Rpt. 13.

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REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 16896.

Port of Glasgow Date of First Survey 1/6/15 Date of Last Survey 9/8/15 No. of Visits 23.

No. in Reg. Book — on the Iron or Steel H.M.S. "Veronica" Port belonging to

Built at Port Glasgow By whom Dunlop, Bremner & Co Ltd. When built 1915

Owners Owners' Address

Yard No. Electric Light Installation fitted by Claud Hamilton, Ltd. When fitted 1915.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two Steam Engines direct coupled to compound Dynamos.

Capacity of Dynamo 250 Amperes at 105 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Engine Room. Starboard Side Whether single or double wire system is used Double Wire

Position of Main Switch Board Engine Room. Starboard Side having switches to groups of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each

If fuses are fitted on main switch board to the cables of main circuit Yes and on each auxiliary switch board to the cables of auxiliary circuits and at each position where a cable is branched or reduced in size yes and to each lamp circuit 25 lights

If vessel is wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits yes

Are the fuses of non-oxidizable metal yes and constructed to fuse at an excess of 50 per cent over the normal current

Are all fuses fitted in easily accessible positions yes Are the fuses of standard dimensions yes If wire fuses are used are permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 160 arranged in the following groups :—

A	26	lights each of	16	candle power requiring a total current of	15.6	Amperes
B	26	lights each of	16	candle power requiring a total current of	15.6	Amperes
C	24	lights each of	16	candle power requiring a total current of	14.4	Amperes
D	28	lights each of	16	candle power requiring a total current of	16.8	Amperes
E	26	lights each of	16	candle power requiring a total current of	15.6	Amperes
2	Mast head light with	1	lamps each of	16	candle power requiring a total current of	1.2	Amperes
2	Side light with	1	lamps each of	16	candle power requiring a total current of	1.2	Amperes
2	Cargo lights of	9 -		50	candle power, whether incandescent or arc lights		

If arc lights, what protection is provided against fire, sparks, &c. 2 Admiralty 20" Projectors

Where are the switches controlling the masthead and side lights placed Wheel House.

DESCRIPTION OF CABLES.

Main cable carrying	117	Amperes, comprised of	37	wires, each	14	S.W.G. diameter,	.182 square inches total sectional area
Branch cables carrying	75	Amperes, comprised of	19	wires, each	16	S.W.G. diameter,	.060 square inches total sectional area
Branch cables carrying	15	Amperes, comprised of	19	wires, each	17	S.W.G. diameter,	.046 square inches total sectional area
Leads to lamps carrying	3.6	Amperes, comprised of	1	wires, each	14	S.W.G. diameter,	.0250 square inches total sectional area
Cargo light cables carrying	16	Amperes, comprised of	19	wires, each	20	S.W.G. diameter,	.019. square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered cables

Joints in cables, how made, insulated, and protected none

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances — Are all joints in accessible positions, none being made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage

Are there any joints in or branches from the cable leading from dynamo to main switch board No.

How are the cables led through the ship, and how protected Clipped to Decks, Bulkheads & Wood Grounds by brass saddles.

DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible Yes

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture Lead covered

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

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

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

How are cables carried through beams Lead Bushes *through bulkheads, &c.* metal packing glands

How are cables carried through decks Galvanised iron deck tubes

Are any cables run through coal bunkers No *or cargo spaces* No *or spaces which may be used for carrying cargo, stores, or baggage* —

If so, how are they protected —

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage No

If so, how are the lamp fittings and cable terminals specially protected —

Where are the main switches and fuses for these lights fitted —

If in the spaces, how are they specially protected —

Are any switches or fuses fitted in bunkers —

Cargo light cables, whether portable or permanently fixed Portable *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 —

Is the installation supplied with a voltmeter Yes, *and with an amperemeter* Yes, *fixed* main Switchboard

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas —

Are any switches, fuses, or joints of cables fitted in the pump room or companion —

How are the lamps specially protected in places liable to the accumulation of vapour or gas —

The copper used is guaranteed to have a conductivity of not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than 2500 megohms per statute mile at 60° Farhenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

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.

for CLAUD HAMILTON, LIMITED
A. B. *Electrical Engineers* *Date* Aug 17th/15.

COMPASSES.

Distance between dynamo or electric motors and standard compass 25 ft.

Distance between dynamo or electric motors and steering compass 32 ft.

The nearest cables to the compasses are as follows:—

A cable carrying	3	*Amperes*	3	*feet from standard compass*	3	*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 — *degrees on* — *course in the case of the standard compass and* — *degrees on* — *course in the case of the steering compass.*

DUNLOP BREMNER & CO., LIMITED
Geo. G. Parker *Builder's Signature.* *Date* 20/8/15.

GENERAL REMARKS.

The materials & workmanship are good. On completion the installation was tried under full working conditions with satisfactory results. The contract being carried out in accordance with Lord Admiralty specification.

Noted. JWD. 7/9/15.

Haslette.
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute GLASGOW 11 AUG. 1915

Elec Light.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im.9.12.—Transfer.