

RECEIVED
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No.

REPORT ON ELECTRIC LIGHTING INSTALLATION.

Port of Belfast

Received at London Office 17 DEC 92

No. 4192*

No. in Reg. Book.

Name of Ship

Sagamore

Built at

Belfast.

When built

1892

Electric Light Installation fitted by

J. H. Holmes & Coy

when fitted

Nov. 1892

DESCRIPTION OF DYNAMO AND ENGINE.—

2-8" x 6 Vertical open Auto. Expansion Governor
each coupled to 1 No 14 Castle Dynamo.

Capacity of Dynamo

140

Amperes at

60

Volts, whether continuous or alternating current

Continuous

Where is Dynamo fixed

in Engine Room.

WIRING.—

Vessel wired on single or double wire system

Single

Total number of lights

207

arranged in the following groups:—

<u>Bridge house</u>	<u>51</u> lights each of	<u>16</u>	candle power requiring a total current of	<u>51</u>	Amperes
<u>Engine room</u>	<u>35</u> lights each of	<u>16</u>	candle power requiring a total current of	<u>41</u>	Amperes
<u>Green decks</u>	<u>22</u> lights each of	<u>16</u>	candle power requiring a total current of	<u>22</u>	Amperes
<u>Forward</u>	<u>17</u> lights each of		candle power requiring a total current of		Amperes
<u>Aft</u>	<u>17</u> lights each of		candle power requiring a total current of		Amperes
<u>1st. 2. 3 + 4 lower decks</u>	<u>22</u> lights altogether		<u>Cargo</u> candle power requiring a total current of	<u>32</u>	<u>16</u>
<u>1</u>	<u>1</u> Mast head light with <u>2</u> lamps each of	<u>16</u>	candle power requiring a total current of	<u>2</u>	Amperes
<u>2</u>	<u>2</u> Side light with <u>2</u> lamps each of	<u>16</u>	candle power requiring a total current of	<u>4</u>	Amperes
<u>4 x 8</u>	<u>4 x 8</u> Cargo lights of	<u>16</u>	candle power, whether incandescent or arc lights	<u>32</u>	"

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

SWITCHES AND CUT-OUTS.—

Position of Main Switch Board

in Engine Room

having switches to groups

in Chart House

of lights as above

Positions of other switch boards and numbers of switches on each

in Chart House

with 8 switches containing

all above groups & 1 in Engine room

The main switchboard in Engine room contains only the main switches for the above groups + 1 Engine room switch together with main fuses & change over switch, 1 voltmeter and 2 ammeters.

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

Vessel is wired on the double wire system are cut outs fitted on each wire

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

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

yes

How are the lamps specially protected in places liable to the accumulation of vapour or gas

glass dish with India rubber rings

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

Porcelain

DESCRIPTION OF CABLES.—

Main cable carrying	Amperes, comprised of		wires, each	legal standard wire gauge diameter
Branch cables carrying	Amperes, comprised of		wires, each	legal standard wire gauge diameter
Branch cables carrying	Amperes, comprised of	<u>1000 amp</u>	wires, each	legal standard wire gauge diameter
Leads to lamps	Amperes, comprised of		wires, each	legal standard wire gauge diameter
Cargo light cables carrying	Amperes, comprised of		wires, each	legal standard wire gauge diameter

The copper used has a conductivity of _____ 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



DESCRIPTION OF INSULATION, PROTECTION, &c.—

Vulcanized Braided, & compounded.

Joints in cables, how made, insulated, and protected *twisted or spliced, soldered, covered with separator
Vulcanized rubber tape, compounded in a solid mass. If lead covered,
then finally protected with lead see joints*

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*

What special protection has been provided for the cables in open alleyways *Iron sheathed & lead covered*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Iron sheathed*

What special protection has been provided for the cables near boiler casings *Iron sheathed*

What special protection has been provided for the cables in engine room *Iron sheathed*

How are cables carried through decks *in lead lined deck cases* and through bulkheads *in shipping boxes or fibre lumber*

Are any cables run through coal bunkers *no* or ^{cattle} cargo spaces *yes* If so, how are they protected *in strong wood casing
& lead covered wires run inside*

Are any lamps fitted in coal bunkers or spaces which may be used for cargo *yes in cattle spaces*

If so, how are they specially protected *with C. I. covers*

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *connections in strong lead boxes*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *with 2 x 3/8" brass bolts & nuts*

How are the returns from the lamps connected to the hull *with 3/8" brass bolts & washers* → *screwed & lapped into Beal's*

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

TESTING, &c.—

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

The insulation resistance of the whole installation was not less than *100,000* ohms

The installation is *no* supplied with a voltmeter and *no* amperemeter, fixed *on switchboard*

General Remarks.—

A special switch is provided on board by means of which the load is changed from one dynamo to the other but no more than 130 amperes can be put on either dynamo, so that they cannot be overloaded.

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.

J. H. Holmes

Electrical Engineers

Date *7-12-92*

COMPASSES.—

Distance between dynamo and standard compass *100 ft*

Distance between dynamo and steering compass *95 ft*

The nearest cables to the compasses are as follows:— *see all double wired.*

A cable carrying *50* Amperes *about 15* feet from standard compass *2.0* feet from steering compass

A cable carrying *2* Amperes *6* 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

The maximum deviation due to electric currents, etc., was found to be *degrees on* *course in the case of the standard compass*

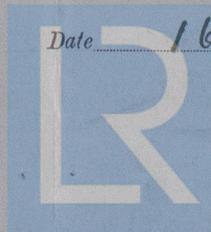
and *degrees on* *course in the case of the steering compass.*

Builder's Signature Date

A. L. Jones

Surveyor's Signature

Date *16th Dec 1892*



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