

REPORT ON ELECTRIC LIGHTING INSTALLATION.

Port of Newcastle

WED. 10 JAN 1894

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 Name of Ship S.S. "Susoflake" Built at Newcastle When built
 Electric Light Installation fitted by Clarke, Chapman, & Co. Ltd. when fitted November 1893.

DESCRIPTION OF DYNAMO AND ENGINE.—

One vertical single cylinder engine having cylinders 6½" x 6" and coupled direct to compound wound dynamo on one bedplate.

Capacity of Dynamo 62 Amperes at 65 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed In Engine Room.

MPS.—

Vessel wired on single or double wire system Double Total number of lights 68 arranged in the following groups:—

34 lights each of 16 candle power requiring a total current of 34 Amperes

31 lights each of 16 candle power requiring a total current of 28 Amperes

lights each of candle power requiring a total current of Amperes

lights each of candle power requiring a total current of Amperes

lights each of candle power requiring a total current of Amperes

1 Mast head light with 1 lamps each of double filament 32 candle power requiring a total current of Amperes

2 Side light with 1 lamps each of do candle power requiring a total current of Amperes

None Cargo lights of candle power, whether incandescent or arc lights

Are 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 of lights as above

Positions of other switch boards and numbers of switches on each one switch to each light and Pump room (3) lights controlled by one switch outside pump room.

Are cut outs fitted to main circuit Yes and to each auxiliary circuit Yes

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

Are vessels wired on the double wire system are cut outs fitted on each wire no except at main switch board.

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

Are vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas Yes

How are the lamps specially protected in places liable to the accumulation of vapour or gas in air tight fittings

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

DESCRIPTION OF CABLES.—

Main cable carrying 62 Amperes, comprised of 19 wires, each 16 legal standard wire gauge diameter

Branch cables carrying 22 Amperes, comprised of 7 wires, each 16 legal standard wire gauge diameter

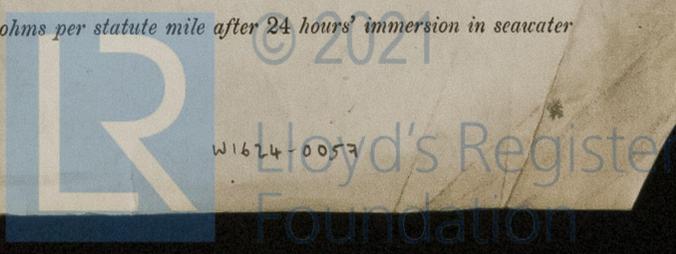
Branch cables carrying 12 Amperes, comprised of 7 wires, each 18 legal standard wire gauge diameter

Cables to lamps 9 Amperes, comprised of 1 wires, each 18 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 2000 megohms per statute mile after 24 hours' immersion in seawater



DESCRIPTION OF INSULATION, PROTECTION, &c.—

Cables & wires insulated pure I.R. then vulcanizing I.R. I.R. Coated tape and the whole vulcanized together & covered preservative compound
Cables are braided in addition to this

Joints in cables, how made, insulated, and protected soldered with resin, two layers pure rubber tape, rubber solution then finished with two layers of prepared tape & solution.

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 under beams in engine room & holes in lead lined unwarmed cables*

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

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *oil lamps are not fitted close to cables*

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

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

How are cables carried through decks *through pipes* and through bulkheads *teak plugs*

Are any cables run through coal bunkers *yes* or cargo spaces *yes* If so, how are they protected *lead covered cables laid in casings*

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

If so, how are they specially protected *in cast iron air tight boxes with lids*

Cargo light cables, whether portable or permanently fixed _____ 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 _____ 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.

H. R. Chapman FOR CLARKE, CHAPMAN & CO. LTD. Electrical Engineers
Director.

Date *3rd Jan^{ry} 1914*

COMPASSES.—

Distance between dynamo and standard compass *14 3 feet*

Distance between dynamo and steering compass *13 9 feet*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>1.8</i>	Amperes	<i>8</i>	feet from standard compass	<i>6</i>	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 *nil* degrees on *East* course in the case of the standard compass and *nil* degrees on *West* course in the case of the steering compass.

FOR SIR W. G. ARMSTRONG, MITCHELL & CO. L^{td}

Arthur Gulston
Richard Sturt

Builder's Signature Date *6th January 1894*

Surveyor's Signature Date *8th January 1893*



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