

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 26942

Port of Glasgow Date of First Survey 7th July 1908 Date of Last Survey 21st Aug 1908 No. of Visits 9
 No. in Reg. Book on the Iron or Steel S/S "NGAHERE" Port belonging to _____
 Built at Port Glasgow By whom Messrs A. Rodgers & Co When built 1908
 Owners _____ Owners' Address _____
 Yard No. H07 Electric Light Installation fitted by Messrs Clarke Chapman & Co Ltd When fitted 1908

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One single cylinder double acting open type vertical engine direct coupled to a continuous current compound wound dynamo
 Capacity of Dynamo 42 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 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Each light & groups of lights provided with switches as required

If cut outs 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 cut outs fitted to both flow and return wires or cables Yes all circuits including lamp circuits Yes
 Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess 50 per cent over the normal current
 Are all cut outs 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 fuse for each circuit Yes
 Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases Yes Slate & porcelain

Total number of lights provided for 116 arranged in the following groups:

A	<u>33</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>19.8</u>	Amperes
B	<u>30</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>18</u>	Amperes
C	<u>36</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>21.6</u>	Amperes
D	<u>14</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>10.2</u>	Amperes
E	<u>—</u>	lights each of	<u>—</u>	candle power requiring a total current of	<u>—</u>	Amperes
	<u>2</u>	Mast head light with <u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>2.4</u>	Amperes
	<u>2</u>	Side light with <u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>2.4</u>	Amperes
	<u>8</u>	Cargo lights of	<u>6-16</u>	candle power, whether incandescent or arc lights	<u>Incandescent</u>	

If arc lights, what protection is provided against fire, sparks, &c. None fitted
 Where are the switches controlling the masthead and side lights placed Chart Room

DESCRIPTION OF CABLES.

Main cable carrying 42 Amperes, comprised of 19 wires, each 15 L.S.G. diameter, .07500 square inches total sectional area
 Branch cables carrying 19.8 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .0221 square inches total sectional area
 Branch cables carrying 4.8 Amperes, comprised of 1 wires, each 14 L.S.G. diameter, .00502 square inches total sectional area
 Leads to lamps carrying 6 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .0018 square inches total sectional area
 Cargo light cables carrying 3.6 Amperes, comprised of 146 wires, each 38 L.S.G. diameter, .00507 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All wires & cables vulcanized india rubber, taped & braided and lead covered overall, where exposed steel armoured over the lead covering.
 Joints in cables, how made, insulated, and protected No joints except mechanical ones.
 Are all the joints of cables thoroughly soldered, resin only having been used as a flux 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 & armoured cables fixed close up to underside of deck with strong clips & screws.



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible no.

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture Lead covered & armoured cables

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 do do

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

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

How are cables carried through decks in galvanized 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 Lead covered & steel armoured

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 cut outs for these lights fitted _____

If in the spaces, how are they specially protected _____

Are any switches or cut outs fitted in bunkers _____

Cargo light cables, whether portable or permanently fixed Portable How fixed to W.T. Cast iron Connection Boxes

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 _____

Are all the joints with the hull in accessible positions _____

The installation is now supplied with a voltmeter and an amperometer, fixed main switchboard

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas _____

Are any switches, cut outs, 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 100 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 600 megohms per statute mile after 24 hours' immersion in seawater.

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.

For Clarke, Chapman & Co. Ltd.

W. Walker

Chairman

Electrical Engineers

Date August 31st 1908

COMPASSES.

Distance between dynamo or electric motors and standard compass 66 ft.

Distance between dynamo or electric motors and steering compass 60.

The nearest cables to the compasses are as follows:—

A cable carrying <u>6</u> Amperes	<u>12</u> feet from standard compass	<u>6</u> feet from steering compass
A cable carrying <u>6</u> Amperes	<u>6</u> feet from standard compass	<u>12</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 _____ degrees on _____ course in the case of the standard compass and _____ degrees on _____ course in the case of the steering compass.

A. Rodger & Co.

Builder's Signature.

Date 3rd Sept 1908.

GENERAL REMARKS.

This installation has been well fitted on board, & when seen working under ordinary conditions was satisfactory.

[Signature]

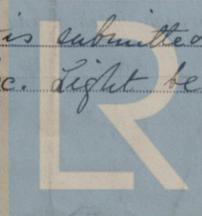
A.H. Pilditch

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

Committee's Minute GLASGOW 22 SEP. 1908

Electric light 6.B.6

It is submitted that the Record Elec. light be noted in the Reg. Book



Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.