

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 38595

Port of Glasgow Date of First Survey Feb 4<sup>th</sup> 1919 Date of Last Survey 3<sup>rd</sup> March No. of Visits 4  
 No. in Reg. Book on the Iron or Steel Reserve Lug. "St. Olaves" Port belonging to London  
 Built at Govan By whom Messrs Harland & Wolff When built 1919  
 Owners The Admiralty Owners' Address \_\_\_\_\_  
 Card No. 564 Electric Light Installation fitted by Messrs Harland & Wolff When fitted 1919

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 12 1/2 H.P. 100 Volt "Holmes" Dynamo - R.P.M. 900 to 6" x 5" single cylinder  
"Shanks" vertical enclosed steam engine giving output of 16 B.H.P.  
 Capacity of Dynamo 125 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed Engine Rm. Starboard side Whether single or double wire system is used double  
 Position of Main Switch Board Engine Rm. Starboard Having switches to groups A.B.C.D. 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 lead 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 48 Lights arranged in the following groups:—

A	<u>Shore</u>	lights each of		candle power requiring a total current of		Amperes
B	<u>Engine &amp; Boiler Rm. &amp; Accommodation</u>	lights each of	<u>58-30 Watt 5-16</u>	candle power requiring a total current of	<u>34.8</u>	Amperes
C	<u>Wireless</u>	lights each of	<u>3-30 Watt 3-8 C.P.</u>	candle power requiring a total current of	<u>5.0</u>	Amperes
D	<u>Navigation</u>	lights each of	<u>5-16 C.P. 4-32 C.P.</u>	candle power requiring a total current of	<u>9.66</u>	Amperes
E		lights each of		candle power requiring a total current of		Amperes
	<u>2 Mast head light</u>	with <u>1</u> lamp each of	<u>32</u>	candle power requiring a total current of	<u>2.4</u>	Amperes
	<u>2 Side light</u>	with <u>1</u> lamp each of	<u>16 &amp; 32</u>	candle power requiring a total current of	<u>1.8</u>	Amperes
	<u>2-6 light Cargo lights</u>	of	<u>32</u>	candle power, whether incandescent or arc lights	<u>incandescent</u>	

If arc lights, what protection is provided against fire, sparks, &c. None

Where are the switches controlling the masthead and side lights placed in wheelhouse

## DESCRIPTION OF CABLES.

Main cable carrying 50 Amperes, comprised of 37 wires, each .042 S.W.G. diameter, .150 square inches total sectional area  
 Branch cables carrying 12 Amperes, comprised of 7 wires, each .18 S.W.G. diameter, .0125 square inches total sectional area  
 Branch cables carrying 2.4 Amperes, comprised of 3 wires, each .18 S.W.G. diameter, .0053 square inches total sectional area  
 Leads to lamps carrying 1.8 Amperes, comprised of 1 wires, each .17 S.W.G. diameter, .0025 square inches total sectional area  
 Cargo light cables carrying 7.2 Amperes, comprised of 90 wires, each .36 S.W.G. diameter, .00408 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cable of 2500 Megohm grade classed to C.M.A. insulated with pure and vulcanised rubber, protected with lead covering.

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 Lead covered cables run on wooden bulkhead, in accommodation etc and perforated plating in Engine & Boiler Rm. secured by brass clips about 10" apart.



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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 cable exposed

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Lead covered cable exposed

What special protection has been provided for the cables near boiler casings Lead covered cable exposed on perforated plating

What special protection has been provided for the cables in engine room Lead covered cable exposed on perforated plating and in tubing on the gratings

How are cables carried through beams beams bushed with lead through bulkheads, &c. in A.P. W. S. Glands

How are cables carried through decks in A.P. Copper Deck Tubes, protected by sheet iron casing

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

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 Permanent to terminal box, Lead covered cable clipped portable from term. box How fixed to bulkheads where permanent

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 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.

*John Dickenson*

Electrical Engineers

Date 5th March 1919

COMPASSES.

Distance between dynamo or electric motors and standard compass 75 feet

Distance between dynamo or electric motors and steering compass 73 feet

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
1.2	6	3	
4.2	7	4	
10.0	8	6	

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 all the course in the case of the standard compass and nil degrees on all the course in the case of the steering compass.

*John Dickenson*

Builder's Signature.

Date 5th March 1919

GENERAL REMARKS.

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

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

*J. Stanley Rankin*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW 25 MAR 1918

Elec. Light

*WJM*



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HC 10.3.19

154,116—Transfer.