

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 36468

Port of GLASGOW Date of First Survey 24th Nov. 1916 Date of Last Survey 4th March 1917 No. of Visits 14
 No. in Reg. Book on the Iron or Steel S. S. Nantes Port belonging to London
 Built at Troon By whom Ailsa Shipbuilding Co. Ltd When built 1917
 Owners European Gas Co London (W. Bigham) Owners' Address
 Yard No. 292 Electric Light Installation fitted by Telford, Gray & Mackay Ltd. When fitted 1917

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One enclosed type splash lubricated engine direct coupled to open multipolar protected type dynamo compound wound
 Capacity of Dynamo 70 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Abd. side starting platform Whether single or double wire system is used Double
 Position of Main Switch Board Beside Dynamo having switches to groups 4 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 and constructed to fuse at an excess of 50 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 84-16 C.P. - 532 c.p. - 94-16 ^{equivalent of} 94-16 arranged in the following groups:—

A	<u>14</u>	lights each of <u>16 c.p.</u>	candle power requiring a total current of <u>8</u>	Amperes
B	<u>7</u>	lights each of <u>5-32 c.p. 2-16 c.p.</u>	candle power requiring a total current of <u>6</u>	Amperes
C	<u>46</u>	lights each of <u>16 c.p.</u>	candle power requiring a total current of <u>28</u>	Amperes
D	<u>22</u>	lights each of <u>16 c.p.</u>	candle power requiring a total current of <u>13</u>	Amperes
E		lights each of	candle power requiring a total current of	Amperes
	<u>2</u>	Must head light with <u>1</u> lamp each of <u>32 c.p.</u>	candle power requiring a total current of <u>2</u>	Amperes
	<u>2</u>	Side light with <u>1</u> lamp each of <u>32 c.p.</u>	candle power requiring a total current of <u>2</u>	Amperes
	<u>4</u>	Cargo lights of each <u>96 c.p.</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 Chart Room

DESCRIPTION OF CABLES.

Main cable carrying 70 Amperes, comprised of 19 wires, each 16 S.W.G. diameter, .06 square inches total sectional area
 Branch cables carrying 28 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .022 square inches total sectional area
 Branch cables carrying 7 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .007 square inches total sectional area
 Leads to lamps carrying 4 Amperes, comprised of 1 wires, each 17 S.W.G. diameter, .002 square inches total sectional area
 Cargo light cables carrying 4 Amperes, comprised of 1 wires, each 17 S.W.G. diameter, .002 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cargo spaces, Engine & Boiler spaces etc. V. I. R. Cable in Galv. Iron screwed Tubing. Crew space, Twin, Armoured Braided Accommodation, Lead covered wire.
 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 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 none
 Are there any joints in or branches from the cable leading from dynamo to main switch board none
 How are the cables led through the ship, and how protected clipped to Bulkheads & under side of Deck. By Tubing Armoured or Lead



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

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

What special protection has been provided for the cables near boiler casings Galv. Iron Tube

What special protection has been provided for the cables in engine room Galv. Iron Tube

How are cables carried through beams None through bulkheads, &c. Tubing made w.t. ✓

How are cables carried through decks Galv. Deck Tubes rendered watertight ✓

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 Galv. Iron Tubes

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 Tube set direct into heavy guarded fittings

Where are the main switches and fuses for these lights fitted Engine room

If in the spaces, how are they specially protected None

Are any switches or fuses fitted in bunkers None

Cargo light cables, whether portable or permanently fixed Permanent How fixed Cast metal Term. Box

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel None

How are the returns from the lamps connected to the hull None

Are all the joints with the hull in accessible positions None

Is the installation supplied with a voltmeter yes and with an amperemeter yes, fixed on 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 None

Are any switches, fuses, or joints of cables fitted in the pump room or companion None

How are the lamps specially protected in places liable to the accumulation of vapour or gas None

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.

ELFORD, GRIER & MACKAY, LTD Electrical Engineers Date 10-5-17

COMPASSES.

Distance between dynamo or electric motors and standard compass 40 feet

Distance between dynamo or electric motors and steering compass None

The nearest cables to the compasses are as follows:—

A cable carrying <u>7</u> Amperes <u>9</u> feet from standard compass	<u>9</u> feet from steering compass
A cable carrying <u>3</u> Amperes <u>3</u> feet from standard compass	<u>3</u> feet from steering compass
A cable carrying <u>3</u> Amperes <u>3</u> feet from standard compass	<u>3</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 0° degrees on any course in the case of the standard compass and 0° degrees on any course in the case of the steering compass.

AILSA SHIPBUILDING CO., LIMITED Builder's Signature. Date 15th May, 1917.

GENERAL REMARKS.

This installation has been fitted under special survey, tried and found to work satisfactorily.

It is submitted that this vessel is eligible for THE RECORD. Elec. light. J.W.D. 30/5/17

Committee's Minute **GLASGOW** 29 MAY 1917

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

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

