

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 30159

Port of Glasgow Date of First Survey 3. 4. 11 Date of Last Survey May 12th No. of Visits 13
 No. in Reg. Book on the Iron or Steel "Elephanta" Port belonging to Glasgow
 Built at Glasgow By whom Burley Gull & Co. When built 1911
 Owners The British India Steam Nav. Co. Owners' Address London
 Yard No. 487 Electric Light Installation fitted by Siemens Bros. Dynamo Works Ltd. When fitted 1911

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2 Siemens 4 pole compound wound dynamos each coupled direct to a
Shaftes & Sons single cylinder open type vertical engine 10" x 8".

Capacity of Dynamo 300 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Main Engine room Whether single or double wire system is used double

Position of Main Switch Board " having switches to groups A to D of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each

2 of 5 & 1 of 4 switches in 2nd class passage Shade Deck.
1 of 5 switches in Engine room.

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 none reduced 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 of all circuits including lamp circuits Yes

Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of 100 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 size of fuse for each circuit Yes

Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 448 arranged in the following groups:—

A	<u>93</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>about 50</u>	Amperes
B	<u>118</u>	lights each of	"	candle power requiring a total current of	" <u>65</u>	Amperes
C	<u>132</u>	lights each of	"	candle power requiring a total current of	" <u>70</u>	Amperes
D	<u>105</u>	lights each of	"	candle power requiring a total current of	" <u>60</u>	Amperes
E	—	lights each of	—	candle power requiring a total current of	—	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</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</u>	Amperes
<u>3</u>	Cargo lights of	<u>8-16</u>		candle power, whether incandescent or arc lights	<u>incandescent</u>	

If arc lights, what protection is provided against sparks, &c.

Where are the switches controlling the masthead and side lights placed in Chart room

DESCRIPTION OF CABLES.

Main cable carrying 300 Amperes, comprised of 37 wires, each 12 L.S.G. diameter, .3 square inches total sectional area

Branch cables carrying 70 Amperes, comprised of 19 wires, each 14 L.S.G. diameter, .09372 square inches total sectional area

Branch cables carrying 18 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .02214 square inches total sectional area

Leads to lamps carrying 3 Amperes, comprised of 7 wires, each 23 L.S.G. diameter, .004238 square inches total sectional area

Cargo light cables carrying 4 Amperes, comprised of 7 wires, each 23 L.S.G. diameter, " " square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

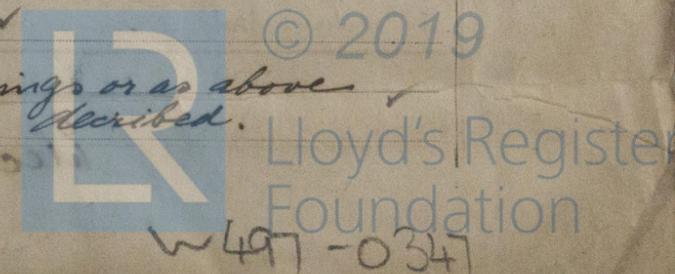
conductors of high conductivity tinned copper wire, insulated with pure & vulcanized india rubber, taped, braided & compounded, also as before but in addition taped lead covered & armoured with gal. steel wire & taped over armour. cables held in place with gal. iron clips.

Joints in cables, how made, insulated, and protected jointless system

Are all the joints of cables thoroughly soldered, resin only having been used as a flux — 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 in teakwood or pine casings or as above described.



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 & armour

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

What special protection has been provided for the cables near boiler casings " " " "

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

How are cables carried through beams in fibre tubes through bulkheads, &c. special glands

How are cables carried through decks special Deckpipes

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 Lead covered & armour

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage _____

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 _____

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 _____

The installation is _____ supplied with 2 voltmeter and 2 amperemeter, fixed on 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 98 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.

SIEMENS BROTHERS DYNAMO WORKS LIMITED,
MARINE DEPARTMENT.

Electrical Engineers W.D.

Date May 22nd 1911

COMPASSES.

Distance between dynamo or electric motors and standard compass over 100 feet

Distance between dynamo or electric motors and steering compass over 100 feet

The nearest cables to the compasses are as follows:—

A cable carrying <u>18</u> Amperes	<u>20</u> feet from standard compass	<u>20</u> feet from steering compass
A cable carrying <u>_____</u> Amperes	<u>_____</u> feet from standard compass	<u>_____</u> feet from steering compass
A cable carrying <u>.6</u> Amperes	<u>3</u> feet from standard compass	<u>3</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 _____ course in the case of the standard compass and nil degrees on _____ course in the case of the steering compass.

FOR BARCLAY, CURLE & CO., LTD.
H.V. Coney Secretary.

Builder's Signature. _____

Date 25th May 11

GENERAL REMARKS.

This installation has been fitted in accordance with the rules, tested under full working conditions & found satisfactory.

It is submitted that this vessel is eligible for THE RECORD Elec. light. W.D. 2/6/11

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

Committee's Minute Glasgow 30 MAY 1911

Elec. lights



Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

W.D. 29-5-11.