

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 34649

Port of GLASGOW Date of First Survey 14<sup>th</sup> July 1918 Date of Last Survey 5<sup>th</sup> April 1918 No. of Visits 11  
 No. in on the ~~Iron~~ or Steel S.S. "POLYCARP" Port belonging to (540)  
 Reg. Book Built at Glasgow By whom Messrs. Barclay, Curle & Co. When built  
 Owners Owners' Address  
 Yard No. Electric Light Installation fitted by A. Watson & Co. Ltd., When fitted

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

1 - 6½ B.H.P. Single Cylinder Open Type Engine Direct Coupled to a 16 K.W. Compound wound dynamo running at 300 R.P.M.

Capacity of Dynamo 160 ✓ Amperes at 100 ✓ Volts, whether continuous or alternating current continuous ✓

Where is Dynamo fixed Bottom platform Engine Room Whether single or double wire system is used Single ✓

Position of Main Switch Board adjacent to Dynamo having switches to groups 9 circuits 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 - 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 -

Are the fuses of non-oxidizable metal Yes and constructed to fuse at an excess of 90-100 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 196 arranged in the following groups :-

A	<u>56</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>11.2</u>	Amperes
B	<u>24</u>	lights each of	<u>32</u>	candle power requiring a total current of	<u>9.6</u>	Amperes
C	<u>12</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>2.4</u>	Amperes
D	<u>17</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>4.2</u>	Amperes
E	<u>63</u>	lights each of	<u>32</u>	candle power requiring a total current of	<u>14.2</u>	Amperes
	<u>4</u>	lights each of	<u>32</u>	candle power requiring a total current of	<u>.1</u>	Amperes
1	Mast head light with	1 lamps each of	<u>2½</u>	candle power requiring a total current of	<u>.32</u>	Amperes
2	Side light with	2 lamps each of	<u>8</u>	candle power requiring a total current of	<u>.32</u>	Amperes
8	Cargo lights of	6 Lamps each	<u>32</u>	candle power, whether incandescent or arc lights	<u>Incandescent</u>	

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

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

## DESCRIPTION OF CABLES.

Main cable carrying 160 ✓ Amperes, comprised of 37 ✓ wires, each 12 ✓ S.W.G. diameter, .300 ✓ square inches total sectional area  
 Branch cables carrying 12.6 ✓ Amperes, comprised of 19 ✓ wires, each 17 ✓ S.W.G. diameter, .046 ✓ square inches total sectional area  
 Branch cables carrying 9.6 ✓ Amperes, comprised of 19 ✓ wires, each 18 ✓ S.W.G. diameter, .034 ✓ square inches total sectional area  
 Leads to lamps carrying 2 ✓ Amperes, comprised of 3 ✓ wires, each 22 ✓ S.W.G. diameter, .0018 ✓ square inches total sectional area  
 Cargo light cables carrying 2.4 ✓ Amperes, comprised of 110 ✓ wires, each 38 ✓ S.W.G. diameter, .0032 ✓ square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Insulation is of pure and Vulcanizing Indiarubber, taped, the whole vulcanized together and finished with lead sheathing and galvanized wire armouring

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 Generally the cables are clipped direct to inside of decks and bulkheads with no further protection than the armouring



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 They are enclosed in metal conduits

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Nothing further than the armouring

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

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

How are cables carried through beams in fibre ferrules through bulkheads, &c. W.T.Glands ✓

How are cables carried through decks Galvanized Iron 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 As above

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage Portables with connections outside

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 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 with suitable sweating socket with lock nuts

How are the returns from the lamps connected to the hull Cable is placed between washers and secured to hull by tapped screw

Are all the joints with the hull in accessible positions Yes

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 2500 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 ARCHD. WATSON & CO., LTD.,

Electrical Engineers

Date 23<sup>rd</sup> April 1918

COMPASSES.

Distance between dynamo or electric motors and standard compass 100

Distance between dynamo or electric motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying	<u>.25</u>	Amperes	<u>2</u>	feet from standard compass	<u>2</u>	feet from steering compass
A cable carrying	<u>8</u>	Amperes	<u>16</u>	feet from standard compass	<u>6</u>	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

The maximum deviation due to electric currents, etc., was found to be 0 degrees on standard compass and 0 degrees on steering compass

S. S. Creevy Secretary

Builder's Signature.

Date 25<sup>th</sup> April 1918

GENERAL REMARKS.

This installation has been well fitted on board and when tested under full working conditions was found Satisfactory

It is submitted that this vessel is eligible for

THE RECORD. Elec. light.

J.W.D. 2/5/18.

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

Committee's Minute

GLASGOW 30 APR 1918

Elec. Light



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



ARCHD. WATSON &amp; Co., LTD.

*S.S. Polycarp*REPORT ON ELECTRICAL INSTALLATION contd.

F.	2 Lights each of $2\frac{1}{2}$ C.P.	)	
	11 " " 8 C.P.	)	Requiring a total current of 8 amperes
	9 " " 16 C.P.	)	
	1 " " 32 C.P.	)	
	1 Morse Lamp	)	

G.	24 Lights each of 32 C.P.	)	
	12 " " of 16 C.P.	)	Requiring a total current of 12.6 amperes
	1 Fan	)	

H.	28 Fans	16.8 amperes
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I.	Wireless Telegraphy	30 amperes.
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Insulation is of pure and vulcanizing India rubber, taped, and whole vulcanized together and finished with lead sheathing and galvanized wire armouring