

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 62102

Port of Newcastle Date of First Survey Aug 1911 Date of Last Survey Mar 30<sup>d</sup> 1912 No. of Visits 6  
 No. in Reg. Book 546 on the ~~Iron~~ or Steel S.S. Queen Louise Port belonging to Glasgow  
 Built at Newcastle By whom Northumberland S.P. Co. When built 1912  
 Owners Dunlop S.S. Co. Ltd. Owners' Address Glasgow  
 Yard No. Electric Light Installation fitted by Jalorim Bros. Co. When fitted 1912

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

8x6 Robey Eng. to work @ 100 lbs steam pressure driven coupled to 6.15 two dynamo 110 Volts 250 R.P.M.

Capacity of Dynamo 55.9 Amperes at 110 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Shutting Platform Whether single or double wire system is used Double  
 Position of Main Switch Board Next dynamo having switches to groups A. B. C. of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each 1x9 Way in 1<sup>st</sup> Glass Pentagon  
1x9 Way in Wheelhouse 1x5 Way in Messroom 1x2 Way in 1<sup>st</sup> Eng's Berth  
1x4 Way in Burpendas Berth 1x6 Way in Engine Room  
 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 110 arranged in the following groups:—

A	<u>Messrooms</u>	<u>52</u> lights each of	<u>16</u> candle power requiring a total current of	<u>26.4</u> Amperes
B	<u>Officers' Cabin</u>	<u>36</u> lights each of	<u>16</u> candle power requiring a total current of	<u>18.3</u> Amperes
C	<u>Eng. Room</u>	<u>22</u> lights each of	<u>16</u> candle power requiring a total current of	<u>12.1</u> 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
	<u>2</u> Mast head light, with	<u>1</u> lamps each, of	<u>32</u> candle power requiring a total current of	<u>2</u> Amperes
	<u>2</u> Side lights, with	<u>1</u> lamps each, of	<u>32</u> candle power requiring a total current of	<u>2</u> Amperes
	<u>5</u> Cargo lights of	<u>6x16</u> candle power, whether incandescent or arc lights		<u>Incandescent</u>

If arc lights, what protection is provided against fire, sparks, &c.  
 Where are the switches controlling the masthead and side lights placed Blackroom

## DESCRIPTION OF CABLES.

Main cable carrying 55.9 Amperes, comprised of 19 wires, each 16 L.S.G. diameter, .06 square inches total sectional area  
 Branch cables carrying 26.4 Amperes, comprised of 7 wires, each 15 L.S.G. diameter, .028 square inches total sectional area  
 Branch cables carrying 18.3 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .022 square inches total sectional area  
 Leads to lamps carrying 2 Amperes, comprised of 1 wires, each L.S.G. diameter, .0018 square inches total sectional area  
 Cargo light cables carrying 3 Amperes, comprised of 1 wires, each L.S.G. diameter, .0032 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Insulated copper wire I.R. Vulk. I.R. taped + Lead covered + Aramid overall in Holds Engine Room

Joints in cables, how made, insulated, and protected None

Are all the joints of cables thoroughly soldered, resin only having been used as a flux None Are all joints in accessible positions, none being made in bunks, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage

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 + Aramid



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

Are they in places always accessible *Generally*

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

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

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

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

How are cables carried through beams *Fibre bushes* through bulkheads, &c. *Drumming boxes*

How are cables carried through decks *Deck tubes*

Are any cables run through coal bunkers *Yes* 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 *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 *No*

Are any switches or cut outs fitted in bunkers *No*

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *W. J. sockets*

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 Main board*

**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 compartment */*

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 *650* 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.

*Galvanic* Electrical Engineers Date *April 10<sup>th</sup> 1912*

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *72 ft*

Distance between dynamo or electric motors and steering compass *64 -*

The nearest cables to the compasses are as follows:—

A cable carrying <i>18</i> Amperes	<i>16</i> feet from standard compass	<i>8</i> feet from steering compass
A cable carrying <i>15</i> Amperes	<i>1</i> feet from standard compass	<i>1</i> feet from steering compass
A cable carrying <i>Amperes</i>	<i>feet</i> from standard compass	<i>feet</i> 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 *✓* course in the case of the standard compass and *Nil* degrees on *✓* course in the case of the steering compass.

For THE NORTHUMBERLAND SHIPBUILDING Co. LTD  
*Richard Garlick* Builder's Signature. Date *10 4-12*

**GENERAL REMARKS.**

*This installation has been fitted in accordance with the rules, and has been tried under full power. In my opinion it is eligible for record of*

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

*Charles Cooper* *Electric Light*  
 Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute TUE. APR. 23 1912

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

