

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 17344.

Port of Greenock Date of First Survey 24th July, 1918 Date of Last Survey 31st August, 1918 No. of Visits 10
 No. in Reg. Book on the Iron or Steel 1.1 War Mission Port belonging to London
 Built at Greenock By whom The Greenock T.S. & J. & Co When built 1918
 Owners Anglo Mexican Petroleum Co. Ltd. Owners' Address _____
 Yard No. 384 Electric Light Installation fitted by Nadrow & Co When fitted 1918

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Enclosed Type Double Acting Single Cylinder Forced Lubrication Steam Engine coupled to Compound wound Dynamo on same Bedplate.
 Capacity of Dynamo 100 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Engine Room Whether single or double wire system is used Double
 Position of Main Switch Board E.R. Alongside Dynamo Having switches to groups A, B, C, D, E, F. of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Engine Room, 8 circuits; Cargo Cluster, in Steering Gear Space, 5 circuits; Washp, in Pantry, 10 circuits; aft, in Passage 7 circuits; Navigation in Wheelhouse, 7 circuits; Forward in Forecastle, 3 circuits; Smoke Room & Salley in E.R., 2 circuits.
 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-oxidisable metal YES and constructed to fuse at an excess of 25 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 162 arranged in the following groups:—

A in ER	26	lights each of	16	candle power requiring a total current of	14.3	Amperes
B for Cluster	39	lights each of	16 cp.	candle power requiring a total current of	21.4	Amperes
C in Washp	50	lights each of	30 WATT M.F.	candle power requiring a total current of	15.0	Amperes
D in aft	31	lights each of	16 and 8	candle power requiring a total current of	17.	Amperes
E Navigation	16	lights each of	16, 8 and 2½	candle power requiring a total current of	8.8	Amperes
F WIRELESS						
1 Mast head light with	1	lamps each of	2½	candle power requiring a total current of	1	Amperes
2 Side light with	1	lamps each of	8	candle power requiring a total current of	6	Amperes
5 Cargo lights of	6	Groups of	16	candle power, whether incandescent or arc lights	included in above	

If arc lights, what protection is provided against fire, sparks, &c. None in Ship
 Where are the switches controlling the masthead and side lights placed Wheel House

DESCRIPTION OF CABLES.

Main cable carrying	100	Amperes, comprised of	19	wires, each	14	S.W.G. diameter,	.094	square inches total sectional area
Branch cables carrying	15.0	Amperes, comprised of	7	wires, each	16	S.W.G. diameter,	.022	square inches total sectional area
Branch cables carrying	21.4	Amperes, comprised of	7	wires, each	16	S.W.G. diameter,	.022	square inches total sectional area
Leads to lamps carrying	8.8	Amperes, comprised of	7	wires, each	18	S.W.G. diameter,	.012	square inches total sectional area
Cargo light cables carrying	3.3	Amperes, comprised of	1	wires, each	14	S.W.G. diameter,	.005	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Raw Rubber, vulcanized Rubber, Taped and braided and compounded overall then protected by Galvanized Iron wires and Braided
 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 Armoured & Braided throughout with Lead Covered Cables in accommodation

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 **In Iron Tubes**

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

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

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

How are cables carried through beams **Lead Lined** ✓ through bulkheads, &c. **Watertight Glazings**

How are cables carried through decks **Iron Tubes flanged to Deck with W.T. Glazings in Top of Tubes**

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

If so, how are they protected

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

Cargo light cables, whether portable or permanently fixed **Portable** ✓ How fixed **Iron Sockets & Plugs**

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 **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 **YES**

Are any switches, fuses, or joints of cables fitted in the pump room or companion **No** ✓

How are the lamps specially protected in places liable to the accumulation of vapour or gas **Watertight and Airtight Fittings**

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 **Waddow & Co. Ltd.** Electrical Engineers

Date **2nd Sept 1918**

Per D. Bennett

COMPASSES.

Distance between dynamo or electric motors and standard compass **112 ft**

Distance between dynamo or electric motors and steering compass **100 ft**

The nearest cables to the compasses are as follows:—

A cable carrying **9.9** Amperes **20** feet from standard compass **10** feet from steering compass

A cable carrying **.5** Amperes **4** feet from standard compass **4** 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 _____ course in the case of the

standard compass and **NIL** degrees on _____ course in the case of the steering compass.

The Greenock & Granton Dockyard Co., Ltd.

M. Hill Builder's Signature. Date _____

GENERAL REMARKS.

The fitting of the wires in this vessel are as stated in this report and appear to be in accordance with the Committee's requirements.

It is submitted that this vessel is eligible for **THE RECORD.**

ELEC LIGHT. *W.A.* 11/9/18 Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW, 10 SEP. 1918**

Elec. Light



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.