

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 29316.

Port of Glasgow Date of First Survey 12th Aug Date of Last Survey 6th Sept 10 No. of Visits 6
 No. in Reg. Book on the ~~Iron~~ Steel Brew Steamer "Thomas Holt" Port belonging to Liverpool
 Built at Port Glasgow By whom Wm Hamilton & Co. Ltd. When built 1910
 Owners John Holt & Co. (Liverpool) Limited Owners' Address Colonial House, 20 Water Street, Liverpool
 Yard No. 217 Electric Light Installation fitted by Builders When fitted 1910

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Four Pole, Compound Wound ✓

Capacity of Dynamo 70 ✓ Amperes at 100 ✓ Volts, whether continuous or alternating current Continuous ✓
 Where is Dynamo fixed Engine thrust recess ✓ Whether single or double wire system is used Double ✓
 Position of Main Switch Board Engine room ✓ having switches to groups Five ✓ 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 no and at each position where a cable is branched or reduced in size no 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 five ✓ 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 _____ arranged in the following groups:—

A	<u>30</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>20</u>	Amperes
B	<u>14</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>8</u>	Amperes
C	<u>14</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>10</u>	Amperes
D	<u>36</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>25</u>	Amperes
E	<u>20</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>10</u>	Amperes
	<u>2</u>	Mast head light with <u>double</u> <u>filament</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>3</u>	Amperes
	<u>2</u>	Side light with <u>"</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>3</u>	Amperes
		<u>Anchor</u> <u>light</u> <u>"</u>	<u>32</u>		<u>3</u>	
		<u>Four</u> Cargo lights of each <u>80</u>		candle power, whether incandescent or arc lights	<u>incandescent</u>	

If arc lights, what protection is provided against fire, sparks, &c. none ✓

Where are the switches controlling the masthead and side lights placed Wheelhouse ✓

DESCRIPTION OF CABLES.

Main cable carrying 75 Amperes, comprised of 19 wires, each 15 L.S.G. diameter, 0.713 square inches total sectional area
 Branch cables carrying 24 Amperes, comprised of 7 wires, each 14 L.S.G. diameter, 0.352 square inches total sectional area
 Branch cables carrying 20 Amperes, comprised of 7 wires, each 15 L.S.G. diameter, 0.285 square inches total sectional area
 Leads to lamps carrying 10 Amperes, comprised of 7 wires, each 2 1/2 ¹⁸ L.S.G. diameter, 0.027 square inches total sectional area
 Cargo light cables carrying 20 Amperes, comprised of 7 wires, each 15 L.S.G. diameter, 0.0285 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables insulated with June vulcanized india rubber
braided & compounded, lead covered & armoured with a layer of galv. steel wire. ✓
Branch wires all lead covered ✓

Joints in cables, how made, insulated, and protected No joints ✓

Are all the joints of cables thoroughly soldered, resin only having been used as a flux none ✓ 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 none ✓

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 fastened to longitudinals with clips, protected as above

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 *none exposed* ✓

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Armoured wire* ✓

What special protection has been provided for the cables near boiler casings *Armoured wire* ✓

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

How are cables carried through beams *Clipped to longitudinals* ✓ through bulkheads, &c. *W.T. Glands where required* ✓

How are cables carried through decks *Iron 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 *no* ✓

If so, how are they protected *Armoured with a layer of Galv. steel wire* ✓

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 *no* ✓

Cargo light cables, whether portable or permanently fixed *Portable* ✓ How fixed *Sockets* ✓

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 a voltmeter and _____ 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 *100* ✓ per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than *2000* ✓ 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.

Electrical Engineers

Date _____

COMPASSES.

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

Distance between dynamo or electric motors and steering compass *90 ft*

The nearest cables to the compasses are as follows:—

A cable carrying *20* Amperes *20* feet from standard compass *15* feet from steering compass

A cable carrying _____ Amperes _____ feet from standard compass _____ 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.

WILLIAM HAMILTON & CO., LIMITED

Builder's Signature.

Date *28th Sept. 1910.*

GENERAL REMARKS.

The Electric Lighting of this vessel has been satisfactorily carried out.

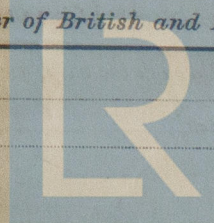
It is submitted that this vessel is eligible for THE RECORD. Elec. light.

Hardner-Smith.

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

Committee's Minute *Glasgow* 11 OCT. 1910

Elec. Light.



Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.