

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 41876

Port of GLASGOW Date of First Survey 20.3.22 Date of Last Survey 4.4.22 No. of Visits 3  
 No. in Reg. Book on the Iron or Steel S.S. MAYFIELD Port belonging to DUBLIN  
 Built at SCOTSTOWN By whom MESSRS YARROW & CO LTD When built 1922  
 Owners THE CARGO SHIP CO LTD Owners' Address C. J. IRWIN ENNISCORTHY  
 Yard No. 1470 Electric Light Installation fitted by MESSRS SIEMENS BROS & CO LTD When fitted 1922

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

TOTAL K.W. = 6.5

One Compound Wound Engine Base Type Generator - Output 6.6 K.W., 110 Volts, direct coupled to a Robey 6 1/2" x 6" Single Cylinder, Open Type, High Speed Vertical Engine, 11 B.H.P., 330 R.P.M. Steam 100/180 Lbs  
 Capacity of Dynamo 60 Amperes at 110 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Engine Rm, Starboard Side, Aft Whether single or double wire system is used Double  
 Position of Main Switch Board " " " " having switches to groups A to C. 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 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 61 arranged in the following groups :-

A <u>Gen. &amp; Cargo</u>	<u>3</u> lights each of <u>32</u>	candle power requiring a total current of <u>11.9.</u>	Amperes
B <u>Accommodation</u>	<u>12</u> lights each of <u>32</u>	candle power requiring a total current of <u>5.5.</u>	Amperes
C <u>Machinery</u>	<u>14</u> lights each of <u>25</u>	candle power requiring a total current of <u>3.8.</u>	Amperes
D	lights each of <u>001</u>	candle power requiring a total current of	Amperes
E	lights each of	candle power requiring a total current of	Amperes
<u>2</u> Mast head lights with <u>1</u> lamp each of <u>32</u>		candle power requiring a total current of <u>2.36.</u>	Amperes
<u>2</u> Side lights with <u>1</u> lamp each of <u>32</u>		candle power requiring a total current of <u>2.36</u>	Amperes
<u>12</u> (in cluster of 6) Cargo lights 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.

Where are the switches controlling the masthead and side lights placed Gen. Light Indicator in Chart Rm, Port.

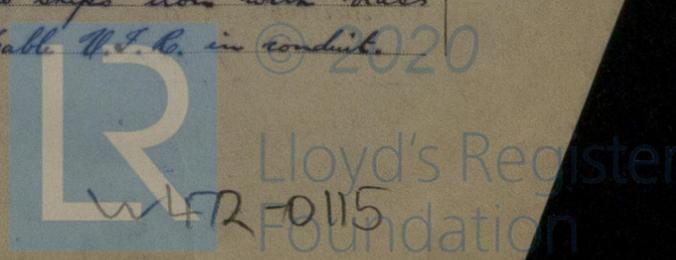
**DESCRIPTION OF CABLES.**

Main cable carrying 21.2 Amperes, comprised of 19 wires, each .052 S.W.G. diameter, .04 square inches total sectional area  
 Branch cables carrying 11.9 Amperes, comprised of 7 wires, each .044 S.W.G. diameter, .01 square inches total sectional area  
 Branch cables carrying 6.5 Amperes, comprised of 7 wires, each .036 S.W.G. diameter, .007 square inches total sectional area  
 Leads to lamps carrying 5 Amperes, comprised of 3 wires, each .029 S.W.G. diameter, .002 square inches total sectional area  
 Cargo light cables carrying 2.2 Amperes, comprised of 110 wires, each .0076 S.W.G. diameter, .0048 square inches total sectional area

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

Conductors of High Conductivity Copper Wire, insulated with pure or vulcanized india rubber taped & braided - Also the foregoing but taped, & lead covered - Also the foregoing but armoured with galvanized steel wires, the whole being braided. Also U.S.C. in G.I. Conduit  
 Joints in cables, how made, insulated, and protected No joints - Circular Porcelain Extensions.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances Yes 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 Yes  
 Are there any joints in or branches from the cable leading from dynamo to main switch board Yes  
 How are the cables led through the ship, and how protected Clipped to Wooden Bulkheads, or to ships iron with brass or Galvanized Clips, by means of brass screws. Through Holds - cable U.S.C. in conduit.



**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. & A.  
U.S.R. in conduit.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat L. C. & A.

What special protection has been provided for the cables near boiler casings L. C. & A.

What special protection has been provided for the cables in engine room L. C. & A.

How are cables carried through beams Fibre bushed holes through bulkheads, &c. W.T. Bulkhead glands.

How are cables carried through decks W.T. Packed Deck Tubes.

Are any cables run through coal bunkers Yes or cargo spaces Yes or spaces which may be used for carrying cargo, stores, or baggage Yes

If so, how are they protected U.S.R. cable in f.f. conduit.

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

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

Where are the main switches and fuses for these lights fitted Yes

If in the spaces, how are they specially protected Yes

Are any switches or fuses fitted in bunkers Yes

Cargo light cables, whether portable or permanently fixed Permanent to Connectors How fixed Brass clips to Deck & Bulkheads.  
Portable to Cluster

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel Yes

How are the returns from the lamps connected to the hull Yes

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 Yes

Are any switches, fuses, or joints of cables fitted in the pump room or companion Yes

How are the lamps specially protected in places liable to the accumulation of vapour or gas Yes

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.

For SIEMENS BROTHERS & CO., LIMITED,  
MARINE DEPARTMENT.

Electrical Engineers

Date 6<sup>th</sup> April 1922

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 110 feet

Distance between dynamo or electric motors and steering compass 110 ft

The nearest cables to the compasses are as follows:—

A cable carrying	<u>11.9</u>	Amperes	<u>12</u>	<u>110 feet</u>	feet from steering compass
A cable carrying	<u>5.5</u>	Amperes	<u>30</u>	<u>110 ft</u>	feet from steering compass
A cable carrying	<u>3</u>	Amperes	<u>in</u>	<u>110 ft</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 ANY course in the case of the standard compass and Yes degrees on ANY course in the case of the steering compass.

J. G. Young & Co. (1922) Ltd. J. W. Diddie,

Builder's Signature.

Date 10<sup>th</sup> April 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.

FRS 26-10-0. of 14/4/22.

Elec. Light.

19/4/22

J. Rankin

Surveyor to Lloyd's Register of Shipping.

2m.11.10.—Transfer.

Committee's Minute

GLASGOW

APR 1922

Elec. Light.



© 2020

Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.