

REPORT ON ELECTRIC LIGHTING INSTALLATION.

Port of *Belfast* Received at London Office *THURS. 9 AUG 1894*
 No. *4401* *
 No. in Reg. Book. Name of Ship *Logician* Built at *Belfast* When built *1894 - 7m.*
 Electric Light Installation fitted by *W. H. Allen & Co. London* when fitted *July 1894*

DESCRIPTION OF DYNAMO AND ENGINE.—

W. H. Allen's patent compound dynamo coupled direct to three vertical single cylinder high pressure engine.
 Capacity of Dynamo *60* Amperes at *62* Volts, whether continuous or alternating current *Continuous*
 Where is Dynamo fixed *Bottom platform engine room on Starboard Side.*

LAMPS.—

Is vessel wired on single or double wire system *Single* Total number of lights *80* arranged in the following groups:—
 A *28* lights each of *16* candle power requiring a total current of *28* Amperes
 B *36* lights each of *16* candle power requiring a total current of *36* Amperes
 C *16* lights each of *16* candle power requiring a total current of *16* 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
 1 Mast head light with 1 lamp each of *32* candle power requiring a total current of *2* Amperes
 2 Side lights with 1 lamp each of *32* candle power requiring a total current of *4* Amperes
 6 Cargo lights of *96* candle power, whether incandescent or arc lights *Incandescent*
 If arc lights, what protection is provided against fire, sparks, &c.

SWITCHES AND CUT-OUTS.—

Position of Main Switch Board *Engine room Bottom platform* switches to groups *A.B.C.* of lights as above
 Positions of other switch boards and numbers of switches on each *On main switchboard is placed a separate switch for circuit feeding Arc Light and Projector to be used in Survey Canal.*
 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 *pure tin* and constructed to fuse at an excess of *35* per cent over the normal current
 Are all cut outs fitted in easily accessible positions *All fuses placed in purveys or on bulk heads.*
 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 *Base of porcelain*

DESCRIPTION OF CABLES.—

Main cable carrying *54* Amperes, comprised of *19* wires, each *16* legal standard wire gauge diameter
 Branch cables carrying *5* Amperes, comprised of *7* wires, each *22* legal standard wire gauge diameter
 Branch cables carrying *3* Amperes, comprised of *1* wires, each *16* legal standard wire gauge diameter
 Leads to lamps *1* Amperes, comprised of *1* wires, each *18* legal standard wire gauge diameter
 Cargo light cables carrying *6* Amperes, comprised of *145* wires, each *38* legal standard wire gauge diameter
 The copper used has a conductivity of *99* 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.—

All cables are of best vulcanized rubber type with an insulation resistance of 2000 megohms per mile.

Joints in cables, how made, insulated, and protected

All joints thoroughly soldered being covered with pure rubber. felt and oakum like tapes finally covered with insulating varnish

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

yes.

How are cables led throughout the ship

~~Planned to be soldered to brass rail covers~~
secured into beams of ship. Casing of wood used in alleyways and passages
Cables running to Prop and Forecastle being lead sheathed and armored clipped to bulkheads

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

Hard wood casing additionally protected by the flames over head

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

Strong casing

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

All cables in boiler room and engine room

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

of high insulation resistance sheathed with steel wire

How are cables carried through decks

Galvanized iron duct pipes and through bulkheads Fibre bushes

Are any cables run through coal bunkers

no

or cargo spaces

no

If so, how are they protected

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

with Adams' cargo coupler

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

terminal bolted to field magnets

How are the returns from the lamps connected to the hull

Soldered to the main cables secured into beams of ship

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

hours' duration

The insulation resistance of the whole installation was not less than

ohms

The installation is furnished supplied with a voltmeter and

an amperemeter, fixed

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.

M. Hall R.

Electrical Engineers

Date 26th July 1894

COMPASSES.—

Distance between dynamo and standard compass

78 feet

Distance between dynamo and steering compass

72 feet.

The nearest cables to the compasses are as follows:—

A cable carrying	1	Amperes	9	feet from standard compass	3	feet from steering compass
A cable carrying	17	Amperes	18	feet from standard compass	12	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.

PRO WORKMAN, CLARK & CO., LIMITED.

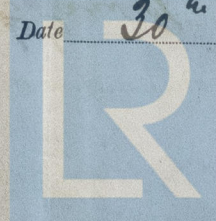
Builder's Signature

Date 30th July 1894

A. L. Jones

Surveyor's Signature

Date 30th July 1894



Lloyd's Register Foundation