

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 41392

Port of Glasgow. Date of First Survey 2.2.1921 Date of Last Survey 29.9.1921 No. of Visits 11
 No. in on the Iron or Steel SB "DIPLOMAT" Port belonging to Liverpool
 Reg. Book 56271 Built at Whitby By whom Messrs C. Connell & Co Ltd When built 1920
 Owners Charter S. S. Co Ltd Owners' Address Messrs T. J. Harrison
 Yard No. 382 Electric Light Installation fitted by Messrs Campbell & Isherwood When fitted 1921

DESCRIPTION OF DYNAMO, ENGINE, ETC.

— TOTAL K.W. — 17

W. H. Allen Sons. 4 Pole Compound Wound Dynamo direct coupled to their open type Engines

Capacity of Dynamo 140 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Engine Room Whether single or double wire system is used single
 Position of Main Switch Board " having switches to groups 4 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Chart Room 6
Engine Room 6

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

Are the fuses of non-oxidisable metal Yes and constructed to fuse at an excess of 80 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 146 arranged in the following groups:—

A	<u>60</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>30</u>	Amperes		
B	<u>60</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>30</u>	Amperes		
C	<u>30</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>15</u>	Amperes		
D	<u>20</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>10</u>	Amperes		
E		lights each of		candle power requiring a total current of	<u>7</u>	Amperes		
	<u>1</u>	Mast head light with	<u>1</u>	lamps each of	<u>32</u>	candle power requiring a total current of	<u>7</u>	Amperes
	<u>2</u>	Side light with	<u>2</u>	lamps each of	<u>32</u>	candle power requiring a total current of	<u>2</u>	Amperes

Cargo lights of both candle power, whether incandescent or arc lights

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

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

DESCRIPTION OF CABLES.

Main cable carrying 140 Amperes, comprised of 34 wires, each .083 S.W.G. diameter, 2 square inches total sectional area
 Branch cables carrying 30 Amperes, comprised of 4 wires, each .064 S.W.G. diameter, .0225 square inches total sectional area
 Branch cables carrying 30 Amperes, comprised of 4 wires, each .064 S.W.G. diameter, .0225 square inches total sectional area
 Leads to lamps carrying 5 Amperes, comprised of 1 wires, each .044 S.W.G. diameter, .0015 square inches total sectional area
 Cargo light cables carrying 3 Amperes, comprised of 108 wires, each .40 S.W.G. diameter, — square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered Armoured & Braided

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 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 No

How are the cables led through the ship, and how protected Steel tubes on deck



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W382-0027

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. + B. cable

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

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

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

How are cables carried through beams Fibre Grommets through bulkheads, &c. Brass Glands

How are cables carried through decks Galv. Steel Pipes to 18" above decks

Are any cables run through coal bunkers Yes or cargo spaces No or spaces which may be used for carrying cargo, stores, or baggage Yes

If so, how are they protected L.C.A. + B. cables. Steel Tubes + Cast Iron Fittings

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 Enclosed Fittings

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

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 Couplings Boxes on Deck

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

How are the returns from the lamps connected to the hull between Brass Washers

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 main 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.

Campbell + Sherwood Ltd. Electrical Engineers

Date 15/10/21

COMPASSES.

Distance between dynamo or electric motors and standard compass 200 feet

Distance between dynamo or electric motors and steering compass 200 feet

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
30	10	6	
15	15	10	

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 — course in the case of the standard compass and Nil degrees on — course in the case of the steering compass.

For CHARLES CONNELL & CO., Limited.

Secretary

Builder's Signature.

Date

19 Oct 1921

GENERAL REMARKS.

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

THE RECORD.

FEE: £16-0-0.

GLASGOW

25 OCT 1921

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

Committee's Minute

Elec. Light.



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