

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 39805

Port of Glasgow Date of First Survey 12.2.20 Date of Last Survey 25.3.20 No. of Visits 5
 No. in Reg. Book 35805 on the Steel "S.S. Somerset Coast" Port belonging to Liverpool
 Built at Govan By whom Messrs Harland & Wolff Ltd. When built 1920
 Owners Messrs The Coast Lines Ltd. Owners' Address 35 Regent Road Liverpool
 Yard No. 529 G Electric Light Installation fitted by Messrs Harland & Wolff Ltd. When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 10 H.P. Holmes' Dynamo, 520 R.P.M. D/c to a 5 1/2" x 5" Single Cylinder
"Shank's" Vertical enclosed engine giving an output of 15-16 H.P.
 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 Engine Room having switches to groups A, B, C, & D 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} ~~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, fused Copper 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 94 Lights arranged in the following groups:—

A Navigation 8 lights each of 4-32 cp. 3-8 cp. 2-1-30 watt. candle power requiring a total current of 5.6 Amperes

B Accommodation 41 lights each of 35-30 watt, 6-16 cp. candle power requiring a total current of 13.8 Amperes

C Cargo 28 lights each of 3-30 watt, 25-16 cp. candle power requiring a total current of 14.9 Amperes

D Machinery 20 lights each of 16 cp. candle power requiring a total current of 11.2 Amperes

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

1 Mast head light with 1 lamp each of 32 candle power requiring a total current of 1.1 Amperes

2 Side light with 1 lamp each of 32 candle power requiring a total current of 1.1 Amperes

4-6 Light Cargo lights of 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 Chart house

DESCRIPTION OF CABLES.

Main cable carrying 45.5 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .094 square inches total sectional area

Branch cables carrying 14.9 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .022 square inches total sectional area

Branch cables carrying 5.6 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .004 square inches total sectional area

Leads to lamps carrying 2.4 Amperes, comprised of 1 wires, each 17 S.W.G. diameter, .00246 square inches total sectional area

Cargo light cables carrying 3.3 Amperes, comprised of 20 wires, each 36 S.W.G. diameter, .00404 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cable of 600 megohm grade classed to C.M.A. Insulated with pure & vulcanized rubber, protected with lead covering in Accommodation. Cables in Engine Room & where exposed, protected with steel armouring & braiding

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 Lead covered in accommodation & clipped to Bulkhead. Armoured & braided in Engine & Boiler Rms. Cable run in galvanized steel tubing where exposed to moisture

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 Armoured & Braided Cable in Galvanized Steel Tubing

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

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

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

How are cables carried through beams Beams Bored with lead through bulkheads, &c. in Glands if W.T.

How are cables carried through decks In Bussia galvanized steel deck tubes

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 Armoured & Braided Cable protected by sheet iron casing

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 Permanent to Socket How fixed Armoured & Braided Cable clipped to Bulk head where Permanent.

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel Portable from Socket

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 Switch Board.

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 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 HAMILTON & CO. LTD.

John Dickenson.

Electrical Engineers

Date 8th April 1920

COMPASSES.

Distance between dynamo or electric motors and standard compass 120 ft

Distance between dynamo or electric motors and steering compass 110 ft

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>11.6</u>	<u>15</u>	<u>10</u>	<u>10</u>
<u>5.6</u>	<u>15</u>	<u>10</u>	<u>10</u>
<u>1.1</u>	<u>10</u>	<u>5</u>	<u>5</u>

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

FOR HAMILTON & CO. LTD.

John Dickenson.

Builder's Signature.

Date 8th April 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. LIGHT 16/4/20

J. B. Rankin.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW 13 APR 1920

Elec. Light



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

HC.
12.4.20