

REPORT ON ELECTRIC LIGHTING INSTALLATION.

Port of Glasgow

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No. 10776 *
 No. in Reg. Book. 439 Name of Ship Medway Built at C. Cowell & Co When built 1886. 8. 6. m.
 Electric Light Installation fitted by Norman & Son Limited when fitted June 1891

DESCRIPTION OF DYNAMO AND ENGINE.—

Engine & dynamo coupled together on one lead - Engine 6 1/2 x 6' open type vertical - dynamo compound wound - Speds about 320 revs. per min.
 Capacity of Dynamo Reidy Amperes at 210 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Engine Room. Part side of vessel - placed with shaft for & aft.

LAMPS.—

Is vessel wired on single or double wire system Double Total number of lights arranged in the following groups:—

A	<u>41</u>	lights each of	<u>16 x 50</u>	candle power requiring a total current of	<u>45</u>	Amperes
B	<u>21</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>20</u>	Amperes
C	<u>44</u>	lights each of	<u>16 x 50</u>	candle power requiring a total current of	<u>45</u>	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
Mast head light with		lamps each of		candle power requiring a total current of		Amperes
Side light with		lamps each of		candle power requiring a total current of		Amperes
<u>Two</u> Cargo lights of			<u>570</u>	candle power, whether incandescent or arc lights	<u>None</u>	

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

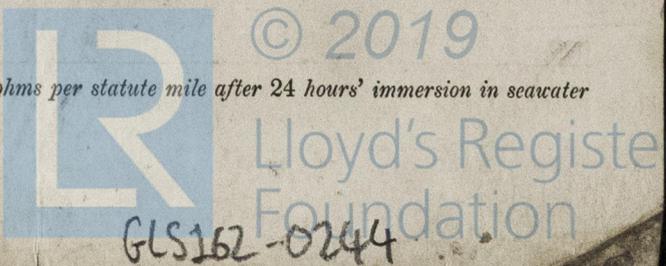
SWITCHES AND CUT-OUTS—

Position of Main Switch Board Engine Room having switches to groups _____ of lights as above
 Positions of other switch boards and numbers of switches on each _____
 If cut outs are fitted to main circuit Yes double pole and to each auxiliary circuit Yes
 and at each position where cable is branched or reduced in size Yes
 If vessel is wired on the double wire system are cut outs fitted on each wire In main circuits
 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
 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 _____
 How are the lamps specially protected in places liable to the accumulation of vapour or gas In brass or iron pipes
 Are all switches and cut-outs constructed of unflammable materials and fitted on unflammable bases Yes

DESCRIPTION OF CABLES.—

Main cable carrying	<u>147</u>	Amperes, comprised of	<u>19</u>	wires, each	<u>19</u>	legal standard wire gauge diameter
Branch cables carrying	<u>228</u>	Amperes, comprised of	<u>7</u>	wires, each	<u>15</u>	legal standard wire gauge diameter
Branch cables carrying	<u>12</u>	Amperes, comprised of	<u>1</u>	wires, each	<u>10</u>	legal standard wire gauge diameter
Leads to lamps	<u>2.4</u>	Amperes, comprised of	<u>1</u>	wires, each	<u>17</u>	legal standard wire gauge diameter
Cargo light cables carrying	<u>1.8</u>	Amperes, comprised of	<u>1</u>	wires, each	<u>17</u>	legal standard wire gauge diameter

The copper used has a conductivity of 98% per cent. that of pure copper.
 Insulation of cables is guaranteed to have a resistance of not less than 6000 megohms per statute mile after 24 hours' immersion in seawater



10776 gcs

DESCRIPTION OF INSULATION, PROTECTION, &c.—

All wires & cables run securely in wood casing & piping - special care has been taken in exposed positions -

Joints in cables, how made, insulated, and protected Soldered with resin & varnished rubber solution rubber tape prepared tape & orokenti tape

Are all the joints of cables thoroughly soldered, resin only having been used as a flux Yes

How are cables led throughout the ship in stout wood casing - using piping in exposed places.

What special protection has been provided for the cables in open alleyways

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

What special protection has been provided for the cables near boiler casings Stout wood casing & piping

What special protection has been provided for the cables in engine room Casing & piping

How are cables carried through decks hard wood timbers and through bulkheads hard wood timbers

Are any cables run through coal bunkers Yes or cargo spaces Yes If so, how are they protected piping & stout

wood casing

Are any lamps fitted in coal bunkers or spaces which may be used for cargo Yes & securely covered.

If so, how are they specially protected No well out of danger

Cargo light cables, whether portable or permanently fixed 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

TESTING, &c.—

Has the installation been thoroughly tested to its full capacity during a trial of 24 hours' duration with satisfaction

The insulation resistance of the whole installation was not less than 250000 ohms & considerably higher

The installation is efficiently supplied with a voltmeter and also an amperemeter, fixed on forebulkhead

General Remarks.—

The entire work carried out. Under Messrs' instructions is carefully done & in our opinion should give satisfaction. We have paid special attention to all exposed parts—

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.

Olava Hamilton Electrical Engineers
MANAGER & SECRETARY

Date 28th July 1891

COMPASSES.—

Distance between dynamo and standard compass more than 30 feet.

Distance between dynamo and steering compass 100

The nearest cables to the compasses are as follows:—

A cable carrying	47	Amperes	30	feet from standard compass	100	feet from steering compass
A cable carrying	28	Amperes	40	feet from standard compass	110	feet from steering compass
A cable carrying	10	Amperes	20	feet from standard compass	20	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 nil course in the case of the standard compass and nil degrees on nil course in the case of the steering compass.

Builder's Signature Date

Surveyor's Signature Date



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