

REPORT ON ELECTRIC LIGHTING INSTALLATION. No.

Port of Glasgow Date of First Survey 21st Apr Date of Last Survey 29th July No. of Visits 8
 No. in Reg. Book 54364 on the Iron or Steel S.S. "Chantala" Port belonging to Glasgow
 Built at W. Hiteirich By whom Messrs Barclay Curie & Co. When built 1920
 Owners Messrs The British India St. Nao. Co. Owners' Address
 Yard No. 589 Electric Light Installation fitted by Messrs A. Watson & Co. When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Compound Vertical Enclosed Engine 5" x 11" x 6" (by Shanks) direct coupled to compound wound dynamo (by E.C.C.) giving an output of 14.5 K.W. at 100 Volts, when running at 450 R.P.M. on 100 lbs steam pressure.

Capacity of Dynamo 14.5 Amperes at 100 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Starboard side of Engine Room Whether single or double wire system is used Double

Position of Main Switch Board Adjacent to Dynamo having switches to groups 5 Circuits 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 Fuse 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 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

Total number of lights provided for 374 arranged in the following groups:—

A Navigation 5 lights each of 32 CARBON. 16 METALLIC. 48 WATT candle power requiring a total current of 14.48 Amperes

B Engine & Crew 157 lights each of 16 CP METALLIC. 1000 WATT candle power requiring a total current of 45.24 Amperes

C Wireless — lights each of — candle power requiring a total current of 25.00 Amperes

D Engine Room & Lathe 51 lights each of 16 CP METALLIC. 500 WATT candle power requiring a total current of 32.20 Amperes

E Accommodation 104 lights each of 16 CP METALLIC. 48 WATT candle power requiring a total current of 38.96 Amperes

2 Mast head light with 1 lamps each of 32 C.P. candle power requiring a total current of 2.56 Amperes

2 Side light with 1 lamps each of 32 C.P. candle power requiring a total current of 2.56 Amperes

40 Cargo lights of 1000 Watt. 16 CP METALLIC candle power, whether incandescent or arc lights Incandescent

If arc lights, what protection is provided against fire, sparks, &c. No arc lamps fitted

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

DESCRIPTION OF CABLES.

Main cable carrying 145.00 Amperes, comprised of 37 wires, each 13 S.W.G. diameter, .250 square inches total sectional area

Branch cables carrying 45.24 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .094 square inches total sectional area

Branch cables carrying 25.00 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .022 square inches total sectional area

Leads to lamps carrying 60 Amperes, comprised of 7 wires, each 25 S.W.G. diameter, .002 square inches total sectional area

Cargo light cables carrying 1.60 Amperes, comprised of 7 wires, each 25 S.W.G. diameter, .002 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

In Machinery Spaces, holds, etc, Cables are Lead Covered, Armoured & Braided.

In Accommodation Cables are Lead Covered.

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 —

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 In Machinery Spaces etc, Lead Covered, Armoured & Braided Cable, clipped to beams, decks, & Bulkheads. In Accommodation Lead Covered Cable, clipped to Wooden Beams & Bulkheads.

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 Cables are Lead Covered Armoured & Braided

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Lead Covered Armoured & Braided Cables

What special protection has been provided for the cables near boiler casings Lead Covered Armoured & Braided Cables

What special protection has been provided for the cables in engine room Lead Covered Armoured & Braided Cables

How are cables carried through beams In Fibre Tubes through bulkheads, &c. in W.T. Packing Boxes

How are cables carried through decks In W.T. Deck Tubes standing 16" above deck level

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

If so, how are they protected Lead Covered Armoured & Braided Cable closely clipped to under side of decks

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 Iron Fittings with Heavy Cast Iron Covers

Where are the main switches and fuses for these lights fitted On Decks, at Entrances or Stairways

If in the spaces, how are they specially protected Iron Fittings with Heavy Cast Iron Covers

Are any switches or fuses fitted in bunkers No.

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 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 500 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 ARCHD. WATSON & CO., LTD.,

Electrical Engineers

Date 1st September 1920

COMPASSES.

Distance between dynamo or electric motors and standard compass 84 feet

Distance between dynamo or electric motors and steering compass 84 feet

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
14.48	7	4	4
1.28	2	3	3
-	-	-	-

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 BRIDAY, CURLE & CO., LTD.

H. J. Casey Secretary

Builder's Signature.

Date 1st Sept 1920

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.

Elec Lt
Roll

16/9/20

J. Stanley Rankin

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW

Elec. Light

W.M.



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Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

HC
6.9.20

Im. 7/19.—Transfer.