

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 17260.

Port of Greenock Date of First Survey 10th Dec. 1914, Date of Last Survey 8th March 1918, No. of Visits 26.
 No. in Reg. Book on the Iron or Steel L. F. A. Hickman Port belonging to
 Built at Greenock By whom A. McMillan & Co. When built 1918
 Owners British Admiralty Owners' Address
 Yard No. 490 Electric Light Installation fitted by Claude Hamilton & Co. When fitted 1918

DESCRIPTION OF DYNAMO, ENGINE, ETC.

High speed engine direct coupled to compound wound ship lighting dynamo.

Capacity of Dynamo 100 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Engine Room Whether single or double wire system is used double
 Position of Main Switch Board Engine Room having switches to groups 4 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each none.

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 yes and at each position where a cable is branched or reduced in size yes and to each lamp circuit yes

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 100 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 yes

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

Total number of lights provided for 161 arranged in the following groups:—

A	14	lights each of	20 Watts	candle power requiring a total current of	2.8	Amperes
B	58	lights each of	12-20 Watts. 16-50 C.P. carbon	candle power requiring a total current of	36.	Amperes
C	46	lights each of	20 Watt	candle power requiring a total current of	9.2.	Amperes
D	53	lights each of	34-20 Watt 16-50 C.P. carbon	candle power requiring a total current of	35	Amperes
E		lights each of		candle power requiring a total current of		Amperes
1	Mast head light with	16 lamps each of	16	candle power requiring a total current of	2	Amperes
2	Side light with	16 lamps each of	16	candle power requiring a total current of	4	Amperes
4	Cargo lights of	each of	8-50	candle power, whether incandescent or arc lights	incandescent	

If arc lights, what protection is provided against fire, sparks, &c. no arc lamp.

Where are the switches controlling the masthead and side lights placed Bridge.

DESCRIPTION OF CABLES.

Main cable carrying	100	Amperes, comprised of	34	wires, each	15	S.W.G. diameter,	.150	square inches total sectional area
Branch cables carrying	36	Amperes, comprised of	19	wires, each	16	S.W.G. diameter,	.06	square inches total sectional area
Branch cables carrying	9	Amperes, comprised of	19	wires, each	17	S.W.G. diameter,	.045	square inches total sectional area
Leads to lamps carrying	2	Amperes, comprised of	1	wires, each	14	S.W.G. diameter,	.002	square inches total sectional area
Cargo light cables carrying	11	Amperes, comprised of	19	wires, each	22	S.W.G. diameter,	.011	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables insulated with india rubber vulcanized india rubber braided lead covered

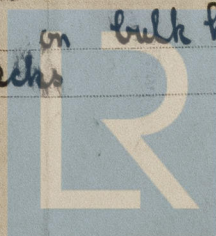
Joints in cables, how made, insulated, and protected no joints

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 Lead covered wire run on bulk heads & under decks

Cables are all to Admiralty Specification and circulate drawings.



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 cover.

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

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

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

How are cables carried through beams Lead bushes through bulkheads, &c. W. I. Glanch. ✓

How are cables carried through decks W. I. 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 no

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 none

If in the spaces, how are they specially protected —

Are any switches or fuses fitted in bunkers no

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 1

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 yes.

Are any switches, fuses, or joints of cables fitted in the pump room or companion no

How are the lamps specially protected in places liable to the accumulation of vapour or gas Special magazine fittings

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 600 megohms per statute mile at 60° Fahrenheit 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**

Electrical Engineers

Date 4th March 1918.

COMPASSES.

Distance between dynamo or electric motors and standard compass 140 feet

Distance between dynamo or electric motors and steering compass 145 -

The nearest cables to the compasses are as follows:—

A cable carrying	Ampères	feet from standard compass	feet from steering compass
10	12	15	
2	8	12	

Have the compasses been adjusted with and without the electric installation at work at full power (Adjusted by Admiralty Officials)

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.

ARCHD. McMILLAN & SON, LTD.

Garrick DIRECTOR

Builder's Signature.

Date

12th March 1918

GENERAL REMARKS.

The material and workmanship are good. Upon completion the installation was tested under full load with satisfactory results. The work has been carried out in accordance with the Admiralty specifications.

It is submitted that this vessel is eligible for THE RECORD. Elec. light.

JWD 5/4/18 Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

GLASGOW 3 APR 1918

Elec Light



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