

Rpt. 13.

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REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 26478

Port of Glasgow Date of First Survey 21st March/08 Date of Last Survey 15th April/08 No. of Visits 9
 No. in Reg. Book 147 on the Iron or Steel San Barcelona Port belonging to Cadiz
 Built at Glasgow By whom Chas. Connell & Co When built 1908
 Owners Vinillos, Izquierdo & Co Owners' Address _____
 Yard No. 320 Electric Light Installation fitted by Haddow & Co When fitted 1908

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Compound Wound Dynamo coupled direct on same bed plate to One Double Acting Open Ported Steam Engine
 Capacity of Dynamo 160 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Engine Room Whether single or double wire system is used double
 Position of Main Switch Board Alongside Dynamo having switches to groups H. B. C. D. E. F. G. of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Pastry - Eight Circuits, 1st Class Accommodation - Twelve Circuits, Forecastle - Eight Circuits, Poop - Ten Circuits, Engine Room - Six, Eight Circuits, Engine Room - Ten Circuits, Chart Room, Eight Circuits.
 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 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 Yes
 Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases Yes
 Total number of lights provided for 257 arranged in the following groups :-
 A 24 lights each of 16 candle power requiring a total current of 16.2 Amperes
 B 51 lights each of 2 candle power requiring a total current of 50.6 Amperes
 C 31 lights each of 1 candle power requiring a total current of 18.6 Amperes
 D 49 lights each of 1 candle power requiring a total current of 29.4 Amperes
 E F. G. 91 lights each of 1 candle power requiring a total current of 54.6 Amperes
2 Mast head light with 1 D. F. lamps each of 1 candle power requiring a total current of 2.4 Amperes
2 Side light with 1 D. F. lamps each of 1 candle power requiring a total current of 2.4 Amperes
 Cargo lights of 5.16 candle power, whether incandescent or arc lights Incandescent
 If arc lights, what protection is provided against fire, sparks, &c. (Included in above)

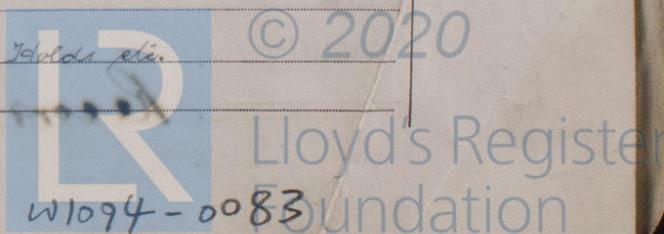
Where are the switches controlling the masthead and side lights placed In Chart Room Companion

DESCRIPTION OF CABLES.

Main cable carrying 160 Amperes, comprised of 34 wires, each 14 L.S.G. diameter, .1825 square inches total sectional area
 Branch cables carrying 24 Amperes, comprised of 4 wires, each 15 L.S.G. diameter, .02522 square inches total sectional area
 Branch cables carrying 51 Amperes, comprised of 19 wires, each 16 L.S.G. diameter, .06029 square inches total sectional area
 Leads to lamps carrying 6 Amperes, comprised of 3 wires, each 20 L.S.G. diameter, .003016 square inches total sectional area
 Cargo light cables carrying 3 Amperes, comprised of 3 wires, each 20 L.S.G. diameter, .003016 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure Rubber, Vulcanized Rubber Tape, braided and compounded over all.
 Joints in cables, how made, insulated, and protected Soldered and Insulated with Pure Para Rubber Vulcanized Tape and Rubber Solution
 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 Lead Covered, Run in Idols etc.



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 Armoured

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Do

What special protection has been provided for the cables near boiler casings Do

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

How are cables carried through beams Vulcanized Fibre Tubes through bulkheads, &c. Stuffing Glands

How are cables carried through decks iron pipes flanged to decks

Are any cables run through coal bunkers No or cargo spaces Yes or spaces which may be used for carrying cargo, stores, or baggage Yes

If so, how are they protected Armoured

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage Yes in spaces

If so, how are the lamp fittings and cable terminals specially protected All Lamps Portable

Where are the main switches and cut outs for these lights fitted Engine Room

If in the spaces, how are they specially protected All Lamps Portable with Detachable Sockets

Are any switches or cut outs fitted in bunkers No

Cargo light cables, whether portable or permanently fixed Portable How fixed Brass Sockets & Plugs

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel Double Fixed

How are the returns from the lamps connected to the hull Do

Are all the joints with the hull in accessible positions Do

The installation is Do supplied with a voltmeter and Do an amperemeter, fixed Keel

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 Do

Are any switches, cut outs, or joints of cables fitted in the pump room or companion Do

How are the lamps specially protected in places liable to the accumulation of vapour or gas Do

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 600 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.

Hadden & Co. Glasgow Electrical Engineers Date April 25th

COMPASSES.

Distance between dynamo or electric motors and standard compass 80 ft.

Distance between dynamo or electric motors and steering compass 90 ft.

The nearest cables to the compasses are as follows:—

A cable carrying	<u>24</u>	Amperes	<u>25</u>	feet from standard compass	<u>24</u>	feet from steering compass
A cable carrying	<u>51</u>	Amperes	<u>40</u>	feet from standard compass	<u>50</u>	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 Keel degrees on Keel course in the case of the standard compass and Keel degrees on Keel course in the case of the steering compass.

C. B. Connell Director. Builder's Signature. Date 28th April 1908

GENERAL REMARKS.

The electric lighting of this vessel has been satisfactorily carried out & has been tried under full power. Similar to S S Cadiz.

H Gardner-Smith
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute Glasgow 5 MAY 1908
Records Elec light

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 1, 1903.