

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 6664

Port of Shellfleet Date of First Survey June 18 (1907) Date of Last Survey July 28 (1909) No. of Visits 30
 No. in Reg. Book on the Iron or Steel S.S. "S. Paulo" Port belonging to Wm de Farieno
 Built at Belcast By whom Markingham Clark & Co. Ltd. When built 1907
 Owners Lloyd Triplex Co. Owners' Address Rugby
 Yard No. 245 Electric Light Installation fitted by Lunduland & Sons Ltd. When fitted 1909

DESCRIPTION OF DYNAMO, ENGINE, ETC.

3 Combined Plants fitted consisting of High Speed Enclosed type forced lubrication Engines fitted to compound wound dynamos
 Capacity of Dynamo 164 Amperes at 110 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed on platform at top of Engine Room Whether single or double wire system is used Single
 Position of Main Switch Board near dynamos having switches to groups eight of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each none fitted

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

Total number of lights provided for 410 arranged in the following groups :-

A	<u>139</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>83.4</u>	Amperes
B	<u>32</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>18.2</u>	Amperes
C	<u>69</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>41.4</u>	Amperes
D	<u>34</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>30.4</u>	Amperes
E	<u>84</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>50.4</u>	Amperes
F	<u>48</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>28.8</u>	Amperes
G	<u>motors</u>	lights each of	<u>—</u>	candle power requiring a total current of	<u>15 HP</u>	Amperes
H	<u>Projector</u>	lights each of	<u>—</u>	candle power requiring a total current of	<u>25</u>	Amperes
I	<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
J	<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
K	<u>9</u>	Cargo lights of <u>6 lamps each</u>	<u>16</u>	candle power, whether incandescent or arc lights	<u>incandescent</u>	

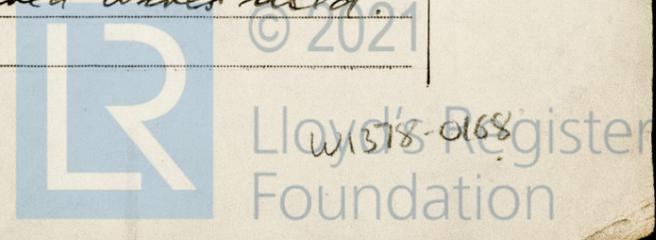
If arc lights, what protection is provided against fire, sparks, &c. —
 Where are the switches controlling the masthead and side lights placed In Chart Room?

DESCRIPTION OF CABLES.

Main cable carrying 164 Amperes, comprised of 37 wires, each 14 L.S.G. diameter, .184 square inches total sectional area
 Branch cables carrying 35 Amperes, comprised of 7 wires, each 14 L.S.G. diameter, .035 square inches total sectional area
 Branch cables carrying 22 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .022 square inches total sectional area
 Leads to lamps carrying .5 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .0018 square inches total sectional area
 Cargo light cables carrying 3 Amperes, comprised of 138 wires, each 38 L.S.G. diameter, .005 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Wire insulated with pure and vulcanised India Rubber, taped and Braided
 Joints in cables, how made, insulated, and protected None used, wiring carried out on distribution system.
 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 —
 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 and Armoured Wires used



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 and armoured wires used.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat L.C. & A Cables used

What special protection has been provided for the cables near boiler casings L.C. & A Cables used

What special protection has been provided for the cables in engine room L.C. & A Cables used

How are cables carried through beams holes bucked with Fibre through bulkheads, &c. Watertight Glands used

How are cables carried through decks Watertight Deck Tubes used.

Are any cables run through coal bunkers yes 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 and armoured wires used.

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

If so, how are the lamp fittings and cable terminals specially protected Heavy cast iron guards.

Where are the main switches and cut outs for these lights fitted In Engine Room.

If in the spaces, how are they specially protected None fitted

Are any switches or cut outs 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 Cable lug fitted and secured by 3/8" brass head tap screws.

How are the returns from the lamps connected to the hull yes.

Are all the joints with the hull in accessible positions yes.

The installation is supplied with a voltmeter and three amperemeters 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 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.

Wynn Man Electrical Engineers Date 19/8/09

COMPASSES.

Distance between dynamo or electric motors and standard compass 60 feet.

Distance between dynamo or electric motors and steering compass 60 feet.

The nearest cables to the compasses are as follows:—

A cable carrying	<u>.5</u>	Amperes	<u>on</u>	feet from standard compass	<u>on</u>	feet from steering compass
A cable carrying	<u>.6</u>	Amperes	<u>12</u>	feet from standard compass	<u>14</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 Nil degrees on all course in the case of the standard compass and Nil degrees on all course in the case of the steering compass.

R. P. M. Munnings Builder's Signature. Date 7th Sept. 1909

GENERAL REMARKS.

This installation appears to be of good description and has been fitted in accordance with the Rules

R. P. M. Munnings
Elec. light
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute 11th. 5 APL 1910

REPORT FORM No. 12.—5m.4.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

