

# REPORT ON ELECTRIC LIGHTING INSTALLATION.

MON. 13 NOV 1893

Port of *W. Hartlepool.*

Received at London Office 18

No. *9246\**

No. in  
Reg. Book.

Name of Ship

*"Chickahominy"*

Built at *Furness*

*Witby, 16: Ltd*

When built

*Oct./93*

Electric Light Installation fitted by

*Clarke, Chapman, 16: Ltd*

when fitted *October 1893.*

## DESCRIPTION OF DYNAMO AND ENGINE.—

*Vertical engine coupled direct on same bedplate to compound wound dynamo.*

Capacity of Dynamo

*115*

Amperes at

*65*

Volts, whether continuous or alternating current *Continuous*

Where is Dynamo fixed

*In Engine Room.*

## LAMPS.—

Is vessel wired on single or double wire system

*double.*

Total number of lights

*126.*

arranged in the following groups:—

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

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

C lights each of candle power requiring a total current of 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

*Four*

Cargo lights of *4- 16 cp. lamps each* 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 *2 Main circuits from board of lights as above*

Positions of other switch boards and numbers of switches on each

*One sub. switchboard in Starboard alleyway.*

*with 4 switches. One cattle space forward. Main Deck — One do. Upper Deck — One do. aft Main Deck — 1 do aft Upper Deck — Also one sub. switchboard in Saloon Lobby with 3 switches. 1 for Accommodation. 1 for Forecastle — 1 for Wheelhouse aft.*

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

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

*Yes.*

## DESCRIPTION OF CABLES.—

Main cable carrying

*75*

Amperes, comprised of

*19*

wires, each

*15.*

legal standard wire gauge diameter

Branch cables carrying

*22*

Amperes, comprised of

*7*

wires, each

*16.*

legal standard wire gauge diameter

Branch cables carrying

*16*

Amperes, comprised of

*7*

wires, each

*18*

legal standard wire gauge diameter

Leads to lamps

*One*

Amperes, comprised of

*1*

wires, each

*16 + 1/18*

legal standard wire gauge diameter

Cargo light cables carrying

*4*

Amperes, comprised of

*160*

wires, each

*40*

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.—

Insulated pure I.R., then vulcanising I.R., I.R. coated tape & the whole vulcanised together & drawn into lead tubes, all joints being lead covered.

Joints in cables, how made, insulated, and protected Taped & covered with lead properly 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 Engine room, Storehold, Tunnel, galley & cables are in lead tubes, then taped & iron sheathed & fixed with brass clips. otherwise laid in casing close against deck & with teak plugs through all

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

See above

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

See above

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 deck tubes with teak plugs and through bulkheads through tubes & teak plugs. If so, how are they protected carried in galvanised

Are any cables run through coal bunkers Yes. or cargo spaces

iron pipes clipped to beams

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

The decks are all for cattle.

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

Six

hours' duration

The insulation resistance of the whole installation was not less than

120,000

ohms

The installation is supplied with a voltmeter and

an ammeter, fixed on main Switchboard

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.

FOR CLARKE, CHAPMAN & CO. LTD.

Electrical Engineers

Date 10<sup>th</sup> Nov. 1893

COMPASSES.—

Distance between dynamo and standard compass

MANAGING DIRECTOR

90 feet

Distance between dynamo and steering compass

84 feet

The nearest cables to the compasses are as follows:—

A cable carrying One Amperes

300

feet from standard compass

Three

feet from steering compass

A cable carrying " Amperes

feet from standard compass

3 feet

6 ins 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.

For FURNESS, WITIN & CO. LIMITED.

Builder's Signature

Date

11<sup>th</sup> Nov. 1893

Surveyor's Signature

Date

11<sup>th</sup> November 1893



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