

REPORT ON ELECTRIC LIGHTING INSTALLATION.

Port of MIDDLESBROUGH-ON-TEES. Received at London Office 18
 No. 390 *
 No. in Reg. Book. Name of Ship "Oil Rivers" Built at Middlesboro When built Jan 7th 1891
 Electric Light Installation fitted by J. M. Holmes & Co. when fitted when built.

DESCRIPTION OF DYNAMO AND ENGINE.

7 1/2 Cylinder, 6 Stroke - vertical - automatic expansion governor - to regulate within 5% of speed with full or no load - 240 revolutions - Proportional
 Capacity of Dynamo 150 Amperes at 60 Volts, continuous or intermittent current

Where is Dynamo fixed Recess on Starboard Side Plating platform in Engine room

LAMPS.

Is vessel wired on single or double wire system Single Total number of lights 130 arranged in the following groups:—

A <u>Forward Circuit</u>	<u>22</u> lights each of <u>16</u>	candle power requiring a total current of <u>22</u> Amperes
B <u>Saloon</u>	<u>42</u> lights each of <u>16</u>	candle power requiring a total current of <u>42</u> Amperes
C <u>Engine Room</u>	<u>51</u> lights each of <u>16</u>	candle power requiring a total current of <u>51</u> Amperes
D <u>Aft Circuit</u>	<u>15</u> lights each of <u>16</u>	candle power requiring a total current of <u>15</u> Amperes
E	lights each of	candle power requiring a total current of Amperes
<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> Side light with	<u>2</u> lamps each of <u>16</u> each	candle power requiring a total current of <u>4</u> Amperes
<u>4</u> Cargo lights of	<u>8</u> lamps each of <u>16</u>	candle power, <u>whether</u> incandescent <u>or</u> lights

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

SWITCHES AND CUT-OUTS.

Position of Main Switch Board Near dynamo having switches to groups A B C D of lights as above

Positions of other switch boards and numbers of switches on each - Separate porcelain switches back light on Saloon Circuit other switches attached to the fittings

If cut outs are fitted to main circuit - No main circuit used 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

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

DESCRIPTION OF CABLES.

Main cable carrying	<u>Run</u> Amperes, comprised of <u>at 1000 amperes</u> <u>1/2</u> wires, each <u>1/2</u> legal standard wire gauge diameter
Branch cables carrying	Amperes, comprised of <u>1/2</u> wires, each <u>1/2</u> 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 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than megohms per statute mile after 24 hours' immersion in sea

DESCRIPTION OF INSULATION, PROTECTION, &c.—

As usual - (See our previous forms)

Joints in cables, how made, insulated, and protected

do.

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

do.

How are cables led throughout the ship

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

do.

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

do.

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

do.

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

do.

and through bulkheads

How are cables carried through decks

Are any cables run through coal bunkers

or cargo spaces

If so, how are they protected

do.

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

If so, how are they specially protected

In an efficient manner

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

Mass screw washers. Screwed into beams.

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

Five

hours' duration

Yes.

The insulation resistance of the whole installation was

50,000

ohms

The installation is

supplied with a voltmeter and

not

an amperemeter, fixed

on Switchboard

General Remarks.—

*Insulation: { Engine Room Circuit
Resistance { Aft
Measured on Feb 2. 1891 { Saloon
Forward*

120,000 ohms.

100,000 "

475,000 "

1,100,000 "

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. W. Holmes & Co.

Electrical Engineers

Date *Mar 3rd 91*

COMPASSES.—

Distance between dynamo and standard compass

Distance between dynamo and steering compass

*Sir. W. Thompson's compass on Bridge
about 70 ft from dynamo*

The nearest cables to the compasses are as follows:—

A cable carrying

4

Amperes

about 7

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.

SIR RAYLTON DIXON & Co.

Builder's Signature

Date

March 11th 1891.

H. M. Williams

Surveyor's Signature

Date

March 8th 1891.

MDCTH/115

