

TUE. JAN. 21. 1913

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 25758

Port of Hull Date of First Survey Dec 6 Date of Last Survey Dec 20 No. of Visits 7
 No. in Reg. Book 6724 on the Iron or Steel S.C.K. "CAULONIA" Port belonging to Grimsby
 Built at Selling By whom Edwards & Sons When built 1912
 Owners Alliance Ship Repairing Co. Ltd. Owners' Address Grimsby
 Yard No. Electric Light Installation fitted by Mr. Jennings, Grimsby When fitted 1912

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Enclosed engine - Protected type dynamo - 4 pole - horizontal mounted.

Capacity of Dynamo 80 Amperes at 24.5 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed In engine room Whether single or double wire system is used Double

Position of Main Switch Board In engine room having switches to groups 9 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each One in wheel house 4 switches

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 Copper and constructed to fuse at an excess of 20% 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 All same size

Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases Yes

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

A	8	lights each of	16	candle power requiring a total current of	15	Amperes
B	6	lights each of	16	candle power requiring a total current of	12	Amperes
C	4	lights each of	16	candle power requiring a total current of	14	Amperes
D	5	lights each of	16	candle power requiring a total current of	10	Amperes
E	10	lights each of	16	candle power requiring a total current of	16	Amperes

Mast head light with lamps each of candle power requiring a total current of Amperes

Side light with lamps each of candle power requiring a total current of Amperes

2 Cargo lights of 32 candle power, whether incandescent or arc lights Incandescent

If arc lights, what protection is provided against fire, sparks, &c. Yes

Where are the switches controlling the masthead and side lights placed In wheelhouse

DESCRIPTION OF CABLES.

Main cable carrying 80 Amperes, comprised of 19 wires, each 15 L.S.G. diameter, .029 square inches total sectional area

Branch cables carrying 16 Amperes, comprised of 7 wires, each 22 L.S.G. diameter, .0042 square inches total sectional area

Branch cables carrying 6 Amperes, comprised of 1 wires, each 16 L.S.G. diameter, .0032 square inches total sectional area

Leads to lamps carrying 2 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .0018 square inches total sectional area

Cargo light cables carrying 4 Amperes, comprised of 40 wires, each 36 L.S.G. diameter, square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanised India rubber cables, taped, braided & compounded.

Joints in cables, how made, insulated, and protected

Mechanical joints on porcelain

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 Yes

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 steel tubes



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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 *Steel tubes.*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Steel tubes.*

What special protection has been provided for the cables near boiler casings *Steel tubes.*

What special protection has been provided for the cables in engine room *Steel tubes.*

How are cables carried through beams *through bulkheads, &c. insulated light joints*

How are cables carried through decks *Steel tubes with insulated light joints.*

Are any cables run through coal bunkers *Yes* or cargo spaces *Yes* or spaces which may be used for carrying cargo, stores, or baggage *✓*

If so, how are they protected *Steel tubes.*

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 *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 *also* supplied with a voltmeter and *also* an amperemeter, fixed *in engine room*

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 *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.

W. H. Johnson

Electrical Engineers

Date

Jan 14th 1913

COMPASSES.

Distance between dynamo or electric motors and standard compass *✓*

Distance between dynamo or electric motors and steering compass *✓*

The nearest cables to the compasses are as follows:—

A cable carrying <i>14</i> Amperes <i>about 10</i> feet from standard compass	feet from steering compass
A cable carrying <i>-</i> Amperes <i>-</i> feet from standard compass	feet from steering compass
A cable carrying <i>-</i> Amperes <i>-</i> feet from standard compass	feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power

The maximum deviation due to electric currents, etc., was found to be *-* degrees on *-* course in the case of the standard compass and *-* degrees on *-* course in the case of the steering compass.

FOR COCHRANE & SONS LTD.

J. H. Cochrane

Builder's Signature.

Date

January 18th 1913

GENERAL REMARKS.

This installation of electric light has been well fitted. The materials & workmanship are good. It has been tried under full working conditions & found satisfactory.

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

J. H. Cochrane

22/1/13

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

Committee's Minute

