

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 70065

as now

Port of *Montevideo* Date of First Survey *19th June 1917* Date of Last Survey *19th July 1917* No. of Visits *12*
 No. in Reg. Book *1789* on the ~~Iron~~ *Steel* *Crossteth Hall* Port belonging to *Liverpool*
 Built at *Jarrow* By whom *Messrs Palmer Ltd* When built *1917*
 Owners *Ellerman Lines* Owners' Address _____
 Yard No. *847* Electric Light Installation fitted by *Palmer Ltd* When fitted *1917*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Engine & Dynamo by Clarke Chapman & Co. Ltd.
 Capacity of Dynamo *200* Volts *100* 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 *in Engine Room* having switches to groups *7* of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each *None*

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 *None* and at each position where a cable is branched or reduced in size *—* 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 *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 size of fuse for each circuit
 Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases *Yes*

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

A	<i>7</i>	lights each of	<i>32</i>	candle power requiring a total current of	<i>7.5</i>	Amperes
B	<i>102</i>	lights each of	<i>16</i>	candle power requiring a total current of	<i>57</i>	Amperes
C	<i>7</i>	lights each of	<i>8</i>	candle power requiring a total current of	<i>2</i>	Amperes
D		lights each of		candle power requiring a total current of		Amperes
E		lights each of		candle power requiring a total current of		Amperes
	<i>2</i>	Must head light with <i>1</i> lamps each of	<i>32</i>	candle power requiring a total current of	<i>1.12</i>	Amperes
	<i>2</i>	Side light with <i>1</i> lamps each of	<i>32</i>	candle power requiring a total current of	<i>1.12</i>	Amperes
	<i>6</i>	Cargo lights of	<i>6-16</i>	candle power, whether incandescent or arc lights	<i>Incandescent</i>	

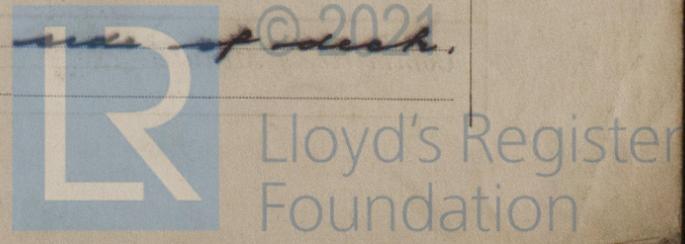
If arc lights, what protection is provided against fire, sparks, &c. *No arcs fitted*
 Where are the switches controlling the masthead and side lights placed *At Steering Wheel on Bridge*

DESCRIPTION OF CABLES.

Main cable carrying	<i>200</i> Amperes, comprised of	<i>37</i> wires, each	<i>13</i> L.S.G. diameter,	<i>.25</i> square inches total sectional area
Branch cables carrying	<i>28.2</i> Amperes, comprised of	<i>7</i> wires, each	<i>15</i> L.S.G. diameter,	<i>.028</i> square inches total sectional area
Branch cables carrying	<i>9</i> Amperes, comprised of	<i>19</i> wires, each	<i>20</i> L.S.G. diameter,	<i>.019</i> square inches total sectional area
Leads to lamps carrying	<i>2.5</i> Amperes, comprised of	<i>1</i> wires, each	<i>17</i> L.S.G. diameter,	<i>.0025</i> square inches total sectional area
Cargo light cables carrying	<i>35</i> Amperes, comprised of	<i>7</i> wires, each	<i>18</i> L.S.G. diameter,	<i>.0125</i> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables when exposed to damage — *Armoured & Lead Covered*
 " in Cabins etc. — *Lead Covered*
 Joints in cables, how made, insulated, and protected *None*
 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 *—*
 How are the cables led through the ship, and how protected *Clipped to under side of deck, Armoured.*



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 covering

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat None

What special protection has been provided for the cables near boiler casings None

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

How are cables carried through beams drifted holes through bulkheads, &c. if Watertight-glands

How are cables carried through decks in 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

If so, how are they protected Armoured cables

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coats, 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 —

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 Yes supplied with a voltmeter and Yes an amperemeter, fixed on 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 99% per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 2.500 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.

Palmers Shipbuilding & Iron Co., Ltd. Electrical Engineers Date 7-8-17

Albert P. Byrne.

COMPASSES.

Distance between dynamo or electric motors and standard compass 152 ft

Distance between dynamo or electric motors and steering compass 142 ft

The nearest cables to the compasses are as follows:—

A cable carrying <u>2.5</u> Amperes <u>12</u> feet from standard compass <u>2</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>—</u> Amperes <u>—</u> feet from standard compass <u>—</u> feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power —

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.

J. Hutchison Builder's Signature. Date —

GENERAL REMARKS The electric lighting installation of this vessel has been fitted in accordance with the rules and satisfactorily tested with all lights burning.

George Murdoch.

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

JWD 15/5/17

Committee's Minute —

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

