

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 14720

Port of Glasgow Date of First Survey ✓ Date of Last Survey ✓ No. of Visits ✓
 No. in Reg. Book on the ~~Iron~~ Steel S/S Custodian Port belonging to Liverpool
 Built at Glasgow By whom C. Connell & Co. When built 1900
 Owners' Address _____
 Yard No. 252 Electric Light Installation fitted by W. A. Allen Son & Co. When fitted 1900

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Dynamo Compound wound, coupled direct to Vertical Engine, Single Cylinder
 Capacity of Dynamo 130 Amperes at 62 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed In Engine room Thrust recess Amidships
 Position of Main Switch Board Thrust recess having switches to groups A, B, C, D & E of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each A cast iron Distributing Box with 6 Switches Thrust recess & a Cast Iron Distributing with 4 Switches in Stoke-hold aft Bulk-head
 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 wire 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 289 ~~124~~ arranged in the following groups:—

Group	Description	Number of Lights	Wattage per Light	Total Wattage	Current (Amperes)
A	lights each of				
B	Saloon	23	16	368	2.3
C	Projector Cargo	39	16	624	3.9
D	Engine room	58	16	928	5.8
E	"	17	7	119	1.7
	1 Mast head light with 1 lamps each of	32			2
	2 Side light with 1 lamps each of	32			4
	6 Cargo lights of	30			75 Amperes

If arc lights, what protection is provided against fire, sparks, &c. Copper lanterns with Glass & wire Guards

Where are the switches controlling the masthead and side lights placed In bridge wheel house

DESCRIPTION OF CABLES.

Main cable carrying 130 Amperes, comprised of 37 wires, each 16 L.S.G. diameter, .1214 square inches total sectional area
 Branch cables carrying 35 Amperes, comprised of 19 wires, each 18 L.S.G. diameter, .0351 square inches total sectional area
 Branch cables carrying 29 Amperes, comprised of 7 wires, each 15 L.S.G. diameter, .0291 square inches total sectional area
 Leads to lamps carrying 1 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .0018 square inches total sectional area
 Cargo light cables carrying 5 Amperes, comprised of 145 wires, each 38 L.S.G. diameter, .0040 square inches total sectional area

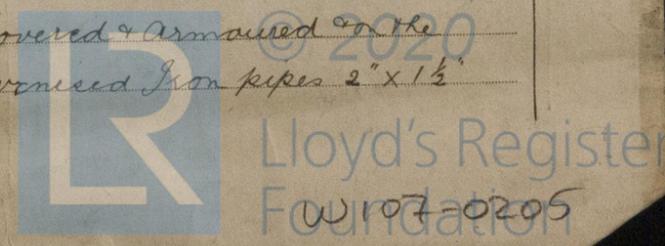
DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure Indian rubber, Vulcanised Indian rubber Rubber coated tape & the whole vulcanised together then braided & preservative compound
wood casings in rooms Galvd Iron pipes along decks lead covered & Armoured in engine room
 Joints in cables, how made, insulated, and protected spliced & soldered then re-insulated with Felt Tape several layers of Rubber Tape orokerite waterproof tape & varnished

Are all the joints of cables thoroughly soldered, resin only having been used as a flux yes 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

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 In engine room lead covered & Armoured on the Upper Deck Lead covered Cables fore & aft Port side in Galvanised Iron pipes 2" x 1 1/2"



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 *Galvd iron pipes*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead covered & armoured*

What special protection has been provided for the cables near boiler casings *Lead covered & armoured*

What special protection has been provided for the cables in engine room *Armoured & Lead covered & armoured*

How are cables carried through beams *in Fibre Ferrules* through bulkheads, &c. *Fibre ferrules*

How are cables carried through decks *Galvd Iron pipes bushed with Fibre*

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 *—*

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 *Brass Socket on Dynamo Pole piece*
Brass 3/8" Ferrules

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 *Brass 3/8" screws*

Are all the joints with the hull in accessible positions *yes*

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 *2* amperemeters fixed on *Switch board*

The copper used is guaranteed to have a conductivity of *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.

For *W. H. ALLEN, SON & Comp^y*
Electric Engineers

Electrical Engineers

Date *26/3/1900*

COMPASSES.

Distance between dynamo or electric motors and standard compass *200 Feet*

Distance between dynamo or electric motors and steering compass *200 "*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>75</i>	Amperes	<i>12</i>	feet from standard compass	<i>8</i>	feet from steering compass	<i>In use with Projector on cargo only</i>
A cable carrying	<i>35</i>	Amperes	<i>12</i>	feet from standard compass	<i>8</i>	feet from steering compass	
A cable carrying	<i>2</i>	Amperes	<i>8</i>	feet from standard compass	<i>5</i>	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 *Every* course in the case of the standard compass and *Nil* degrees on *Every* course in the case of the steering compass.

Charles Connell Ho
C. Connell Builder's Signature. Date *4th April 1900*

GENERAL REMARKS.

The materials, fittings and workmanship are good and the installation when tried worked well

Wm R. Austin

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

Committee's Minute

Already posted



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REPORT FORM No. 13.