

# REPORT ON ELECTRIC LIGHTING INSTALLATION.

Port of SUNDERLAND

SAT. 12 JAN 1895

No. 14645 \*

Received at London Office 18

No. in  
Reg. Book.

Name of Ship

Merionethshire

Built at

SUNDERLAND

When built

1894

Electric Light Installation fitted by

Blanke Chapman & Co. Ltd. when fitted

1894

## DESCRIPTION OF DYNAMO AND ENGINE.—

One vertical double-acting engine dia. of cyl.  $6\frac{1}{2}$ " stroke 6" working at a pressure of 80 lbs.  $\square$ " + coupled direct to a compound-wound drum armature dynamo turning at 340 Revs. per minute.

Capacity of Dynamo

75

Amperes at

65

Volts, whether continuous or alternating current

Continuous

Where is Dynamo fixed

on port side of steering engine

## LAMPS.—

Is vessel wired on single or double wire system

double

Total number of lights

4 Cargo shades + one projector

arranged in the following groups:—

A 4 Cargo lights each of 500 candle power requiring a total current of 70 Amperes

B 1 projector lights each of candle power requiring a total current of 60 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

1 arc lamp

~~Cargo~~ lights of

3000

candle power, whether incandescent or arc lights

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

Arc lamp. mains are fitted with switches cut-outs & the lamp is enclosed in glass lantern.

## SWITCHES AND CUT-OUTS.—

Position of Main Switch Board

near to dynamo

having switches to groups

A + B

of lights as above

Positions of other switch boards and numbers of switches on each

4 Cargo in boxes fitted with switch & connection for Cargo lamp

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

Cables not branched.

If 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 close to switches

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

60

Amperes, comprised of

19

wires, each

16

legal standard wire gauge diameter

3

Branch cables carrying

18

Amperes, comprised of

7

wires, each

16

legal standard wire gauge diameter

Branch cables carrying

Amperes, comprised of

wires, each

legal standard wire gauge diameter

Cargo

Leads to lamps

18

Amperes, comprised of

7

wires, each

16

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

600

megohms per statute mile after 24 hours' immersion in seawater

DESCRIPTION OF INSULATION, PROTECTION, &c.—

Insulated pure india rubber, then vulcanizing india rubber, india rubber coated laps & the whole vulcanized together

Joints in cables, how made, insulated, and protected

no joints

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

How are cables led throughout the ship

in wrot iron galvanized piping.

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

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 wrot iron galvanized piping and through bulkheads

dith.

Are any cables run through coal bunkers

yes

or cargo spaces

yes

If so, how are they protected

in W.I. galvanized piping

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

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

3

hours' duration

yes

The insulation resistance of the whole installation was not less than

1,000,000

ohms

The installation is supplied with a voltmeter and

an amperemeter, fixed

on 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 and safe working condition.

FOR CLARKE, CHAPMAN & CO. LTD.

Electrical Engineers

Date

14<sup>th</sup> Jan

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.

FOR THE SUNDERLAND  
SHIPBUILDING CO. LD.

James R. Hirstly

SECRETARY

John Salmon

Builder's Signature

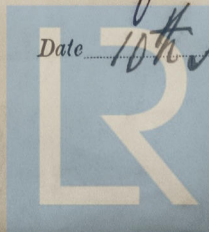
Date

Jan 9<sup>th</sup> 1895

Surveyor's Signature

Date

10<sup>th</sup> Jan 1895



Lloyd's Register  
Foundation