

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 44694.

Port of Glasgow. Date of First Survey 13-12-21 Date of Last Survey 23-1-22 No. of Visits 4  
 No. in on the Iron or Steel S.S. "OUSK" Port belonging to London  
 Reg. Book 384998 Built at Port Glasgow By whom Messrs Ferguson Bros Ltd When built 1921  
 Owners The C.A.B. & Co Ltd Owners' Address \_\_\_\_\_  
 Yard No. 323 Electric Light Installation fitted by M<sup>r</sup> J. Charles When fitted 1921

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

*Replaced by a 16 1/2 KW. M.T. 740.* **TOTAL KW: 75**  
One single cylinder enclosed forced lubrication engine coupled direct to single pedestal bearing open type compound wound dynamo  
 Capacity of Dynamo 63 Amperes at 110 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Engine Room Starboard Whether single or double wire system is used Double wire  
 Position of Main Switch Board E.R. Store casing having switches to groups A, B, C, D & E of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each \_\_\_\_\_

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 Copper + Tin 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 S.W.G. 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 2 @ 2500 w, 4 @ 200 w, 5 @ 32 cp, 59 @ 30 w, 66 @ 16 cp + 1 Morse lamp + 2 Anchor Lamps. arranged in the following groups:—

A Cargo Clusters	2 lights each of 1000 cp + 63 lights @ 16 candle power requiring a total current of	41.1.	Amperes
B Navigation	5 lights each of 32 cp + 6 lights 25 candle power requiring a total current of	6.7 + .3	Amperes
C Accommodation	15 lights each of 30 w + 25 candle power requiring a total current of	4.1.	Amperes
D Engine Room	4 lights each of 200 w + 10 lights 25 candle power requiring a total current of	10.0	Amperes
E Midship Accom <sup>2</sup>	28 lights each of 30 w + 3 lights 16 candle power requiring a total current of	9.1.	Amperes
2 Mast head light with	2 lamps each of 32 candle power requiring a total current of	2.04	Amperes
2 Side light with	2 lamps each of 32 candle power requiring a total current of	2.04	Amperes
and 2-500 watt 1/2 watt Lamps			
8 Cargo lights of 96 c.p. 6-Ditto	48 candle power, whether incandescent or are lights	incandescent.	

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

Where are the switches controlling the masthead and side lights placed

Midship Chanthouse.

## DESCRIPTION OF CABLES.

Main cable carrying	68 Amperes, comprised of	19 wires, each	14 S.W.G. diameter,	.04.1 square inches total sectional area
Branch cables carrying	41.1 Amperes, comprised of	7 wires, each	.064" S.W.G. diameter,	.0225 square inches total sectional area
Branch cables carrying	10 Amperes, comprised of	3 wires, each	.036" S.W.G. diameter,	.003 square inches total sectional area
Leads to lamps carrying	27.5 Amperes, comprised of	3 wires, each	22 S.W.G. diameter,	.0018 square inches total sectional area
Cargo light cables carrying	3 Amperes, comprised of	40 wires, each	36 S.W.G. diameter,	.0018 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Conductor of high conductivity tinned copper wires, insulated with one coat of Pure + two coats of Vulcanising India Rubber, taped, the whole vulcanised together, braided & compounded overall. C.A.B. 600 Ω grade. & A.P. 254.

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 In Engine & Boiler Rooms & the Holds H.G. Solid Drawn galvanised tube. Accommodation Lead covered wire clipped direct to steel work & wood work.



**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 L.C. or Galv. Tubing.

What special protection has been provided for the cables near galleys or oil tanks or other sources of heat Galvanised Tubing

What special protection has been provided for the cables near boiler casings L.C. or Galvanised Tubing.

What special protection has been provided for the cables in engine room Galvanised Tubing.

How are cables carried through beams where L.C. lead pushed holes through bulkheads, &c. Tubing or W/T Glands.

How are cables carried through decks Tubing or W/T 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 Galvanised Tubing.

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage in Stores only.

If so, how are the lamp fittings and cable terminals specially protected Guarded fittings

Where are the main switches and fuses for these lights fitted switches only in the Spaces.

If in the spaces, how are they specially protected fitted in safe positions.

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 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.

J. Charters

Electrical Engineers

Date 23rd January '22

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 60'.

Distance between dynamo or electric motors and steering compass ✓

The nearest cables to the compasses are as follows:—

Cable carrying	Amperes	Distance from standard compass	Distance from steering compass
<u>7</u>	<u>Amperes</u>	<u>10</u> feet from standard compass <u>✓</u>	<u>✓</u> feet from steering compass
<u>4.6</u>	<u>Amperes</u>	<u>12</u> feet from standard compass <u>✓</u>	<u>✓</u> feet from steering compass
<u>5</u>	<u>Amperes</u>	<u>in</u> feet from standard compass <u>✓</u>	<u>✓</u> 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 any course in the case of the standard compass and Nil degrees on any course in the case of the steering compass.

Robert Ferguson

Builder's Signature.

Date 2nd February 1922

**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.

Exp. - 14.10.0  
10.6. Said 7/22

Elec. Light.

J.S. Rankin

9/2/22 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Elec. Light.



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