

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 41483

Port of Glasgow Date of First Survey 22.9.21 Date of Last Survey 6.10.21 No. of Visits 4
 No. in on the Iron or Steel S.S. "ARCHLIGHT" Port belonging to Greenock
 Reg. Book 08642 Built at Proon By whom Messrs The Oulton S. B. Co When built 1921
 Owners The Light Shipping Co Ltd. Owners' Address Greenock
 Yard No. 381 Electric Light Installation fitted by Messrs Belford & Co. & Mr. Hay When fitted 1921

DESCRIPTION OF DYNAMO, ENGINE, ETC.

TOTAL KW = 3.5.

Open type, single cylinder, double acting vertical engine, direct coupled to open protected compound wound multipolar dynamo
 Capacity of Dynamo 35 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed On starting platform Whether single or double wire system is used Double
 Position of Main Switch Board On bulkhead at dynamo having switches to groups Five circuits of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each no. auxiliary switch boards.

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 none and at each position where a cable is branched or reduced in size none 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 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 yes
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 64 arranged in the following groups:—

A	Navigation	4	lights each of	32	candle power requiring a total current of	4.00	Amperes
B	Clusters	24	lights each of	16	candle power requiring a total current of	12.00	Amperes
C	Forward	9	lights each of	80 Watts	candle power requiring a total current of	2.70	Amperes
D	Midships	10	lights each of	30 Watts	candle power requiring a total current of	3.00	Amperes
E	After End	17	lights each of	30 "	candle power requiring a total current of	5.10	Amperes
1	Mast head light with	1	lamp each of	32	candle power requiring a total current of		Amperes
2	Side lights with	1	lamp each of	32	candle power requiring a total current of		Amperes
	4	Cargo lights of		80	candle power, whether incandescent or arc lights	incandescent	

If arc lights, what protection is provided against fire, sparks, &c. no arc lightsWhere are the switches controlling the masthead and side lights placed On Navigating Bridge Deck.

DESCRIPTION OF CABLES.

Main cable carrying 35 Amperes, comprised of 19 wires, each .052 S.W.G. diameter, 0.0400 square inches total sectional area
 Branch cables carrying 4 Amperes, comprised of 7 wires, each .029 S.W.G. diameter, 0.0045 square inches total sectional area
 Branch cables carrying 3 Amperes, comprised of 7 wires, each .029 S.W.G. diameter, 0.0045 square inches total sectional area
 Leads to lamps carrying 2 Amperes, comprised of 3 wires, each .029 S.W.G. diameter, 0.0020 square inches total sectional area
 Cargo light cables carrying 3 Amperes, comprised of 3 wires, each .036 S.W.G. diameter, 0.0030 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables in accommodation are lead covered over V.I.R. insulation
 In engine room and stokehold & V.I.R. insulation, protected by steel armoring, and ~~and~~ braiding, and compounding
 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 none 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 none

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 Cables are led through beams, clipped up closely to decks, and protected by steel armour.

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
of armoured braided and compounded

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat armoured braided & compounded

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

What special protection has been provided for the cables in engine room ditto

How are cables carried through beams Armoured braided & compounded through bulkheads, &c. in W.T. Glands

How are cables carried through decks Waterlight Deck Tubes

Are any cables run through coal bunkers no or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage yes

If so, how are they protected Armoured braided & compounded

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 none

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 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 on 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 — 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.

Telford Greig Macchay his Electrical Engineers Date 30/11/21

COMPASSES.

Distance between dynamo or electric motors and standard compass —

Distance between dynamo or electric motors and steering compass —

The nearest cables to the compasses are as follows:—

A cable carrying	<u>4</u>	Amperes	<u>8</u>	feet from standard compass	<u>8</u>	feet from steering compass
A cable carrying	<u>2</u>	Amperes	<u>4</u>	feet from standard compass	<u>6</u>	feet from steering compass
A cable carrying	<u>25</u>	Amperes	<u>fitted inside</u>	<u>feet from</u> standard compass	<u>fitted inside</u>	<u>feet from</u> 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 nil degrees on — course in the case of the standard compass and nil degrees on — course in the case of the steering compass.

AILSA SHIPBUILDING CO., LIMITED.

Wm. S. Watson

Builder's Signature.

Date 3rd December 1921

GENERAL REMARKS.

This installation has been fitted on board under special survey. Tested under full working conditions & found satisfactory.

FEE £5-0-0
EXP 10-0-

a/c 17/10/21

Paid 19/10/21 fine

Rec. Light.
21 9/12/21

J. S. Rankin.

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

Committee's Minute

GLASGOW 6 DEC 1921

Elec. Light.



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