

REPORT ON ELECTRIC LIGHTING INSTALLATION.

Port of Glasgow Received at London Office 18

No. 11222* Name of Ship City of Agra Built at Glasgow When built 1849

No. in Reg. Book. 602 Electric Light Installation fitted by Paterson & Cooper when fitted December 1891

DESCRIPTION OF DYNAMO AND ENGINE.—

Engine single cylinder 6 1/2 x 6 vertical type
Compound wound dynamo belt driven

Capacity of Dynamo 50 Amperes at 100 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed next to aft Bulkhead in engine Room.

LAMPS.—

Is vessel wired on single or double wire system double Total number of lights 82 arranged in the following groups:—

A	<u>20</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>11</u>	Amperes
B	<u>30</u>	lights each of	"	candle power requiring a total current of	<u>18</u>	Amperes
C	<u>32</u>	lights each of	"	candle power requiring a total current of	<u>19</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
<u>One</u>		Mast head light with <u>2</u> lamps each of	<u>16</u>	candle power requiring a total current of		Amperes
<u>Two</u>		Side light with <u>2</u> lamps each of	<u>16</u>	candle power requiring a total current of		Amperes
<u>Two</u>		Cargo lights of	<u>48</u>	candle power, whether incandescent or arc lights		<u>incandescent</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 A. B. C. of lights as above

Positions of other switch boards and numbers of switches on each No other Switchboards

If cut outs are fitted to main circuit yes 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 single pole only.

Are the cut outs of non-oxidizable metal yes of tin 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 No lamps in this position

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

DESCRIPTION OF CABLES.—

Main cable carrying	<u>47</u>	Amperes, comprised of	<u>19</u>	wires, each	<u>16</u>	legal standard wire gauge diameter
Branch cables carrying	<u>17+19</u>	Amperes, comprised of	<u>7</u>	wires, each	<u>16</u>	legal standard wire gauge diameter
Branch cables carrying	<u>11</u>	Amperes, comprised of	<u>7</u>	wires, each	<u>16</u>	legal standard wire gauge diameter
Leads to lamps	<u>6</u>	Amperes, comprised of	<u>1</u>	wires, each	<u>18</u>	legal standard wire gauge diameter
Cargo light cables carrying	<u>two</u>	Amperes, comprised of	<u>70</u>	wires, each	<u>40</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 600 megohms per statute mile after 24 hours' immersion in seawater

11222 g/s

DESCRIPTION OF INSULATION, PROTECTION, &c.—

Pure para rubber and vulcanising rubber

J.R. (Insulac) proofed tape, the whole vulcanised together, braided & compounded.

Joints in cables, how made, insulated, and protected soldered & covered with pure para rubber, rubber solution, and rubber proof 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 strong wood casing throughout the engine Room, Cabin &c thence over main deck to fore-castle in galvanised iron tubes

What special protection has been provided for the cables in open alleyways in galvanised iron pipes.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat No lamps in this position

What special protection has been provided for the cables near boiler casings ordinary wood casing

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

How are cables carried through decks Metal tubes and through bulkheads Leak plugs

Are any cables run through coal bunkers none or cargo spaces none If so, how are they protected

Are any lamps fitted in coal bunkers or spaces which may be used for cargo none

If so, how are they specially protected

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

TESTING, &c.—

Has the installation been thoroughly tested to its full capacity during a trial of yes. 6 hours' duration

The insulation resistance of the whole installation was not less than 200,000 ohms

The installation is supplied with a voltmeter and an amperemeter, fixed in switchboard.

General Remarks.—

The whole installation is fitted in accordance with the proposals issued by Lloyd's and the ordinary fire insurance regulations.

The foregoing statements are a correct description of the Electric Light installation fitted on this vessel and we declare that it is at this date in good order and safe working condition.

W. C. Martin & Co Electrical Engineers

Date Aug 30/93.

COMPASSES.—

Distance between dynamo and standard compass

Distance between dynamo and steering compass

The nearest cables to the compasses are as follows:—

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

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.

Builder's Signature Date

Surveyor's Signature Date