

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 73274

Port of Newcastle on Tyne Date of First Survey 11/3/20 Date of Last Survey 12/4/20 No. of Visits 4  
 No. in Reg. Book 35590 on the Iron or Steel SS. RONDA Port belonging to London  
 Built at S. White Shields By whom Messrs. H. Readhead & Sons When built 1920  
 Owners C. J. Bowring Co Ltd (Managers) Owners' Address \_\_\_\_\_  
 Yard No. 460 Electric Light Installation fitted by Messrs. Clarke Chapman & Co Ltd When fitted 1920

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One single cylinder double acting open type vertical engine direct coupled to a continuous current compound wound dynamo  
 Capacity of Dynamo 120 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 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 Each light & group of lights provided with switches as required

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 50 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 slate & porcelain  
 Total number of lights provided for 154 arranged in the following groups :-  
 A Engine Room 30 lights each of 16 candle power requiring a total current of 16.8 Amperes  
 B Engine Room 51 lights each of 16 candle power requiring a total current of 28.5 Amperes  
 C Cabotage Room 73 lights each of 16 candle power requiring a total current of 40.8 Amperes  
 D Wireless 0 lights each of 0 candle power requiring a total current of 25 Amperes  
 E 0 lights each of 0 candle power requiring a total current of 0 Amperes  
2 Mast head light with 1 lamps each of 32 candle power requiring a total current of 2.2 Amperes  
2 Side light with 1 lamps each of 32 candle power requiring a total current of 2.2 Amperes  
5 Cargo lights of 6 candle power, whether incandescent or arc lights incandescent

If arc lights, what protection is provided against fire, sparks, &c. \_\_\_\_\_  
 Where are the switches controlling the masthead and side lights placed In Wheel House

## DESCRIPTION OF CABLES.

Main cable carrying 120 Amperes, comprised of 37 wires, each 16 S.W.G. diameter, .117 square inches total sectional area  
 Branch cables carrying 40.8 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .022 square inches total sectional area  
 Branch cables carrying 16.8 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, .0125 square inches total sectional area  
 Leads to lamps carrying 1.6 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area  
 Cargo light cables carrying 3.3 Amperes, comprised of 168 wires, each 39 S.W.G. diameter, .0050 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanized india rubber lathed & leaded & lead covered where exposed steel armored cable

Joints in cables, how made, insulated, and protected No joints except mechanical ones

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances Yes 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 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 Lead covered & armored cables run through ledges & clipped to beam with strong galvanized iron clips

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

Are they in places always accessible no

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

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

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 In lead ladder through bulkheads, &c. In WT glands

How are cables carried through decks In galvanized iron deck ladders

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 + shield armoured cables

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 To WT Connection boxes

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel Double wire system

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 in 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.

**FOR CLARKE, CHAPMAN & CO. LTD.**

Electrical Engineers Date May 3<sup>rd</sup> 1920

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 120 ft

Distance between dynamo or electric motors and steering compass 114

The nearest cables to the compasses are as follows:—

A cable carrying	1.1	Amperes	12	feet from standard compass	6	feet from steering compass
A cable carrying	1.1	Amperes	6	feet from standard compass	12	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.

**FOR JOHN READHEAD & SONS, LIMITED,**

John H. Readhead Builder's Signature. Date 17. 5. 20

**GENERAL REMARKS:..... DIRECTOR**

The above installation is in accordance with the Society's Rules. It has been tested and found satisfactory

It is submitted that this vessel is eligible for THE RECORD Elec. light. J.W.D. 20/7/20

W.T. Badger Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

