fitted in accordance with the rules and has been seen working satisfactorily.

mitted that this vessel is eligible for THE RECORD. Elec Light.

Harry Clarke

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

Committee's Minute

Glasgow - 4 APR 1911

Elec Light



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