

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 10776 * Port of Glasgow Received at London Office 18
 No. 489 Name of Ship Medway Built at C. Cammell & Co. When built 1886
 Reg. Book. 489 Electric Light Installation fitted by Norman & Son Limited when fitted June 1891

DESCRIPTION OF DYNAMO AND ENGINE.—

Engine & dynamo coupled together on one lead - Engine 6 1/2 x 6' open type vertical - dynamo compound wound - Speds about 320 revs. per min.

Capacity of Dynamo 2500 Amperes at 240 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Engine Room. Port side of vessel - placed with shaft 'fair & off'.

LAMPS.—

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

A 41 lights each of 16 & 50 candle power requiring a total current of 45 Amperes

B 21 lights each of 16 candle power requiring a total current of 20 Amperes

C 44 lights each of 16 & 50 candle power requiring a total current of 45 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

Mast head light with lamps each of candle power requiring a total current of Amperes

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

Sam Cargo lights of 50 candle power, whether incandescent or arc lights None

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

SWITCHES AND CUT-OUTS.—

Position of Main Switch Board Engine Room having switches to groups of lights as above

Positions of other switch boards and numbers of switches on each

If cut outs are fitted to main circuit Yes double pole 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 In main circuits

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 In brass or iron pipes

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

DESCRIPTION OF CABLES.—

Main cable carrying 147 Amperes, comprised of 19 wires, each 19 legal standard wire gauge diameter

Branch cables carrying 28 Amperes, comprised of 7 wires, each 15 legal standard wire gauge diameter

Branch cables carrying 12 Amperes, comprised of 1 wires, each 10 legal standard wire gauge diameter

Leads to lamps 2 1/2 Amperes, comprised of 1 wires, each 12 legal standard wire gauge diameter

Cargo light cables carrying 1 1/2 Amperes, comprised of 1 wires, each 12 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 600 megohms per statute mile after 24 hours' immersion in seawater

10776 ges

DESCRIPTION OF INSULATION, PROTECTION, &c.—

Cable wires & cables run securely in wood casing & piping. Special care has been taken in exposed positions—

Joints in cables, how made, insulated, and protected Solignum with resin & insulated rubber solution rubber tape prepared tape & orokenti 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 stout wood casing—using piping in exposed places.

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

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

What special protection has been provided for the cables near boiler casings Stout wood casing & piping

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

How are cables carried through decks ——— hard wood timbers and through bulkheads hard wood timbers

Are any cables run through coal bunkers Yes or cargo spaces Yes If so, how are they protected piping & stout wood casing

Are any lamps fitted in coal bunkers or spaces which may be used for cargo Yes & securely covered.

If so, how are they specially protected No well out of danger

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 24 hours' duration with satisfaction

The insulation resistance of the whole installation was not less than 250000 ohms & considerably higher

The installation is efficiently supplied with a voltmeter and also an amperemeter, fixed on bulkhead

General Remarks.—

The entire work carried out. Under Messrs' instructions is carefully done & in our opinion should give satisfaction. We have paid special attention to all exposed parts—

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.

Alana Hamilton, Electrical Engineers
MANAGER & SECRETARY

Date 28th July 1891

COMPASSES.—

Distance between dynamo and standard compass more than 30 feet.

Distance between dynamo and steering compass — 100 —

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
47	30	100	
28	40	110	
10	20	20	

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 nil course in the case of the standard compass and nil degrees on nil course in the case of the steering compass.

Builder's Signature Date

Surveyor's Signature Date



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