

Rpt. 13.

Received at London Office 19

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 1 on the Iron or Steel SS Barcelona Port belonging to Cadiz
Reg. Book 44 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 Horizontal Dynamo coupled direct on same bed plate to One Double Acting, Open Horizontal, 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, etc. - 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 254 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 15 candle power requiring a total current of 50.6 Amperes
C 31 lights each of 16 candle power requiring a total current of 18.6 Amperes
D 49 lights each of 15 candle power requiring a total current of 39.4 Amperes
E F. G. 91 lights each of 15 candle power requiring a total current of 54.6 Amperes
2 Mast head light with 1 D. F. lamps each of 16 candle power requiring a total current of 2.4 Amperes
2 Side light with 1 D. F. lamps each of 16 candle power requiring a total current of 2.4 Amperes
5.16 Cargo lights of 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, .1835 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, Armoured in holds 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 No

What special protection has been provided for the cables near boiler casings No

What special protection has been provided for the cables in engine room No

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 No

Are all the joints with the hull in accessible positions No

The installation is supplied with a voltmeter and an amperemeter, fixed Keels Switch Box

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 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.

Haddon & 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	Amperes	feet from standard compass	feet from steering compass
<u>24</u>	<u>25</u>	<u>24</u>	<u>24</u>
<u>51</u>	<u>40</u>	<u>50</u>	<u>50</u>
<u>A cable carrying</u>	<u>Amperes</u>	<u>feet from standard compass</u>	<u>feet from steering compass</u>

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 Keel course in the case of the standard compass and Nil degrees on Keel course in the case of the steering compass.

CHARLES CONNELL & CO., Limited.

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
Recons Elec light.



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 1, 1903-4.

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