

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 26782

Port of SUNDERLAND. Date of First Survey 3 Aug. Date of Last Survey 22 Aug. 16 No. of Visits 6
 No. in Reg. Book on the H.M.S. Steel H.M.S. L.S.A. Creosol. Port belonging to
 Built at SUNDERLAND. By whom Messrs Short Bros. Ltd. When built 1916.
 Owners British Admiralty. Owners' Address
 Yard No. 405 Electric Light Installation fitted by Messrs. Sunderland Forge Eng' Coy. Ltd. When fitted 1916.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1. 10 K.V. Combined plant - supplied by Admiralty.

Capacity of Dynamo 100 Amperes at 105 Volts, whether continuous or alternating current continuous.

Where is Dynamo fixed Eng. Rm. Bottom platform, Std. side. Whether single or double wire system is used double.

Position of Main Switch Board close to Dynamo. having switches to groups four of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Wheelhouse - having 7 switches as follows:-

Masthead light - Flashing lamp - Port Bowlight - Starb^d ditto - Anchor light - Stern light and Steering Pedestal.

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 100% 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 -

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases Yes.

Total number of lights provided for 152. arranged in the following groups:-

A Prop. Pumps &c. 51 lights each of 1-50 cp. 43-16 cp. candle power requiring a total current of 37.52 Amperes

B Navigation. 24 lights each of 1-32 cp. 13-16 cp. candle power requiring a total current of 11.02 Amperes

C E.B. Rms. 33 lights each of 1-16 cp. candle power requiring a total current of 18.48 Amperes

D Forward. 44 lights each of 1-50 cp. 2-32 cp. 34-16 candle power requiring a total current of 34.72 Amperes

E lights each of candle power requiring a total current of Amperes

1 Mast head light with 1 lamps each of 16 candle power requiring a total current of 56 Amperes

2 Side light with 1 lamps each of 32 cp. candle power requiring a total current of 1.68 Amperes

2 Cargo lights of each of 8-50 candle power, whether incandescent or arc lights incandescent.

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

2. 10 amp Arc lamps fitted with hexagonal glazed lanterns supplied by Admy.

Where are the switches controlling the masthead and side lights placed Wheelhouse.

DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, "094" square inches total sectional area

Branch cables carrying 37.52 Amperes, comprised of 19 wires, each 17 S.W.G. diameter, "046" square inches total sectional area

Branch cables carrying 11.02 Amperes, comprised of 19 wires, each 20 S.W.G. diameter, "019" square inches total sectional area

Leads to lamps carrying 5 Amperes, comprised of 1 wires, each 17 S.W.G. diameter, "0025" square inches total sectional area

Cargo light cables carrying 15 Amperes, comprised of 19 wires, each 20 S.W.G. diameter, "019" square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

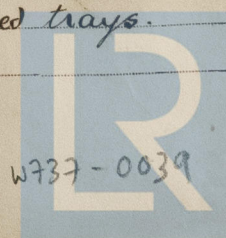
All cables to Admy Spec. & Regts. - tested at Maker's Works.

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

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances - 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 on Special Perforated trays.



© 2021

Lloyd's Register Foundation

W737-0039

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.

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

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 holes bushed with lead. through bulkheads, &c. W.T. Admty Patt. glands

How are cables carried through decks W.T. Admty Deck Tubes.

Are any cables run through coal bunkers No. 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.

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage Yes.

If so, how are the lamp fittings and cable terminals specially protected W.T. Admty Patt. guarded fittings.

Where are the main switches and fuses for these lights fitted In Crew's Acc. Space.

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 —

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 S'Bo.

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 Yes.

Are any switches, fuses, or joints of cables fitted in the pump room or companion No.

How are the lamps specially protected in places liable to the accumulation of vapour or gas Special W.T. Admty Patt. guarded Hgs.

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 Admty Spec. Regts. 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.

P. PRO THE SUNDERLAND FORGE & ENGINEERING CO., LTD.

Electrical Engineers

Date Sep. 20th '16.

COMPASSES.

Distance between dynamo or electric motors and standard compass abt. 155 feet.

Distance between dynamo or electric motors and steering compass " 152 "

The nearest cables to the compasses are as follows:—

Cable carrying	Amperes	Distance from standard compass	Distance from steering compass
A cable carrying <u>11.02</u>	<u>12</u>	<u>7</u> feet from standard compass	<u>7</u> feet from steering compass
A cable carrying <u>.56</u>	<u>6</u>	<u>led into</u> feet from standard compass	<u>led into</u> feet from steering compass
A cable carrying <u>.56</u>	<u>led into</u>	<u>6</u> feet from standard compass	<u>6</u> 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 SHORT BROTHERS, LIMITED.

Builder's Signature. Date 27th Sept. 1916.

GENERAL REMARKS.

The above installation has been fitted in accordance with the requirements, it has been seen running under full power with satisfactory results. In my opinion this vessel is eligible for the award of Elect. Light.

Charles Cooper

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

Committee's Minute TUE. 29 JAN. 1918

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im. 9.14.—Transfer.



© 2021

Lloyd's Register Foundation