

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 15755

Port of Greenock Date of First Survey 29th Dec/09 Date of Last Survey 4th April 1910 No. of Visits 20
 No. in Reg. Book on the Iron or Steel S/S Highland Pude Port belonging to London
 Built at Port Glasgow By whom Russell & Co When built 1910
 Owners H. & W. Nelson L. Owners' Address _____
 Yard No. 602 Electric Light Installation fitted by Jas. Scott Ltd. Boole. When fitted 1910

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Scott's 20 H.P. Dynamo Coupled direct to a Rotap direct Acting Engine running 350 Revs per min.
 Capacity of Dynamo 275 Amperes at 110 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Engine Room Bottom Plat. Whether single or double wire system is used Double
 Position of Main Switch Board Engine Room Stores having switches to groups of 60 to 80 lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Saloon Alleyway Port & 1 switch
Saloon Alleyway Star: 1 switch

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 Porcelain Bridges and constructed to fuse at an excess of 100 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 Either Slate or Porcelain

Total number of lights provided for 458 arranged in the following groups:—

Forward.	36	lights each of	16	candle power requiring a total current of	18	Amperes
A Midship	48	lights each of	16	candle power requiring a total current of	24	Amperes
Saloon Port	74	lights each of	16	candle power requiring a total current of	37	Amperes
B " Star	76	lights each of	16	candle power requiring a total current of	38	Amperes
C Cargo	30	lights each of	16	candle power requiring a total current of	15 also 2 arcs 15	Amperes
Engine Rm.	68	lights each of	16	candle power requiring a total current of	33	Amperes
Eng. "	15	lights each of	16	candle power requiring a total current of	8	Amperes
D aft	48	lights each of	16	candle power requiring a total current of	22	Amperes
E Navigation	4	lights each of	32	candle power requiring a total current of	4	Amperes
	6	lights each of	8	candle power requiring a total current of	2	Amperes
2 Mast head light with 1 lamps each of	32 C.P.	candle power requiring a total current of	2	Amperes		
2 Side lights with 1 lamps each of	32 C.P.	candle power requiring a total current of	2	Amperes		
5 Cargo lights of Cluster of 6	480	candle power, whether incandescent or arc lights	also 2 arcs.			

If arc lights, what protection is provided against fire, sparks, &c. Enclosed with glass lantern
 Where are the switches controlling the masthead and side lights placed In Chart Room

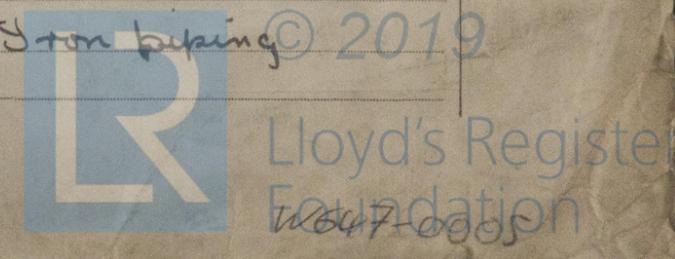
DESCRIPTION OF CABLES.

Main cable carrying 300 Amperes, comprised of 61 wires, each 14 L.S.G. diameter, .3 square inches total sectional area
 Branch cables carrying 35 Amperes, comprised of 19 wires, each 18 L.S.G. diameter, .033 square inches total sectional area
 Branch cables carrying 12 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, .0124 square inches total sectional area
 Leads to lamps carrying 4 Amperes, comprised of 7 wires, each 22 L.S.G. diameter, .00423 square inches total sectional area
 Cargo light cables carrying 25 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .02214 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Insulated with Pure and Vulcanizing rubber, taped and Vulcanized
Cable Braided and compounded.
Lighting circuit wires lead covered.
 Joints in cables, how made, insulated, and protected None. All reductions in Section and Dist. in boxes.

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 bunks, 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 Through Galvanized Iron piping or lead covered on wood grounds.



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 Either Lead Cov: or Vulcanised in Iron pipe ✓
 What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Steel Piping ✓
 What special protection has been provided for the cables near boiler casings Twin cable lead cov: and armoured ✓
 What special protection has been provided for the cables in engine room ditto ✓
 How are cables carried through beams through fibre bushes ✓ through bulkheads, &c. WT doors ✓
 How are cables carried through decks Galv iron deck pipes ✓
 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 Plug connection ✓
 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 None made ✓
 The installation is 110 supplied with a voltmeter and 300 an amperemeter, fixed on switchboard

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 100 ✓ per cent. that of pure copper.
 Insulation of cables is guaranteed to have a resistance of not less than 2,000 ✓ 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.

JAMES SCOTT LIMITED.

Gas Scott
 Director

Electrical Engineers Date _____

COMPASSES.

Distance between dynamo or electric motors and standard compass 100 yards
 Distance between dynamo or electric motors and steering compass 100 "

The nearest cables to the compasses are as follows:—

A cable carrying	<u>6</u>	Amperes	<u>14</u>	feet from standard compass	<u>20</u>	feet from steering compass
A cable carrying	<u>25</u>	Amperes	<u>3</u>	feet from standard compass	<u>-</u>	feet from steering compass
A cable carrying	<u>25</u>	Amperes		feet from standard compass	<u>3</u>	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 _____ course in the case of the standard compass and _____ degrees on _____ course in the case of the steering compass.

Russell Ho

Builder's Signature. Date 18/5/10.

GENERAL REMARKS.

The materials and workmanship are good. The installation was tested and found to work well.

It is submitted that this vessel is eligible for THE RECORD. Elec. light

APR 27/10

Wm. Austin

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

Committee's Minute GLASGOW 31 MAY 1910

Elec. light

W.A.



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 13.—2nd Ed.

J.H.H. 30-5-10.