

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 35489

Port of Glasgow Date of First Survey 17/6/15 Date of Last Survey Sept 7/15 No. of Visits 15
 No. in Reg. Book on the Irons Steel 3/4 WHEATSHEAF Port belonging to Cardiff
 Built at Archroan By whom Archroan D.D. & S.B. 88 (1915) When built 1915
 Owners Spillers S/S Co Ltd Owners' Address Berness & Hurstford When fitted 1915
 Yard No. 263 Electric Light Installation fitted by Berness & Hurstford

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Combined Coupler Plant, open type Vertical Engine driven
coupled to Compound wound Dynamo
 Capacity of Dynamo Thirty Amperes at 110 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 near Dynamo having switches to groups 3 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Fuselboards, one Engine Room
one Pantry one Forecastle.

If fuses 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 fuses fitted to both flow and return wires or cables of all circuits including lamp circuits Yes
 Are the fuses of non-oxidizable metal Yes and constructed to fuse at an excess of 25 per cent over the normal current
 Are all fuses 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 fuses constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 61 arranged in the following groups:—
 A 11 lights each of 16 candle power requiring a total current of 6 Amperes
 B 23 lights each of 16 candle power requiring a total current of 12.2 Amperes
 C 22 lights each of 16 candle power requiring a total current of 12.0 Amperes
 D lights each of candle power requiring a total current of Amperes
 E lights each of candle power requiring a total current of Amperes
 1 Mast head light with 1 lamps each of 32 candle power requiring a total current of 1 Amperes
 2 Side light with 1 lamps each of 32 candle power requiring a total current of 1 Amperes
 2 Cargo lights of 80 (each) candle power, whether incandescent or arc lights

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

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

DESCRIPTION OF CABLES.

Main cable carrying 30 Amperes, comprised of 7 wires, each 14 S.W.G. diameter, .035 square inches total sectional area
 Branch cables carrying 6 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .004 square inches total sectional area
 Branch cables carrying 12 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, .012 square inches total sectional area
 Leads to lamps carrying 2 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, .003 square inches total sectional area
 Cargo light cables carrying 2.4 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, .003 square inches total sectional area

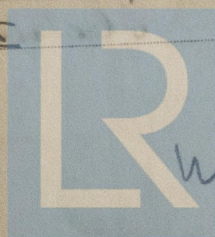
DESCRIPTION OF INSULATION, PROTECTION, ETC.

In accommodation Cables are protected by Pure
& Vulcanized Rubber. Tapes & Braided, & Mercapin served
with Lead Armouring. In Holds etc with Armoured wires
 Joints in cables, how made, insulated, and protected None.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances — 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 None

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 Clippers to deck, cables all iron
armoured going thro' Holds, Engine Room etc



© 2020

Lloyd's Register
 Foundation

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 *Armoured*

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

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

How are cables carried through beams *Lead Ferrules* through bulkheads, &c. *w. glands*

How are cables carried through decks *Iron Deck Tubes 2 ft from deck*

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 & clipped to deck*

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 fuses for these lights fitted */*

If in the spaces, how are they specially protected */*

Are any switches or fuses 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 */*

Is the installation supplied with a voltmeter *Yes*, and with an amperemeter *Yes*, fixed *on Switchboard*

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas *✓*

Are any switches, fuses, 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 not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than *600* megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

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.

Bennett & Curleford

Electrical Engineers

Date *24 Sept 1915*

COMPASSES.

Distance between dynamo or electric motors and standard compass *About 50 ft.*

Distance between dynamo or electric motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	at	feet from steering compass
<i>1/2</i>	<i>Light compass</i>	<i>four</i>	<i>at</i>	<i>four</i>
<i>1/2</i>	<i>Amperes</i>	<i>four</i>	<i>four</i>	<i>four</i>
<i>Amperes</i>	<i>four</i>	<i>four</i>	<i>four</i>	<i>four</i>

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 *✓* degrees on *✓* course in the case of the standard compass and *✓* degrees on *✓* course in the case of the steering compass.

FOR AND ON BEHALF OF THE ARDROSSAN DRY DOCK & SHIPBUILDING COY. LTD.

A. Wilson

Builder's Signature.

Date *24 Sept 1915*

GENERAL REMARKS.

This installation has been fitted in a satisfactory manner, and has been tried under full load and found to work well.

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

W. Dennis Reek

William H. Copeman

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

Committee's Minute *GLASGOW*

2 OCT. 1915

Electric Light



© 2020

Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.