

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 17238.

Port of Greenock Date of First Survey 1st October, 1911 Date of Last Survey 28th December, 1911 No. of Visits 34
 No. in Reg. Book on the Iron or Steel C. S. Mahomed Port belonging to Shupart
 Built at Smt Hargov By whom Samuel H. When built
 Owners Messrs J. G. Brinkbank Owners' Address Shupart
 Yard No. Electric Light Installation fitted by R. J. Robinson When fitted 1911

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two dynamo compound wound multipolar type (4 pole) each dynamo
coupled direct to a vertical engine having cylinders 8" x 4" @ 275 revs
 Capacity of Dynamo each 150 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Engine room, starting platform Whether single or double wire system is used Double wire
 Position of Main Switch Board near dynamo having switches to groups A, B, C, D, E, F, G of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each no Auxiliary Switchboards

If fuses are fitted on main switch board to the cables of main circuit yes and on each auxiliary yes 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

Are the fuses of non-oxidizable 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 184 arranged in the following groups:—

Group	lights each of	candle power requiring a total current of	Amperes
A	<u>184</u>	<u>184</u>	<u>184</u>
B	<u>184</u>	<u>184</u>	<u>184</u>
C	<u>184</u>	<u>184</u>	<u>184</u>
D	<u>184</u>	<u>184</u>	<u>184</u>
E	<u>184</u>	<u>184</u>	<u>184</u>
<u>one</u> Mast head light with <u>1</u> lamps each of <u>16</u>	<u>16</u>	<u>16</u>	<u>16</u>
<u>two</u> Side lights with <u>1</u> lamps each of <u>16</u>	<u>16</u>	<u>16</u>	<u>16</u>

one Cargo lights of 96 candle power, whether incandescent or arc lights both
two Are 1000
 If arc lights, what protection is provided against fire, sparks, &c. Strong deagor plate in lantern & double enclosure glass

Where are the switches controlling the masthead and side lights placed On Bridge & also Bridge Starting Station

DESCRIPTION OF CABLES.

Main cable carrying 150 Amperes, comprised of 37 wires, each 15 S.W.G. diameter, .151 square inches total sectional area
 Branch cables carrying 24 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .0225 square inches total sectional area
 Branch cables carrying 12.6 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, .0127 square inches total sectional area
 Leads to lamps carrying .6 Amperes, comprised of 1 wires, each 17 S.W.G. diameter, .00246 square inches total sectional area
 Cargo light cables carrying 3.6 Amperes, comprised of 119 wires, each 38 S.W.G. diameter, .00322 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure india rubber then vulcanizing india rubber, rubber coating
Cable, the whole vulcanized together, taped, & lead covered in
accommodation, elsewhere armoured with galv wire armouring
 Joints in cables, how made, insulated, and protected no joints

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances no joints 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 no joints

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 Forward under Bridge Deck & Forward Tunnel
decks. Aft thru' shaft tunnel to Prop. Armoured with galv wire
Armouring:-

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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 Lead covered
galv iron pipes

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 Lead covered & armoured

What special protection has been provided for the cables in engine room Armoured & galv wire armoured

How are cables carried through beams in lead bushes through bulkheads, &c. Watertight glands

How are cables carried through decks in galv iron 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 Galv wire armoured

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage none in bunkers

If so, how are the lamp fittings and cable terminals specially protected (Connectors only) strong iron cases

Where are the main switches and fuses for these lights fitted in Engine room

If in the spaces, how are they specially protected no

Are any switches or fuses fitted in bunkers no

Cargo light cables, whether portable or permanently fixed Portable How fixed no

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel (Double wire system)

How are the returns from the lamps connected to the hull no

Are all the joints with the hull in accessible positions no

Is the installation supplied with a voltmeter yes, and with 2 amperemeters yes, fixed 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 no

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 no

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.

A. J. Robertson Esq

Electrical Engineers

Date 7/2/18

COMPASSES.

Distance between dynamo or electric motors and standard compass 108 Feet

Distance between dynamo or electric motors and steering compass 110 Ft

The nearest cables to the compasses are as follows:—

Cable carrying	Amperes	feet from standard compass	feet from steering compass
A cable carrying <u>10</u>	<u>6</u> Amperes	<u>7</u> feet from standard compass	<u>6</u> feet from steering compass
A cable carrying <u>4.8</u>	<u>6</u> Amperes	<u>7</u> feet from standard compass	<u>6</u> feet from steering compass
A cable carrying <u>.3</u>	<u>into</u> Amperes	<u>into</u> feet from standard compass	<u>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 every course in the case of the standard compass and nil degrees on every course in the case of the steering compass.

Russell & Co

Builder's Signature.

Date 14th February 1918

GENERAL REMARKS.

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

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

JUR 20/2/18.

James Limer

Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW. 19 FEB 1918

Elec. Light



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double vacuum & etc.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

186.11a—Transfer.

LMH
19/2/18