

REPORT ON ELECTRIC LIGHTING INSTALLATION.

Port of

Received at London Office

28 SEP 92

No. 4151 *

No. in

Name of Ship

Southern Cross

Built at

Belfast

When built

1892

Reg. Book.

754

Electric Light Installation fitted by

J. H. Holmes & Coy

when fitted

Sept 1892

DESCRIPTION OF DYNAMO AND ENGINE.—

1 open type Automatic governing engine with 7 cylinders & 6 stroke coupled direct to a No 13 Dynamo

Capacity of Dynamo

110

Amperes at

60

Volts, whether continuous or

alternating current

Continuous

Where is Dynamo fixed

Starboard Side Engine room

LAMPS.—

Is vessel wired on single or double wire system

Single

Total number of lights

83

arranged in the following groups:—

A Engine room 21 lights each of 16 candle power requiring a total current of 21 Amperes

B Midships 28 lights each of 25 x 16 & 3 = 32 candle power requiring a total current of 31 Amperes

C Engineers 9 lights each of 16 candle power requiring a total current of 9 Amperes

D Cargo 25 lights each of 16 candle power requiring a total current of 25 Amperes

E lights each of candle power requiring a total current of Amperes

31 Mast head light with 1 lamp each of 32 candle power requiring a total current of Amperes

2 Side lights with 2 lamps each of 32 candle power requiring a total current of Amperes

Cargo lights of

candle power, whether incandescent or arc lights

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 & D

of lights as above

Positions of other switch boards and numbers of switches on each

Auxiliary Switch boards are fixed in Engine room & Saloon pantry with 6 + 4 switches on each

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

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

Yes

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

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

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

98

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.—

Vulcanised rubber braided with cotton or hemp yarn and compounded with special compounds

Joints in cables, how made, insulated, and protected

Twisted joints. wires being carefully cleaned then twisted together & thoroughly soldered

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

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

Iron sheathed wire

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

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

How are cables carried through decks

in tubes

and through bulkheads

W. I. glands

Are any cables run through coal bunkers

No

or cargo spaces

Yes

If so, how are they protected

Extra strong wood casing fitted between the beams

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

No

If so, how are they specially protected

Cargo light cables, whether portable or permanently fixed

portable

How fixed

Socket connections

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel

1/2" Brass bolt nut & washers

How are the returns from the lamps connected to the hull

3/8" brass screw & washers

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

14

hours' duration

The insulation resistance of the whole installation was not less than

230,000

ohms

The installation is

supplied with a voltmeter and

not

an amperemeter, fixed on main board

General Remarks.—

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.

H. Holmes - G

Electrical Engineers

Date Sept 24/92

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

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

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

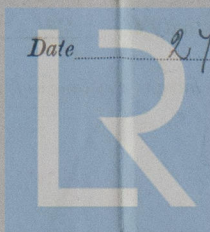
Date

A. L. Jones

Surveyor's Signature

Date

27th Sept 1892



Lloyd's Register Foundation