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 Thwr 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 Suez 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 passages or on bulkheads.

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 uninflammable materials and fitted on uninflammable 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

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H.C.

DESCRIPTION OF INSULATION, PROTECTION, &c.—

All cables are of best vulcanised 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 ozokerite 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 ~~Return wires soldered to brass [illegible] screwed into beams of ship.~~ Casing of wood used in alleyways and passages Cables running to Poop and Forecastle being lead sheathed and armoured clipped to bulwarks

What special protection has been provided for the cables in open alleyways Hard wood casing additionally protected by

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Strong casing the planes over head

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 Galvanised iron deck 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* W H Allen's cargo coupler

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

How are the returns from the lamps connected to the hull Soldered to ⅜" brass screws. screwed 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 Fixed *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.

W H Allen & Co. 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.
W. McLeowes pro Builder's Signature *Date* 30th July 1894
SECRETARY

A. L. Jones Surveyor's Signature *Date* 30th July 1894