

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 71075

Port of Newcastle-on-Tyne Date of First Survey May 7th Date of Last Survey Jun 10 No. of Visits 7
 No. in Reg. Book on the Iron or Steel Wat Ballan. Port belonging to London
 Built at Bill Quay, Newcastle. By whom Messrs. Wood & Shanks Ltd. When built 1918
 Owners The Shipping Controller Owners' Address _____
 Card No. 210 Electric Light Installation fitted by Messrs. J. H. Holmes & Co. When fitted 1918.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

6 1/2 x 6' Open Vertical Single Cylindred Engine Capable of giving 16 1/2 H.P. at 100 lb steam pressure.
 Capacity of Dynamo 100 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed On Starling Plate Whether single or double wire system is used Double
 Position of Main Switch Board near Dynamo 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 1 in Starling Plate Box in Starling Plate Room. 1 in Engine Room. 1 in Chart Room. 1 in Store Room. 1 in Foremast. 1 in Main Mast. 1 in Main Mast. 1 in Main Mast. 1 in Main Mast.
 Are fuses 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
 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 121 arranged in the following groups:—

<u>59</u>	lights each of <u>20 Watt</u>	<u>16</u>	candle power requiring a total current of <u>14</u> Amperes
<u>24</u>	lights each of <u>16</u>	<u>32</u>	candle power requiring a total current of <u>13.5</u> Amperes
<u>6</u>	lights each of <u>5</u>	<u>5</u>	candle power requiring a total current of <u>16</u> Amperes
<u>8</u>	lights each of <u>20 Watt</u>	<u>16</u>	candle power requiring a total current of <u>7.0</u> Amperes
<u>4</u>	lights each of <u>16</u>	<u>32</u>	candle power requiring a total current of <u>13.5</u> Amperes
<u>24</u>	lights each of <u>16</u>	<u>32</u>	candle power requiring a total current of <u>1.12</u> Amperes
<u>1</u>	Most head light with <u>1</u> lamp each of <u>32</u>	<u>1</u>	candle power requiring a total current of <u>2.24</u> Amperes
<u>2</u>	Side light with <u>1</u> lamp each of <u>16</u>	<u>2</u>	candle power requiring a total current of <u>1.12</u> Amperes
<u>4</u>	Cargo lights of <u>6x16</u>	<u>24</u>	candle power, whether incandescent or arc lights <u>Incandescent</u>

Are lights, what protection is provided against fire, sparks, &c. Yes

Where are the switches controlling the masthead and side lights placed on the Bridge with master switch in wheelhouse

DESCRIPTION OF CABLES.

Each cable carrying 100 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .011 square inches total sectional area
 Each cables carrying 4.2 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .022 square inches total sectional area
 Each cables carrying 13.5 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .007 square inches total sectional area
 Cables to lamps carrying .2 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area
 Light cables carrying 3.6 Amperes, comprised of 1 wires, each 16 S.W.G. diameter, .003 square inches total sectional area

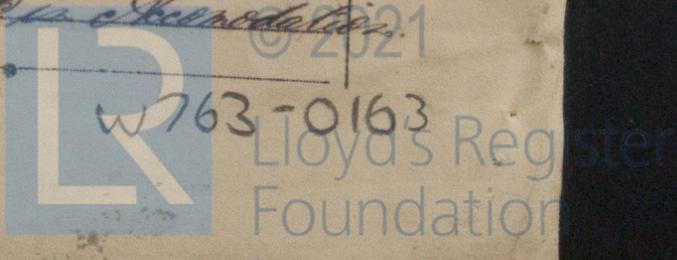
DESCRIPTION OF INSULATION, PROTECTION, ETC.

Are all conductors are fenced off Yes Conductors (stranded) insulated with flex paper rubber & lacquerized rubber, taped, braided, overall.
 Are cables, how made, insulated, and protected None, Looping in system carried out.

Are 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 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

Are the cables led through the ship, and how protected Lead covered, clipped up in wheelhouse, elsewhere sheathed & braided



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible Yes, except in Hold No.
 What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture Arranged & Braided.
 What special protection has been provided for the cables near galley or oil lamps or other sources of heat Arranged & Braided.
 What special protection has been provided for the cables near boiler casings Ditto.
 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. Slapping Glands.
 How are cables carried through decks Lead & Iron tubes flanged & made watertight.
 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 Arranged & Braided.
 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 12.5. Socket Connections.
 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 100 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.

H. H. Thomas, Esq. Electrical Engineers Date 19/6/18

COMPASSES.

Distance between dynamo or electric motors and standard compass Approx 64 ft.
 Distance between dynamo or electric motors and steering compass " " 60 ft.
 The nearest cables to the compasses are as follows:—
 A cable carrying 5p. Amperes inside ~~feet from~~ standard compass inside ~~feet from~~ steering compass
 A cable carrying 5.6. Amperes 12. feet from standard compass 4. feet from steering compass
 A cable carrying 14.5. Amperes 16. feet from standard compass 12. 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 0 degrees on any course in the case of the standard compass and 0 degrees on any course in the case of the steering compass. ppr. J. H. Thomas

WOOD, SKINNER & Co., LIMITED.

Builder's Signature. Date 22nd June 1918.

GENERAL REMARKS.

The above installation has been fitted in a satisfactory manner & in accordance with the Rules.

It is submitted that

this vessel is eligible for
THE RECORD, Elec. light.

J. H. Thomas
J. W. D. 1/7/18.
 TUE. JUL. 2-1918

Thomas Field

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

