

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 7404

Port of Belfast Date of First Survey 27<sup>th</sup> May Date of Last Survey 10<sup>th</sup> June No. of Visits 3  
 No. in Reg. Book on the Iron Steel S.S. "Reynoe" Port belonging to Newcastle on Tyne  
 Built at Londonderry By whom North of Ireland S. Coy Then built 1914  
 Owner The Kyles Transport Co. Ltd. Owners' Address Holmes Bay Newcastle  
 Yard No. 58 Electric/Light Installation fitted by Holmes Bay Newcastle When fitted 1914

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

On 6 1/2" x 5" open vertical Engine 10 BHP. @ 90 lbs steam press.  
Coupled to a "Holmes" Dynamo. Comp. wound  
 Capacity of Dynamo 55 Amperes at 110 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed in Engine Room Port Side Whether single or double wire system is used double  
 Position of Main Switch Board Near Dynamo having switches to groups A. B. C. D of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each 3 way Section Box Port Passage Forward 12 way DP. dis Box Port Passage  
12 way DP. dis Box in Captain's room, 8 way DP. dis box in Painting, 6 way DP. dis box in Engine room.  
6 way DP. dis box in Pilot house.  
 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 100 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 \_\_\_\_\_ arranged in the following groups:—  
 A 57 lights each of 16 candle power requiring a total current of 26 Amperes  
 B 28 lights each of 16 candle power requiring a total current of 14.2 Amperes  
 C 17 lights each of 16 candle power requiring a total current of 8.8 Amperes  
 D 10 lights each of 16 candle power requiring a total current of 5.1 Amperes  
 E \_\_\_\_\_ lights each of \_\_\_\_\_ candle power requiring a total current of 2.1 Amperes  
2 Mast head light with 1 lamps each of 32 candle power requiring a total current of 2.6 Amperes  
2 Side light with 1 lamps each of \_\_\_\_\_ candle power requiring a total current of \_\_\_\_\_ Amperes  
3 Cargo lights of 6 x 16 candle power, whether incandescent or arc lights Incandescent  
 If arc lights, what protection is provided against fire, sparks, &c. ✓

includes above

Where are the switches controlling the masthead and side lights placed in Pilot House

## DESCRIPTION OF CABLES.

Main cable carrying 55 Amperes, comprised of 19 wires, each 16 S.W.G. diameter, .06 square inches total sectional area  
 Branch cables carrying 26 Amperes, comprised of 7 wires, each 15 S.W.G. diameter, .028 square inches total sectional area  
 Branch cables carrying 14.2 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, .0128 square inches total sectional area  
 Leads to lamps carrying 56 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area  
 Cargo light cables carrying 3.1 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, .003 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Twisted Copper, Raw Para rubber bute rubber, Taped, Braided & Compounded.  
 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 None 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 None  
 How are the cables led through the ship, and how protected Lead Covered Clipped up in Accommodation  
Lead. Covered & Armored in Holds & Machinery Spaces.



**DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.**

Are they in places always accessible Yes, except when holds are full of cargo.

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture Lead covered in casing.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Lead covered in Lead casing

What special protection has been provided for the cables near boiler casings Lead covered & Armoured

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

How are cables carried through beams bushed with fibre through bulkheads, &c. stuffing glands

How are cables carried through decks in pipes flanged & made watertight

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 Lead covered & Armoured.

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage none.

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 none

Cargo light cables, whether portable or permanently fixed Portable How fixed Socket 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 ✓

Is the installation supplied with a voltmeter Yes, and with an amperemeter Yes, fixed on Main Board.

**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.

J. H. Holmes & Co Electrical Engineers Date 16/6/14

**COMPASSES.**

Distance between dynamo or electric motors and standard compass approx 190 feet

Distance between dynamo or electric motors and steering compass approx 185 "

The nearest cables to the compasses are as follows:—

A cable carrying	<u>57</u>	Amperes	<u>inside</u>	feet from standard compass	<u>4</u>	feet from steering compass
A cable carrying	<u>5.2</u>	Amperes	<u>10</u>	feet from standard compass	<u>6</u>	feet from steering compass
A cable carrying	<u>26</u>	Amperes	<u>14</u>	feet from standard compass	<u>9</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 all course in the case of the standard compass and Nil degrees on all course in the case of the steering compass.

**THE NORTH OF IRELAND SHIPBUILDING Co. Ltd.**

Builder's Signature. Date June 19<sup>th</sup> 1914.

**GENERAL REMARKS.**

This installation appears to be of good description and has been fitted in accordance with the Rules

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

J.W.D. 17/14 R. L. T. Beveridge  
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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