

REPORT ON ELECTRIC LIGHTING INSTALLATION.

17540 GPK
No. 39198 Gls.

Port of Glasgow Date of First Survey 15.9.19 Date of Last Survey 25.9.19 No. of Visits 3
 No. in Reg. Book 29913 on the Iron or Steel S.S. War. Gaekwar Port belonging to London
 Built at Port Glasgow By whom Messrs Lithgow & Co When built 1919
 Owners The Shipping Controller Owners' Address London
 Yard No. 419 Electric Light Installation fitted by Messrs Grindley Ross & Co When fitted 1919

DESCRIPTION OF DYNAMO, ENGINE, ETC.

10 K.W. Clark, Chapman SetCapacity of Dynamo 100 Amperes at 100 Volts, whether continuous or alternating current ContinuousWhere is Dynamo fixed Bottom Platform (Starboard) Whether single or double wire system is used DoublePosition of Main Switch Board Closet to Dynamo having switches to groups of lights, &c., as belowPositions of auxiliary switch boards and numbers of switches on each One Section Box placed at Top of Engine RoomIf 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

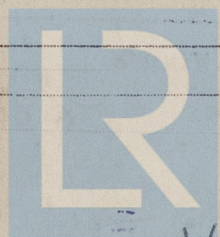
If vessel is wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits

Are the fuses of non-oxidizable metal Yes and constructed to fuse at an excess of 100% per cent over the normal currentAre 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 YesAre all switches and fuses constructed of incombustible materials and fitted on incombustible bases YesTotal number of lights provided for 129 arranged in the following groups:—A Navigation lights each of 16 candle power requiring a total current of 3.2 AmperesB Saloon lights each of 16 candle power requiring a total current of 7.2 AmperesC Coop lights each of 16 candle power requiring a total current of 12.8 AmperesD Winches lights each of — candle power requiring a total current of 15.0 AmperesE Engine Room lights each of 16 candle power requiring a total current of 21.7 Amperes2 Mast head light with 2 lamps each of 32 candle power requiring a total current of 2.56 Amperes2 Side light with 2 lamps each of 32 candle power requiring a total current of 2.56 Amperes12 Cargo lights of 16 candle power, whether incandescent or arc lightsIf arc lights, what protection is provided against fire, sparks, &c. NoneWhere are the switches controlling the masthead and side lights placed Chart House

DESCRIPTION OF CABLES.

Main cable carrying 65 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .094 square inches total sectional areaBranch cables carrying 20 Amperes, comprised of 4 wires, each 14 S.W.G. diameter, .017 square inches total sectional areaBranch cables carrying 12.8 Amperes, comprised of 4 wires, each 18 S.W.G. diameter, .0125 square inches total sectional areaLeads to lamps carrying 3 Amperes, comprised of 1 wires, each 16 S.W.G. diameter, .0032 square inches total sectional areaCargo light cables carrying 3.8 Amperes, comprised of 1 wires, each 16 S.W.G. diameter, .0032 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

V.I.R. Lead covered cables in accommodation & V.I.R. Cables with single wire armoring & branching in Engine Room and Tween DecksJoints in cables, how made, insulated, and protected NoneAre 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 noHow are the cables led through the ship, and how protected Armoured

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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

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat run in tubing

What special protection has been provided for the cables near boiler casings run in tubing

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

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

How are cables carried through decks through 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 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 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 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 2500 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 19th Nov^r 1919

COMPASSES.

Distance between dynamo or electric motors and standard compass 100 ft.

Distance between dynamo or electric motors and steering compass 95 ft.

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>8</u>	<u>12</u>	<u>8</u>	<u>8</u>
<u>4.2</u>	<u>20</u>	<u>16</u>	<u>16</u>
<u>20</u>	<u>90</u>	<u>86</u>	<u>86</u>

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 LITHGOWS LIMITED.

W B Allen

Director & Secretary

Builder's Signature.

Date

22nd Nov 1919

GENERAL REMARKS.

This Installation has been fitted on board under special survey. Tested under full working load for a period of six hours & found satisfactory.

It is submitted that

this vessel is eligible for

THE RECORD. Elec. Light.

4/12/19

J Stanley Rankin

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW 2nd DEC 1919

Elec. Light.

W B Allen



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

JAC.
29.11.19