

WED. MAR 3 1920

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 39499

Port of Glasgow Date of First Survey and Date of Last Survey 26/12/19 No. of Visits 1
 No. in on the Iron or Steel S.S. "Glasford" Port belonging to Glasgow
 Reg. Book 322988 Built at Ardrrossan By whom James Ardrrossan D.D.R.B.C. When built 1919
 Owners James Mann, Macneal & Co. Ltd. Owners' Address
 Yard No. 305 Electric Light Installation fitted by James Sifford Smith & Co. Ltd. When fitted 1919

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Enclosed splash lubrication Engine direct-coupled to
compound wound Dynamo
 Capacity of Dynamo 80 Amperes at 100 Volts, whether continuous or alternating current cont.
 Where is Dynamo fixed Starboard Lower Engine room Whether single or double wire system is used double
 Position of Main Switch Board Near Dynamo having switches to groups 5 groups of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each none fitted

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 yes

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

Total number of lights provided for 109 arranged in the following groups:—

A Navigation	10 lights each of <u>various</u>	candle power requiring a total current of	<u>8</u>	Amperes
B Cargo	24 lights each of <u>16</u>	candle power requiring a total current of	<u>12</u>	Amperes
C Accommodation	39 lights each of <u>20 watt</u>	candle power requiring a total current of	<u>8</u>	Amperes
D Machinery	34 lights each of <u>16</u>	candle power requiring a total current of	<u>19</u>	Amperes
E Bunkers	<u>1/2 KW</u> lights each of <u>Set</u>	candle power requiring a total current of	<u>8</u>	Amperes
<u>2</u>	Mast head light with <u>2</u> lamps each of <u>32</u>	candle power requiring a total current of	<u>2</u>	Amperes
<u>2</u>	Side light with <u>2</u> lamps each of <u>32</u>	candle power requiring a total current of	<u>2</u>	Amperes
<u>4</u>	Cargo lights of <u>each</u> <u>96</u>	candle power, whether incandescent or arc lights	<u>Incand.</u>	

If arc lights, what protection is provided against fire, sparks, &c. No Arc Lights

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

DESCRIPTION OF CABLES.

Main cable carrying 80 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .094 square inches total sectional area
 Branch cables carrying 19 Amperes, comprised of 7 wires, each 14 S.W.G. diameter, .035 square inches total sectional area
 Branch cables carrying 12 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .022 square inches total sectional area
 Leads to lamps carrying 3 Amperes, comprised of 1 wires, each 17 S.W.G. diameter, .002 square inches total sectional area
 Cargo light cables carrying 3 Amperes, comprised of 1 wires, each 14 S.W.G. diameter, .005 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Armoured & braided cable used in holds etc. & lead
cased cable in rooms & for Bridge wiring protected
by piping when liable to damage
 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 — 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 Through beams & clipped to decks
and bulkheads protected by armour in holds etc.

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 casing

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

What special protection has been provided for the cables near boiler casings Armour & braiding

What special protection has been provided for the cables in engine room Armour & braiding

How are cables carried through beams Through cleatholes through bulkheads, &c. W. T. Glauco

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

Are any cables run through coal bunkers no or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage no

If so, how are they protected Armour & braiding

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 no

Where are the main switches and fuses for these lights fitted no

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 Portable

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel no

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 an amperemeter yes, fixed Switch 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.

TELFORD & SONS, PATENT ENGINEERS, LTD.

Electrical Engineers

Date

COMPASSES.

Distance between ~~dynamo~~ or electric motors and standard compass 20 feet

Distance between dynamo or electric motors and steering compass 15 feet

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
5	15	10	
1.5	3	3	

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.

ELIOTT & SONS, LTD.

Builder's Signature.

Date

4/2/1920

GENERAL REMARKS.

This Installation has been fitted on board under special survey. Tested under full working conditions and found satisfactory.

It is submitted that this vessel is eligible for THE RECORD. ELEC. LIGHTS 3/20

J. Stanley Rankin,

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW 2 MAR 1920

Elec. Light. W.M.



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

HC
7.2.20

10.11.16—Transfer.