

## REPORT ON ELECTRIC LIGHTING INSTALLATION.

Port of Belfast

11 DEC 84

Received at London Office 18

No. 4446 \*No. in  
Reg. Book.

Name of Ship

"Ulstermore"

Built at

Belfast

When built

1894-12m.

Electric Light Installation fitted by

W. H. Allen & Sons

when fitted

December 1894

## DESCRIPTION OF DYNAMO AND ENGINE.

2 double acting single vertical engines coupled direct to compound wound dynamo, running at 250 revs per min, both of Allens patent.

Capacity of Dynamo

100

Amperes at

62

Volts, whether continuous or alternating current

continuous

Where is Dynamo fixed

In recess on middle platform facing engine

## LAMPS.—

Is vessel wired on single or double wire system

single

Total number of lights

164

arranged in the following groups:—

A	<u>33</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>33</u>	Amperes		
B	<u>54</u>	lights each of	<u>3.1 of 16</u>	candle power requiring a total current of	<u>54</u>	Amperes		
C	<u>28</u>	lights each of	<u>3 of 32</u>	candle power requiring a total current of	<u>28</u>	Amperes		
D	<u>56</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>56</u>	Amperes		
E	<u>including</u>	lights each of	<u>-</u>	candle power requiring a total current of	<u>-</u>	Amperes		
	<u>1</u>	Mast head light with	<u>1</u>	lamps each of	<u>32</u>	candle power requiring a total current of	<u>2</u>	Amperes
	<u>2</u>	Side light with	<u>1</u>	lamps each of	<u>32</u>	candle power requiring a total current of	<u>4</u>	Amperes
	<u>4</u>	Cargo lights of	<u>128</u>	candle power, whether incandescent or arc lights	<u>incandescent</u>			

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

-

## SWITCHES AND CUT-OUTS—

Position of Main Switch Board

on middle platform

having switches to groups

A B C D

of lights as above

Positions of other switch boards and numbers of switches on each

-

If cut outs are fitted to main circuit

yes

and to each auxiliary circuit

yes where required

and at each position where cable is branched or reduced in size

yes where required

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 + lined

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	<u>100</u>	Amperes, comprised of	<u>34</u>	wires, each	<u>16</u>	legal standard wire gauge diameter
Branch cables carrying	<u>33 + 28</u>	Amperes, comprised of	<u>19</u>	wires, each	<u>18</u>	legal standard wire gauge diameter
Branch cables carrying	<u>54 + 56</u>	Amperes, comprised of	<u>19</u>	wires, each	<u>16</u>	legal standard wire gauge diameter
Leads to lamps	<u>1</u>	Amperes, comprised of	<u>1</u>	wires, each	<u>20/18</u>	legal standard wire gauge diameter
Cargo light cables carrying	<u>8</u>	Amperes, comprised of	<u>148</u>	wires, each	<u>38</u>	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



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BEL 64-0152



DESCRIPTION OF INSULATION, PROTECTION &c.—

Vulcanised rubber of best quality

Joints in cables, how made, insulated, and protected

soldered & insulated with pure mella & asphaltic tape

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 casings

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

casings

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

armoured lead sheath

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

How are cables carried through decks

deck tubes

and through bulkheads

fibre bushes

Are any cables run through coal bunkers

No

or cargo spaces

Yes

If so, how are they protected

along channel in

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

If so, how are they specially protected

Cargo light cables, whether portable or permanently fixed

portable

How fixed

complex

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

earth run to main

How are the returns from the lamps connected to the hull

earth run of main

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

6

hours' duration

72

The insulation resistance of the whole installation was not less than

ohms

The installation is

supplied with a voltmeter and

an ammeter, fixed

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.

John W. Allen for the  
prominent

Electrical Engineers

Date Dec 6th 94.

COMPASSES.—

Distance between dynamo and standard compass

about 100 feet

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

Yes

The maximum deviation due to electric currents, etc., was found to be

0

degrees on

0

course in the case of the standard compass

and 0 degrees on

0

course in the case of the steering compass.

Builder's Signature

Date

A. L. Jones

Surveyor's Signature

Date

10th Dec 1894



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