

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 17360

Port of Swanwick Date of First Survey 20<sup>th</sup> August, 1918 Date of Last Survey 10<sup>th</sup> October, 1918 No. of Visits 9  
 To. in on the Iron or Steel O. O. McDermott Port belonging to Swanwick  
 7. Book Built at Swanwick By whom Amell & Co When built 1918  
 Owners Lang, Fullin Owners' Address Swanwick  
 No. 713 Electric Light Installation fitted by Winnalby Row & Co When fitted 1918

### DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 10 H.P. Compound Wound Generator coupled to Vertical Open Ported  
type, double-acting Engine all by Messrs Clarke Chapman & Co

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

There is Dynamo fixed Engine Room Whether single or double wire system is used Double

Position of Main Switch Board Engine Room having switches to groups \_\_\_\_\_ of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each \_\_\_\_\_

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 \_\_\_\_\_ and at each position where a cable is branched or reduced in size \_\_\_\_\_ 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 yes.

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

Total number of lights provided for 118 arranged in the following groups:—

A	Booth	11 lights each of	16	candle power requiring a total current of	4.04	Amperes
B	Captain's Saloon	28 lights each of	16	candle power requiring a total current of	14.9	Amperes
C	Engine Rm	24 lights each of	16	candle power requiring a total current of	15.3	Amperes
D	Accom <sup>an</sup>	21 lights each of	16	candle power requiring a total current of	13.4	Amperes
E		lights each of		candle power requiring a total current of		Amperes
	2 Mast head light with	2 lamps each of	32	candle power requiring a total current of	2.5	Amperes
	2 Side light with	2 lamps each of	32	candle power requiring a total current of	2.5	Amperes
	5-5 light	Cargo lights of	16	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 Chart Room, with Master Switch in Wheel House

### 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 14.9 Amperes, comprised of 4 wires, each 18 S.W.G. diameter, .0125 square inches total sectional area

Branch cables carrying \_\_\_\_\_ Amperes, comprised of \_\_\_\_\_ wires, each \_\_\_\_\_ S.W.G. diameter, \_\_\_\_\_ square inches total sectional area

Leads to lamps carrying 3.2 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, .003 square inches total sectional area

Cargo light cables carrying 3.2 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, .003 square inches total sectional area

### DESCRIPTION OF INSULATION, PROTECTION, ETC.

Given V.I.R Single wire armoured & braided cables also  
single V.I.R Lead Covered Cables

Joints in cables, how made, insulated, and protected \_\_\_\_\_

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 securely fixed to beams etc with 7/6 T Straps



**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 Arm'd & braided cables

What special protection has been provided for the cables near boiler casings Arm'd & braided cables in gas barrel tubing

What special protection has been provided for the cables in engine room Arm'd & braided cables

How are cables carried through beams Bushed holes through bulkheads, &c. Bulkhead glands

How are cables carried through decks 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 yes

If so, how are they protected Armoured & braided

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 Sw 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 \_\_\_\_\_

Are any switches, fuses, 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 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.

Grindlay Ross & Co Ltd Electrical Engineers Date 8<sup>th</sup> Octr 1918

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 90 ft

Distance between dynamo or electric motors and steering compass 90 ft

The nearest cables to the compasses are as follows:—

A cable carrying	<u>14.9</u>	Amperes	<u>14</u>	feet from standard compass	<u>13</u>	feet from steering compass
A cable carrying	<u>4</u>	Amperes	<u>12</u>	feet from standard compass	<u>11</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 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.

J. Russell o.p.o. Builder's Signature. Date 12<sup>th</sup> October 1918

**GENERAL REMARKS.**

The fitting of the wires in this vessel is as stated in this report and appears to be in accordance with the Committee's requirements.

**It is submitted that this vessel is eligible for THE RECORD.** ELEC. LIGHT

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

Imp. 0.14.—Transfer.

Committee's Minute **GLASGOW 15 OCT 1918**  
Elec. Light APD



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