

REPORT ON ELECTRIC LIGHTING INSTALLATION.

MON. 4 JAN 1892

Port of Glasgow

No. 11201*
 No. in Reg. Book. _____ Name of Ship "Dilwara" Built at Glasgow When built 1891
 Electric Light Installation fitted by Wm. Hamie & Co. Glasgow when fitted December 1891

DESCRIPTION OF DYNAMO AND ENGINE.—

a Compound-wound 4 pole Dynamo by Wm. Hamie & Co. driven by a Charles double Cylinder Silent Engine
 Capacity of Dynamo 375 Amperes at 50 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Near Starting Gear in Engine Room

LAMPS.—

Is vessel wired on single or double wire system Double Total number of lights 312 arranged in the following groups:—

Group	No. of lamps	lights each of	candle power	requiring a total current of	Amperes
A	25	16	25	25	Amperes
AA	26	16	26	26	Amperes
B	36	16	36	36	Amperes
BB	36	16	36	36	Amperes
C	40	16	40	40	Amperes
CC	46	16	46	46	Amperes
D	19	16	19	19	Amperes
DD	32	16	32	32	Amperes
E					Amperes

~~Main 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~~

~~Cargo lights of _____ candle power, whether incandescent or arc lights~~

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

SWITCHES AND CUT-OUTS.—

Position of Main Switch Board Close to Dynamo having switches to groups (9) of lights as above

~~Positions of other switch boards and numbers of switches on each~~

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 No only on One wire

Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of 25 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 40 Amperes, comprised of 19 wires, each 16 legal standard wire gauge diameter

Branch cables carrying 25 Amperes, comprised of 7 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 _____ 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 600 megohms per statute mile after 24 hours' immersion in seawater

DESCRIPTION OF INSULATION, PROTECTION, &c.—

Tulcaised Rubber Covered Cable
Wire, having an insulation resistance of 600 megohms per mile is
used throughout the vessel, run in wood grooves.

Joints in cables, how made, insulated, and protected *Soldered, & afterwards insulated with pyroind tape*
Pure Rubber Sheet & pyroind 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 thoroughly seasoned wood, each wire & cable in its own groove.*

What special protection has been provided for the cables in open alleyways *No Open alleyways*
 What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead covered wire*

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 *In Iron Tubes* and through bulkheads *In Hardwood blocks*

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 *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 *9* hours' duration *Yes*

The insulation resistance of the whole installation was not less than *45,000* ohms

The installation is *(P)* supplied with a voltmeter *and* *an amperometer*, fixed *on side 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.

P. R. Fayus for Wm. Hamer & Co. Electrical Engineers Date *28th Dec 1891*

COMPASSES.—

Distance between dynamo and standard compass *180 feet*

Distance between dynamo and steering compass *190 feet*

The nearest cables to the compasses are as follows:—

A cable carrying *1.8* Amperes *18* feet from standard compass *28* 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 *No* degrees on *any* course in the case of the standard compass

and *No* degrees on *any* course in the case of the steering compass.

A. S. Inglis Builder's Signature Date *31st Dec 1891.*

J. Hearle Surveyor's Signature Date *1st Jan 1892*

