

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 40992

Port of Glasgow Date of First Survey 23.12.1920 Date of Last Survey 24.2.1921 No. of Visits 7
 No. in on the Iron or Steel S.S. "MACEDONIER" Port belonging to Antwerp
 Reg. Book 80338 S. Built at Whiteinch By whom Messrs Lloyd Royal Belge When built 1921
 Owners Lloyd Royal Belge Soc. Anon. Owners' Address _____
 Yard No. 26 Electric Light Installation fitted by Messrs Claud Hamilton & Co When fitted 1921

DESCRIPTION OF DYNAMO, ENGINE, ETC.

CAPACITY OF DYNAMO : 10 KILOWATT

High speed double acting open type steam engine direct coupled to compound wound ship lighting dynamo
 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 six 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-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 153 arranged in the following groups :-

| | | | | | | |
|----------|-----------------------------|----------------|----------------------|---|--|------------------|
| A | <u>44</u> | lights each of | <u>16</u> | candle power requiring a total current of | <u>22</u> | Amperes |
| B | <u>58</u> | lights each of | " | candle power requiring a total current of | <u>29</u> | Amperes |
| C | <u>16</u> | lights each of | " | candle power requiring a total current of | <u>8</u> | Amperes |
| D | <u>5</u> | lights each of | <u>32</u> | candle power requiring a total current of | <u>5</u> | Amperes |
| E | <u>30</u> | lights each of | <u>16</u> | candle power requiring a total current of | <u>15</u> | Amperes |
| <u>2</u> | <u>Mast head light with</u> | <u>1</u> | <u>lamps each of</u> | <u>32</u> | <u>candle power requiring a total current of</u> | <u>2</u> Amperes |
| <u>2</u> | <u>Side light with</u> | <u>1</u> | <u>lamps each of</u> | <u>32</u> | <u>candle power requiring a total current of</u> | <u>2</u> Amperes |
| <u>5</u> | <u>Cargo lights of</u> | <u>each</u> | <u>6-16</u> | <u>candle power, whether incandescent or arc lights</u> | <u>incandescent</u> | |

If arc lights, what protection is provided against fire, sparks, &c. no arcs

Where are the switches controlling the masthead and side lights placed Chart Room

DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of 19 wires, each .083 S.W.G. diameter, .1009 square inches total sectional area
 Branch cables carrying 29 Amperes, comprised of 9 wires, each .064 S.W.G. diameter, .0221 square inches total sectional area
 Branch cables carrying 22 Amperes, comprised of 9 wires, each .064 S.W.G. diameter, .0221 square inches total sectional area
 Leads to lamps carrying 3 Amperes, comprised of 3 wires, each .036 S.W.G. diameter, .0029 square inches total sectional area
 Cargo light cables carrying 15 Amperes, comprised of 9 wires, each .036 S.W.G. diameter, .0040 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables and wires insulated with fine and vulcanizing india rubber taped and braided and lead covered or armoured

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 yes

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 folded to under decks in bulk heads by brass wire clips



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Foundation

W51-0234

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 covers.

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

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

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

How are cables carried through beams Lead bushes through bulkheads, &c. W.I. glands.

How are cables carried through decks W.I. Deck Lubes.

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 Armoured.

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 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 Engine Room

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 CLAUD HAMILTON, LIMITED

Electrical Engineers Date

COMPASSES. M. D. Bagot h.

Distance between dynamo or electric motors and standard compass 42 feet

Distance between dynamo or electric motors and steering compass 80

The nearest cables to the compasses are as follows:—

| | | | | | | |
|------------------|------------|---------|-----------|----------------------------|------------|----------------------------|
| A cable carrying | <u>29.</u> | Amperes | <u>50</u> | feet from standard compass | <u>48.</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 | | 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 No. (Vessel laid up)

The maximum deviation due to electric currents, etc., was found to be _____ degrees on _____ course in the case of the standard compass and _____ degrees on _____ course in the case of the steering compass.

LOYD ROYAL BELGE (Great Britain) Ltd.

John W Stewart Builder's Signature. Date 5/4/21.

GENERAL REMARKS.

This installation has been fitted on board under special survey tested under full working conditions & found satisfactory.

As the vessel has been laid up the Compasses have not been adjusted

It is submitted that

this vessel is eligible for

THE RECORD. See Lt. Roll 18/4/21

F.F.E. — £10.0.0. 9c 17/4/21.

J. S. Rankin. Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute GLASGOW, 12 APR 1921

Elec. Lights

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

M.C.
7-4-21

Im. 11.13.—Transfer.

