

# REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 8365

Port of Belfast Date of First Survey 23<sup>rd</sup> March 20 Date of Last Survey 10<sup>th</sup> June 20 No. of Visits 10  
 No. in 1 on the Iron or Steel S.S. "New Columbia" Port belonging to London  
 Reg. Book Belfast Built at Belfast By whom Harland & Wolff L<sup>td</sup> When built 1920  
 Owners African S.S. Coy L<sup>td</sup> Owners' Address London  
 Yard No. 567 Electric Light Installation fitted by Harland & Wolff L<sup>td</sup> When fitted 1920

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One enclosed forced lubrication, single cylinder engine + dynamo, with cylinder 5 1/2" x 5" stroke speed 520 R.P.M.

Capacity of Dynamo 100 Amperes at 100 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 a, b, c, d, e of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each none

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 100 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 1712 2-1000 CP. arranged in the following groups:—

A Navigation 5 lights each of 32 CP. 4 5 L<sup>ts</sup> or 8 candle power requiring a total current of 9.1 Amperes

B Cabin + Crew 27 lights each of 16 candle power requiring a total current of 19.6 Amperes

C Machinery 39 lights each of 12 Fans " " 27 3 x candle power requiring a total current of 3.6 Amperes

D Cargo 30 lights each of 16 CP. + 20's of 1000 candle power requiring a total current of 10.6 Amperes

E Wireless lights each of candle power requiring a total current of 20.1 Amperes

2 Mast head lights with 1 lamp each of 32 candle power requiring a total current of 15.0 Amperes

2 Side lights with 1 lamp each of 32 candle power requiring a total current of 2.4 Amperes

5 Cargo lights of 96 candle power, whether incandescent or arc lights Incandescent

2 " " " 1000 " " each

If arc lights, what protection is provided against fire, sparks, &c. none

Where are the switches controlling the masthead and side lights placed none

## DESCRIPTION OF CABLES.

Main cable carrying 22.2 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .02201 square inches total sectional area

Branch cables carrying 2.5 Amperes, comprised of 1 wires, each 14 L.S.G. diameter, .005 square inches total sectional area

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

Leads to lamps carrying 1.8 Amperes, comprised of 1 wires, each 17 L.S.G. diameter, .00246 square inches total sectional area

Cargo light cables carrying 2.5 Amperes, comprised of 90 wires, each 36 L.S.G. diameter, .00407 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

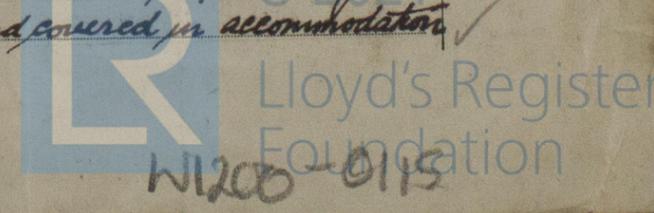
Cables and Branch Wiring exposed are 600 megohm C.M.A. Grade vulcanized India rubber armoured + white braided also 1/4 A.P. 254 lead covered cable.

Joints in cables, how made, insulated, and protected Joints made in porcelain junction Boxes with non protection covers on decks + in Engine Room under cover.

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 Cables clipped direct to Bulkhead + protected by Armouring + Braiding in Engine Room, Galley + Crew's Quarters + lead covered in accommodation.



**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 Run in Iron piping

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Armoured + Braided Cables

What special protection has been provided for the cables near boiler casings Armoured + Braided Cables

What special protection has been provided for the cables in engine room Armoured + Braided Cables

How are cables carried through beams Beams lashed with lead or fibre through bulkheads, &c. Lead or fibre lashed.

How are cables carried through decks In Iron deck Pipes lashed or with Gland.

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

If so, how are they protected Armoured + Braided in Galvanized iron tube.

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 Permanently How fixed A+B Cable clipped to Bulkhead

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 --- supplied with a voltmeter and --- an amperemeter, fixed on Switchboard

**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.

H. W. J. Electrical Engineers Date 20/7/20

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 104 ft. from Dynamo 14 ft. from Wireless Rotary

Distance between dynamo or electric motors and steering compass 109 " " " 14 " " " "

The nearest cables to the compasses are as follows:—

A cable carrying	<u>6.0</u>	Amperes	<u>10</u>	feet from standard compass	<u>5</u>	feet from steering compass
A cable carrying	<u>15.0</u>	Amperes	<u>26</u>	feet from standard compass	<u>22</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 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.

H. W. J. Builder's Signature. Date 22/7/20

**GENERAL REMARKS.** This installation is of good description, and has been fitted in accordance with the Rules

It is submitted that this vessel is eligible for THE RECORD. Pls light R. L. O. Bennett

H. 20/7/20 Surveyor to Lloyd's Register of British and Foreign Shipping.

REPORT FORM No. 13.—974, 54.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

