

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 44980

Port of Newcastle Date of First Survey Aug 21st 02 Date of Last Survey May 17 03 No. of Visits 4
 No. in on the Iron or Steel SS Lusitania Port belonging to London
 Reg. Book Built at Blyth By whom Blyth S. B. Co When built 1902
 Owners John Hall John & Co Owners' Address 1 New London St London E.C.
 Yard No. 109 Electric Light Installation fitted by Patterson Cooper & Co Ltd When fitted 1902

DESCRIPTION OF DYNAMO, ENGINE, ETC.

6 1/2 B.N.P. vertical engine at 80 lbs per sq in; cylinders 5 1/2 x 5, 350 revs. per min.
direct coupled to 4 pole dynamo, slotted drum wound armature.
 Capacity of Dynamo 42 Amperes at 110 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Engine Room.
 Position of Main Switch Board Engine Room having switches to groups A.B.C. of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each

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 —
 Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of 50 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 43 arranged in the following groups:—

Group	Number of lights	Each of	Candle power	Requiring a total current of	Amperes
A	<u>20</u>	lights each of	<u>8</u>	<u>6</u>	<u>Amperes</u>
B	<u>14</u>	lights each of	<u>8</u>	<u>4.2</u>	<u>Amperes</u>
C	<u>9</u>	lights each of	<u>8</u>	<u>3.7</u>	<u>Amperes</u>
D	<u>—</u>	lights each of	<u>—</u>	<u>—</u>	<u>Amperes</u>
E	<u>—</u>	lights each of	<u>—</u>	<u>—</u>	<u>Amperes</u>
Mast head light with <u>—</u> lamps each of			<u>—</u>	<u>—</u>	<u>Amperes</u>
Side light with <u>—</u> lamps each of			<u>—</u>	<u>—</u>	<u>Amperes</u>
Cargo lights of <u>—</u>			<u>—</u>	<u>—</u>	<u>Amperes</u>

If are lights, what protection is provided against fire, sparks, &c. —

Where are the switches controlling the masthead and side lights placed —

DESCRIPTION OF CABLES.

Main cable carrying 13 Amperes, comprised of 19 wires, each 18 L.S.G. diameter, .0343 square inches total sectional area
 Branch cables carrying 6 Amperes, comprised of 4 wires, each 18 L.S.G. diameter, .0126 square inches total sectional area
 Branch cables carrying 4.2 Amperes, comprised of 4 wires, each 18 L.S.G. diameter, .0126 square inches total sectional area
 Leads to lamps carrying 3 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .0018 square inches total sectional area
 Cargo light cables carrying — Amperes, comprised of — wires, each — L.S.G. diameter, — square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All conductors are of high conductivity (98%) pure copper, vulcanized india-rubber, taped, braided, rosin coated over all, minimum insulation resistance not less than 600 megohms per mile after 24 hours immersion in sea water.
 Joints in cables, how made, insulated, and protected no joints, all connections being looped.

Are all the joints of cables thoroughly soldered, resin only having been used as a flux — 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 —

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 In galvanized iron pipe in Engine Room & bunkers & wood casing in Saloon & 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 In galvanized iron tubes.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat In galvanized iron tubes

What special protection has been provided for the cables near boiler casings In galvanized iron tubes

What special protection has been provided for the cables in engine room In galvanized iron tubes.

How are cables carried through beams Insulating wood plugs through bulkheads, &c. water-tight glands.

How are cables carried through decks Through galvanized iron tubes standing 12" above deck.

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 In galvanized iron tubes.

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 —

Cargo light cables, whether portable or permanently fixed — How fixed —

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel By brass lapped bolts.

How are the returns from the lamps connected to the hull By means of brass screwed bolts & washers.

Are all the joints with the hull in accessible positions Yes.

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 installation is — supplied with a voltmeter and — an amperemeter, fixed on switchboard

The copper used is guaranteed to have a conductivity of 98 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.

FOR PATERSON, COOPER & CO., LIMITED

W. Arthur Ker DIRECTOR

Electrical Engineers

Date

10/11/02

COMPASSES.

Distance between dynamo or electric motors and standard compass 60 feet

Distance between dynamo or electric motors and steering compass 60 feet

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>6</u>	<u>12</u>	<u>12</u>	<u>12</u>
<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

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 BLYTH SHIPBUILDING COMPANY, LTD

Builder's Signature.

Date 21/3/03.

GENERAL REMARKS.

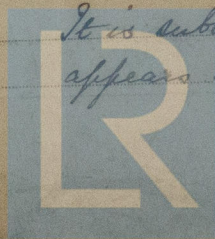
This installation, so far as seen is fitted in a satisfactory manner and in accordance with the rules.

Andrew J Graham.

Surveyor to Lloyd's Register of British and Foreign Shipping

Committee's Minute

It is submitted that this installation appears to be satisfactory.



Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.