

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 34481

Port of **NEWCASTLE-ON-TYNE** Date of First Survey **19th Jan'y** Date of Last Survey **5th Febr'y** No. of Visits **6**
 No. in Reg. Book on the ~~Iron or Steel~~ **S.S. "Devon"** Port belonging to **London**
 Built at **Hebburn** By whom **R.W. Hawthorn Leslie & Co.** When built **1896-7**
 Owners **Federal S. N. Co. Ltd.** Owners Address **London**
 Yard No. **340** Electric Light Installation fitted by **W. J. Robinson & Co. Ltd.** When fitted **6th Feb. 1897**

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1. 14 Gramme compound Dynamo coupled direct to open type automatic governor high speed engine at 280 Revs.
 Capacity of Dynamo **155** Amperes at **60** Volts, whether continuous or alternating current **Continuous**
 Where is Dynamo fixed **Engine Room, starting platform.**
 Position of Main Switch Board **Engine Room** having switches to groups **A, B, C, D** lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each
One distributor in saloon, with 3 switches.

If cut outs are fitted on main switch board to the cables of main circuit **yes** and on each auxiliary switch boards 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 **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 **written instruction**
 Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases **yes, porcelain & stoneware based**

Total number of lights provided for **127** arranged in the following groups:—

A	50 lights each of	16 candle power	requiring a total current of	50 Amperes
B	30 lights each of	16 candle power	requiring a total current of	30 Amperes
C	33 lights each of	16 candle power	requiring a total current of	33 Amperes
D	14 lights each of	16 candle power	requiring a total current of	14 Amperes
E	lights each of		requiring a total current of	Amperes
1	Mast head light with 1 lamps each of	32 candle power	requiring a total current of	2 Amperes
2	Side light with 1 lamps each of	32 candle power	requiring a total current of	4 Amperes
5	Cargo lights of	100 candle power,	whether incandescent or arc lights	Incandescent

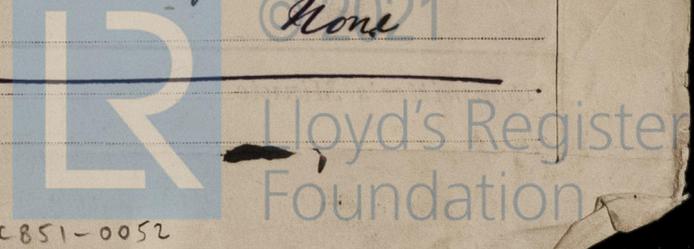
If arc lights, what protection is provided against fire, sparks, &c.
 Where are the switches controlling the masthead and side lights placed **Bridge for side lights, forecastle for masthead.**

DESCRIPTION OF CABLES.

Main cable carrying	155 Amperes, comprised of	27 wires, each	13 L.S.G. diameter,	.246 square inches total sectional area
Branch cables carrying	50 Amperes, comprised of	19 wires, each	16 L.S.G. diameter,	.0612 square inches total sectional area
Branch cables carrying	30 Amperes, comprised of	7 wires, each	14 L.S.G. diameter,	.0352 square inches total sectional area
Leads to lamps carrying	1 Amperes, comprised of	1 wires, each	16 L.S.G. diameter,	.0032 square inches total sectional area
Cable light cables carrying	35 Amperes, comprised of	19 wires, each	16 L.S.G. diameter,	.0612 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Insulated **pure and vulcanizing rubber, then taped the whole thoroughly vulcanized together, then covered with longitudinal wraps and strong braiding covered with protective & weather resisting compound.**
 Joints in cables, how made, insulated, and protected **Running joints soldered with resinous flux, then taped with pure rubber, rubber solution, then black tape to required thickness.**
 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 **None**
 Are there any joints in or branches from the cable leading from dynamo to main switch board
 How are the cables led through the ship, and how protected **In iron piping.**



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 Lead covered wire

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Iron piping & lead covered wire

What special protection has been provided for the cables near boiler casings Iron piping

What special protection has been provided for the cables in engine room Iron piping where required, & wood casing

How are cables carried through beams Insulators through bulkheads, &c.

How are cables carried through decks Water tight iron flanges

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

If so, how are they protected _____

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 _____

Cargo light cables, whether portable or permanently fixed Portable How fixed From distributing braces

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 _____

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 ammeter, fixed near dynamo.

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.

H. J. Robinson & Co. Ltd. Electrical Engineers

Date 10th Feb 1897

COMPASSES.

Distance between dynamo or ~~electrical~~ 30 yards and standard compass

Distance between dynamo or ~~electrical~~ 28 " and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying	<u>2</u>	Amperes	<u>8</u>	feet from standard compass	<u>5</u>	feet from steering compass
A cable carrying	<u>6</u>	Amperes	<u>16</u>	feet from standard compass	<u>12</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 _____

The maximum deviation due to electric currents, etc., was found to be nil degrees on all courses of the standard compass and _____ degrees on _____ course in the case of the steering compass.

FOR R. & W. HAWTHORN, LESLIE & CO., LIMITED,

Builder's Signature [Signature] Date 12/2/97

GENERAL REMARKS.

One bulkhead, entrance to tunnel, fitted with watertight gland, the only one pierced by the Electric wires.
The installation examined & found satisfactory
John H Heck.

Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute _____

This installation appears to be in accordance with the Rules.

[Signature]
 17/2/97

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN

REPORT FORM No. 13

