

REPORT ON ELECTRIC LIGHTING INSTALLATION.

Port of Sunderland Received at London Office MON. 4 DEC 1893
 No. 17162 *
 No. in Name of Ship Umfuli Built at Sunderland When built 1893
 Reg. Book. _____
 Electric Light Installation fitted by Messrs J. H. Holmes & Co. when fitted 1893

DESCRIPTION OF DYNAMO AND ENGINE.—

1. 7' 6" Open Auto vertical engine coupled direct to
 1. No. 13 Dynamo Castle type

Capacity of Dynamo 110 Amperes at 60 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Starting Platform

LAMPS.—

Is vessel wired on single or double wire system Double Total number of lights 107 arranged in the following groups:—

A	<u>Aft</u>	<u>41</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>36.9</u>	Amperes
B	<u>Midships</u>	<u>41</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>36.9</u>	Amperes
C	<u>Forward</u>	<u>9</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>8.1</u>	Amperes
D	<u>Engine Room</u>	<u>16</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>14.4</u>	Amperes
E			lights each of		candle power requiring a total current of		Amperes
	<u>Mast head light with</u>	<u>—</u>	<u>lamps each of</u>	<u>—</u>	candle power requiring a total current of	<u>—</u>	Amperes
	<u>Side light with</u>	<u>—</u>	<u>lamps each of</u>	<u>—</u>	candle power requiring a total current of	<u>—</u>	Amperes
	<u>4</u>	<u>Cargo lights of</u>	<u>5 × 16 cs</u>		candle power, whether incandescent or arc lights	<u>Incandescent</u>	

If arc 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. &c. of lights as above

Positions of other switch boards and numbers of switches on each

1 Aux. switchboard in Engine Room fitted with 5 switches
 1 " " " Pantry aft " " 6 "
 1 " " " Midships " " 7 "

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 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

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 _____ 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 2,000 megohms per statute mile after 24 hours' immersion in seawater

DESCRIPTION OF INSULATION, PROTECTION, &c.—

Tinned copper, pine para rubber + two coats vulcanising rubber J. R. proofed tape the whole vulcanised together, braided & compounded.

Joints in cables, how made, insulated, and protected The wires to be joined are first bared & thoroughly cleaned, then twisted or woven together & soldered, so as to make a strong metallic joint, The joint is then lapped with rubber, tape &c & varnished with shellac.

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 wood casing

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

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 W. I. Deck tubes and through bulkheads stuffing boxes

Are any cables run through coal bunkers yes or cargo spaces — If so, how are they protected Iron pipes

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 sockets

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 5 hours' duration yes

The insulation resistance of the whole installation was not less than 150000 ohms No

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.

Electrical Engineers

Date Dec 16/93

COMPASSES.—

Distance between dynamo and standard compass about 56 feet on Bridge

Distance between dynamo and steering compass 132 feet on Poop.

The nearest cables to the compasses are as follows:—

A cable carrying Amperes feet from standard compass feet from steering compass

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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

Surveyor's Signature

Date

24 December 1893



Lloyd's Register Foundation