

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 25895

Port of Sunderland Date of First Survey Oct 7 Date of Last Survey Oct 21 No. of Visits 4
 No. in on the Iron or Steel S/S "SHABONEE" Port belonging to Sunderland
 Reg. Book Supp 50 Built at Sunderland By whom Sir James Laing & Sons Ltd When built 1913
 Owners Tank Storage & Carriage Co Ltd Owners' Address _____
 Yard No. 043 Electric Light Installation fitted by H.T. Boothroyd Ltd. When fitted 1913

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One "Boothroyd" open type dynamo coupled direct to "Robey's" engine 7" dia x 6" stroke.
 Capacity of Dynamo 75 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed In Engine Room Whether single or double wire system is used Double.
 Position of Main Switch Board Near Dynamo. having switches to groups A.B.C.D (Four) of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Engineers accommodation (4), Chart room (6), Saloon (8), Outside pump room (2) also engine room & fore-castle.
 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-oxidisable metal Yes and constructed to fuse at an excess of 50 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 Yes
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases Yes
 Total number of lights provided for 101 arranged in the following groups:—

A	<u>63</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>31.5</u>	Amperes
B	<u>25</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>12.5</u>	Amperes
C	<u>3</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>1.5</u>	Amperes
D	<u>Siemens Bros) Wireless</u>	lights each of	—	candle power requiring a total current of	<u>22.8</u>	Amperes
E		lights each of		candle power requiring a total current of		Amperes
<u>2</u>	<u>Mast head light with</u>	<u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>1.1</u>	Amperes
<u>2</u>	<u>Side light with</u>	<u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>1.1</u>	Amperes
<u>1</u>	<u>Cargo lights of</u>	<u>6 lights</u>	<u>16 1/2</u>	candle power, whether incandescent or arc lights	<u>Incandescent</u>	

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

Where are the switches controlling the masthead and side lights placed In Chart Room.

DESCRIPTION OF CABLES.

Main cable carrying	<u>73</u>	Amperes, comprised of	<u>19</u>	wires, each	<u>14</u>	S.W.G. diameter, <u>.0937</u> square inches total sectional area
Branch cables carrying	<u>31.5</u>	Amperes, comprised of	<u>7</u>	wires, each	<u>14</u>	S.W.G. diameter, <u>.035</u> square inches total sectional area
Branch cables carrying	<u>25</u>	Amperes, comprised of	<u>7</u>	wires, each	<u>18</u>	S.W.G. diameter, <u>.0125</u> square inches total sectional area
Leads to lamps carrying	<u>1 1/2</u>	Amperes, comprised of	<u>1</u>	wires, each	<u>18</u>	S.W.G. diameter, <u>.0018</u> square inches total sectional area
Cargo light cables carrying	<u>3</u>	Amperes, comprised of	<u>1</u>	wires, each	<u>18</u>	S.W.G. diameter, <u>.0018</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Mains & Sub Mains Vulcanized & Lead cov. In Galv. iron Gas pipe.
Branch cables to lights, etc. Vulcanized & Lead cov.
Engine Room & Pump Room Vulcanized & Lead cov. in Galv. iron Gas pipe.
 Joints in cables, how made, insulated, and protected Porcelain Extensions with cast-iron covers.
No. Joints except mechanical ones.
 Are all 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 Yes.
 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 Lead covered, & where exposed to damage Lead cov. in Galv. iron Gas pipe.

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 & Armoured Lead in Galv Iron Gas pipe

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

What special protection has been provided for the cables near boiler casings Lead Cover & Galv Iron Gas pipe

What special protection has been provided for the cables in engine room — do —

How are cables carried through beams Fibre Baskets through bulkheads, &c. Watertight Stuffing Boxes

How are cables carried through decks Galv: Iron 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 Vulcanized, Lead Cov. & Arm.

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 To watertight connection boxes

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 Switchboard

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 In Special Gas tight 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 2000 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.

COMPASSES.

Distance between dynamo or electric motors and standard compass 229' 0"

Distance between dynamo or electric motors and steering compass 226' 0"

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
75	15	10	10
1	15	10	10

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 No degrees on any course in the case of the standard compass and any degrees on any course in the case of the steering compass.

W. T. Southwood, Limited Builder's Signature. Date 3-11-13

GENERAL REMARKS.

The installation has been satisfactorily fitted in the vessel tested at full load and found good.

It is submitted that this vessel is eligible for THE RECORD. Elec. light.

Levis Davis Surveyor to Lloyd's Register of British and Foreign Shipping. Date 6/11/13

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.