

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. H0094

Port of Glasgow Date of First Survey 26/3/20 Date of Last Survey 14/6/20 No. of Visits 3  
 No. in Reg. Book 322155 on the Iron Steel SS Firpark Port belonging to  
 Built at Grangemouth By whom Messrs The Grangemouth D.D. When built 1920  
 Owners The Ocean Liners Line of Steamers Ltd Owners' Address  
 Yard No. 400 Electric Light Installation fitted by Messrs W.C. Martin & Co When fitted 1920

**DESCRIPTION OF DYNAMO, ENGINE, ETC.**

One 8 Kw compound wound dynamo direct coupled to an open type vertical single cylinder double acting steam engine  
 Capacity of Dynamo 73 Amperes at 110 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed Starting platform in engine Room Whether single or double wire system is used Single  
 Position of Main Switch Board near dynamo having switches to groups A, B, C, D, E of lights, &c., as below  
 Positions of auxiliary fuse boards and numbers of fuses on each Chart Room 6 way, Saloon 6 way, Steering Gear house 1-2 way & 2-4 ways, Crew space 4 way, Engine Room 4 way

If fuses are fitted on main switch board to the cables of main circuit yes and on each auxiliary fuse 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 cessel 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 104 arranged in the following groups:—

A Saloon & Navigation	37 lights each of 32, 16, 8, & 6	candle power requiring a total current of	18	Amperes
B Midships & aft	27 lights each of 32, 16 & 8	candle power requiring a total current of	14.3	Amperes
C Bulbosters	24 lights each of 16	candle power requiring a total current of	12.0	Amperes
D Engine Room	19 lights each of 16	candle power requiring a total current of	9.5	Amperes
E Wireless Telegraphy	lights each of —	candle power requiring a total current of	4.5	Amperes
2 Mast head light with 2 lamps each of 32		candle power requiring a total current of	1	Amperes
2 Side light with 2 lamps each of 32		candle power requiring a total current of	1	Amperes
4 Cargo lights of 96		candle power, whether incandescent or arc lights	incandescent	

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

Where are the switches controlling the masthead and side lights placed in Chart Room

**DESCRIPTION OF CABLES.**

Main cables carrying	43 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .094 square inches total sectional area
Branch cables carrying	18 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .022 square inches total sectional area
Branch cables carrying	14.3 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .022 square inches total sectional area
Leads to lamps carrying	2.5 Amperes, comprised of 1 wires, each 16 S.W.G. diameter, .0032 square inches total sectional area
Cargo light cables carrying	3.36 Amperes, comprised of 108 wires, each 38 S.W.G. diameter, .0048 square inches total sectional area

**DESCRIPTION OF INSULATION, PROTECTION, ETC.**

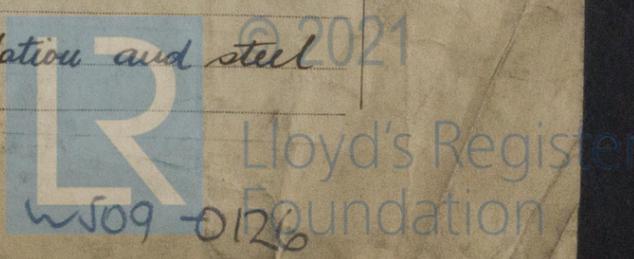
A.C. Copper wire tinned, insulated with pure + vulcanised rubber & tape, the whole vulcanised together, taped, braided & compounded or sheathed with lead or steel armour.

Joints in cables, how made, insulated, and protected No joints except on terminals

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 in accommodation and steel armour in Holds, Engine Room & Boiler Room



**DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.**

Are they in places always accessible Yes, except when cargo in holds.

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

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Steel armour

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

What special protection has been provided for the cables in engine room Steel armour or metal tubes

How are cables carried through beams lusted where unarmoured through bulkheads, &c. W.L. Glands

How are cables carried through decks Metal-tubes fitted watertight to decks

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 Steel armour cables clipped openly protected by beams

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 portable How fixed Hook Connectors

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 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.

W.C. Martin & Co

Electrical Engineers

Date 23<sup>rd</sup> June 1920

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 60 ft. from Dynamo

Distance between dynamo or electric motors and steering compass 56 ft. from Dynamo

The nearest cables to the compasses are as follows:—

A cable carrying	<u>.28</u>	Amperes	<u>6</u>	feet from standard compass	<u>1</u>	feet from steering compass
A cable carrying	<u>.28</u>	Amperes	<u>1</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 yes

The maximum deviation due to electric currents, etc., was found to be Nil degrees on a certain course in the case of the standard compass and Nil degrees on the same course in the case of the steering compass.

FOR THE GRANGE MOUTH DOCKYARD CO., LTD.

J.P. Jackson

Builder's Signature.

Date 26<sup>th</sup> June 1920

**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.W.D.  
20/7/20

J.B. Rankin

Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 6 - JUN 1920

Elec. light



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