

REPORT ON ELECTRIC LIGHTING INSTALLATION, No. 34548

Port of Glasgow Date of First Survey 6/10/14 Date of Last Survey 30/10/14 No. of Visits 4
 No. in on the ~~Iron~~ Steel SS Lampoc Port belonging to Liverpool
 Reg. Book Built at Glasgow By whom D & H. Henderson When built 1914
 Owners The Anglo-Persian Oil & Shipping Co. Ltd. Owners' Address London, Liverpool
 Yard No. 487 Electric Light Installation fitted by Simms Bros. Dynamo Works Ltd. When fitted 1914

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Siemens multipolar Dynamo coupled direct to A. Shanks & Sons, single cylinder open vertical Engine 6" x 5"

Capacity of Dynamo 44 Amperes at 110 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed In Main Engine room Whether single or double wire system is used double

Position of Main Switch Board In Main Engine room having switches to groups A to D of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each 1 of 2 switches in Bridgedeck accommodation

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 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 105 arranged in the following groups: 32 Wals Tantalum lamps

A 13 lights each of 16 candle power requiring a total current of 4 Amperes

B 49 lights each of " candle power requiring a total current of 16 Amperes

C 14 lights each of " candle power requiring a total current of 4 Amperes

D 29 lights each of " candle power requiring a total current of 10 Amperes

E — lights each of — candle power requiring a total current of — Amperes

1 Mast head light with 1 lamps each of 16 candle power requiring a total current of .3 Amperes

2 Side light with 1 lamps each of 16 candle power requiring a total current of .6 Amperes

2 Cargo lights of 6 ar. ful. lamps 16 candle power, whether incandescent or arc lights incandescent

If arc lights, what protection is provided against fire, sparks, &c. None

Where are the switches controlling the masthead and side lights placed In Wheelhouse on Bridge

DESCRIPTION OF CABLES.

Main cable carrying 44 Amperes, comprised of 18 wires, each 16 S.W.G. diameter, .060 square inches total sectional area

Branch cables carrying 16 Amperes, comprised of 4 wires, each 14 S.W.G. diameter, .035 square inches total sectional area

Branch cables carrying 4 Amperes, comprised of 4 wires, each 22 S.W.G. diameter, .0042 square inches total sectional area

Leads to lamps carrying .3 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area

Cargo light cables carrying 3.5 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, .0030 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Conductors of high conductivity tinned copper wires, insulated with pure & vulcanized india rubber, lapped, braided, & compounded, also as before but lead covered or lead covered & armoured with galvanized steel wires.

Joints in cables, how made, insulated, and protected Jointless system.

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 bunks, 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 Slipped direct to Decks or Bulkheads with brass or galvanized iron clips & brass screws, or in galvanized steel 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 *Lead covered & armoured or in galvanized steel conduit.*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead covered & armoured.*

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 *in fibre plugs.* through bulkheads, &c. *in special glands*

How are cables carried through decks *in special Deck 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 _____

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 _____

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 *in guarded watertight 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 _____ 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.

M.S. P. [Signature] Electrical Engineers Date *17 Nov 1914*

COMPASSES.

Distance between dynamo or electric motors and standard ^{Manager's} compass *over 100 feet.*

Distance between dynamo or electric motors and steering compass *over 100 feet.*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>4</i>	Amperes	<i>12</i>	feet from standard compass	<i>12</i>	feet from steering compass
A cable carrying	<i>3</i>	Amperes	<i>3</i>	feet from standard compass	<i>3</i>	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 *any* course in the case of the standard compass and *nil* degrees on *any* course in the case of the steering compass.

For **DAVID & WILLIAM HENDERSON & CO., LIMITED** Builder's Signature. Date *24th Nov. 1914*

GENERAL REMARKS. *This installation has been well fitted on board and when run under ordinary working conditions was satisfactory.*

It is submitted that this vessel is eligible for THE RECORD. Elec. light.

J.W.D. 3/10/14 Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute **GLASGOW** **1-DEC. 1914**

Elec. light



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im. 11.13.—Transfer.

L.R.A. 28/11/14