

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 29850

Port of Hull Date of First Survey 15-1-17 Date of Last Survey 12-3-17 No. of Visits 28
 No. in Reg. Book on the Iron or Steel of S. Embury & Shiver Port belonging to London
 Built at Hull By whom Messrs. Charles F. G. & Co. Ltd. When built 1917-3
 Owners British Admiralty (Lam & Andrew Esq.) Owners' Address
 Yard No. 614 Electric Light Installation fitted by The Sunderland Forge & Eng. Co. Ltd. When fitted 1917-3

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 26½ KW Combined Plant - supplied by Admiralty

Capacity of Dynamo 250 Amperes at 105 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Eng. Room Sbd side bottom plating Whether single or double wire system is used double
 Position of Main Switch Board close to dynamo having switches to groups eight of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Chartroom - with eight switches
controlling Navigation lights - compasses, telegraph & Morse lamp
 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 No 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 212 arranged in the following groups :-
 1. Saloon etc 50 45 @ 16 c.p. 5 @ 32 c.p. candle power requiring a total current of 30.8
 A2. Eng. Room Aft 58 lights each of 56 @ 16 c.p. 2 @ 32 candle power requiring a total current of 33.6 Amperes
 1. Eng. & Boiler Room 38 all at 16 c.p. candle power requiring a total current of 21.3
 2. Wireless - lights each of - candle power requiring a total current of 25.0 Amperes
 1. Deck & Pump Room 29 5 @ 16 c.p. 24 @ 50 c.p. candle power requiring a total current of 43.0
 2. " " " " 37 lights each of 13 @ 16 c.p. 24 @ 50 candle power requiring a total current of 47.5 Amperes
 D 20" Projector lights each of - candle power requiring a total current of Hired for but not fitted 60 Amperes
 E Spare lights each of - candle power requiring a total current of - Amperes
 2 Mast head light with 1 lamps each of 32 candle power requiring a total current of 2.24 Amperes
 2 Side light with 1 lamps each of 32 candle power requiring a total current of 2.24 Amperes
 Six Cargo lights of eight lights 50 c.p. 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 Chartroom

DESCRIPTION OF CABLES.

Main cable carrying 250 Amperes, comprised of 2/37 wires, each 16 S.W.G. diameter, .334 square inches total sectional area
 Branch cables carrying 33.6 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .022 square inches total sectional area
 Branch cables carrying 47.5 Amperes, comprised of 19 wires, each 18 S.W.G. diameter, .034 square inches total sectional area
 Leads to lamps carrying 3 Amperes, comprised of 7 wires, each 25 S.W.G. diameter, .0022 square inches total sectional area
 Cargo light cables carrying 13.5 Amperes, comprised of 7 wires, each 21½ S.W.G. diameter, .0049 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Mains. Pure & Vule. I.R. - taped - vul., Braided & Compounded
 Machinery & Crew Spaces. ditto Lead covered & Armoured
 Cabin Accommodations. ditto Lead covered.

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 V.I.R. Cable run in pipe



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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 Iron Pipe

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

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 fibre through bulkheads, &c. W. T. Glands

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

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 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 —

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' 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 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 By Gas-tight guarded fittings

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.

P. PER THE SURVEYORS & ENGINEERS
[Signature] Electrical Engineers Date 26th March 1917

COMPASSES.

Distance between dynamo or electric motors and standard compass about 102 feet

Distance between dynamo or electric motors and steering compass about 97 feet

The nearest cables to the compasses are as follows:—

A cable carrying	<u>8.4</u>	Amperes	<u>about 18</u>	feet from standard compass	<u>about 10</u>	feet from steering compass
A cable carrying	<u>.56</u>	Amperes	<u>led into</u>	feet from standard compass	<u>about 7</u>	feet from steering compass
A cable carrying	<u>.56</u>	Amperes	<u>about 7</u>	feet from standard compass	<u>led into</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 any course in the case of the standard compass and nil degrees on any course in the case of the steering compass.

FOR EARLE'S SHIPBUILDING & ENGINEERING CO. LIMITED.
[Signature] Builder's Signature. Date

GENERAL REMARKS.

This vessel has been fitted with an electric light installation as above & the workmanship is good on completion it was tested under full working conditions, the full load being obtained by resistances, & found satisfactory.

It is submitted that this vessel is eligible to THE RECORD. Elec light. JWD 4/4/17 Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute TUE. 4 SEP. 1917 FRI. SEP. 14 1917.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



Im. 914.—Transfer.