

REPORT ON ELECTRIC LIGHTING INSTALLATION. No.

Port of Sonchampton Date of First Survey 25th May Date of Last Survey 2nd July 1921 No. of Visits 4
 No. in Reg. Book on the Iron or Steel S.S. Ray light Port belonging to Grenock
 Built at Cows. By whom Messrs. Samuel White & Co When built 1921.
 Owners "Light" Shipping Co. Ltd Owners' Address 28 Main Street, Grenock.
 Yard No. 1559 Electric Light Installation fitted by Messrs. Claud Hamilton Ltd Glasgow When fitted 1921.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1. High speed open type steam engine direct coupled to armature wound ship lighting dynamo running at 400 R.P.M.
 Capacity of Dynamo 30 Amperes at 110 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 2 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each none.

RETAIN

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-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 yes.

Total number of lights provided for 50 arranged in the following groups:—

A	<u>38</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>19.</u>	Amperes
B	<u>12</u>	lights each of	"	candle power requiring a total current of	<u>6</u>	Amperes
C		lights each of		candle power requiring a total current of		Amperes
D		lights each of	<u>000</u>	candle power requiring a total current of		Amperes
E		lights each of		candle power requiring a total current of		Amperes
1		Mast head light with	<u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>1</u> Amperes
2		Side light with	<u>1</u> lamps each of	<u>32.</u>	candle power requiring a total current of	<u>2</u> Amperes
2		Cargo lights of	<u>5-16</u>	candle power, whether incandescent or arc lights	<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 wheel house.

DESCRIPTION OF CABLES.

Main cable carrying 30 Amperes, comprised of 7 wires, each .064 S.W.G. diameter, .0225 square inches total sectional area
 Branch cables carrying 19 Amperes, comprised of 7 wires, each .064 S.W.G. diameter, .0225 square inches total sectional area
 Branch cables carrying 6 Amperes, comprised of 7 wires, each .064 S.W.G. diameter, .0225 square inches total sectional area
 Leads to lamps carrying 1.5 Amperes, comprised of 3 wires, each .029 S.W.G. diameter, .0020 square inches total sectional area
 Cargo light cables carrying 2.5 Amperes, comprised of 3 wires, each .029 S.W.G. diameter, .0020 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

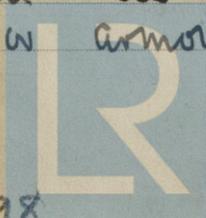
Copper wires insulated with tinned and vulcanizing india rubber taped and lead covered or armored with galvanized steel wires.

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 - 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 fed to bulkheads and under decks by means of brass or iron clip wires lead covered in armored.



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 cover

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

What special protection has been provided for the cables near boiler casings Lead covered & armoured

What special protection has been provided for the cables in engine room Lead cover & armoured

How are cables carried through beams Lead bushes through bulkheads, &c. W.T. Glands

How are cables carried through decks W.T. 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 with steel wire

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 -

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 660 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**

W. D. Bagot
Director

Electrical Engineers

Date 6th July 21.

COMPASSES.

Distance between dynamo or electric motors and standard compass 96 feet

Distance between dynamo or electric motors and steering compass 94 "

The nearest cables to the compasses are as follows:—

A cable carrying	<u>19</u>	Amperes	<u>16</u>	feet from standard compass	<u>12</u>	feet from steering compass
A cable carrying	<u>1.5</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 -

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.

For **J. SAMUEL WHITE & COMPANY, Ltd.**

W. D. Bagot
Managing Director

Builder's Signature.

Date 14 JUL 1921

GENERAL REMARKS.

The Electrical Installation has been fitted in accordance with the rule requirements. The same has been tried under working conditions and found satisfactory.

It is submitted that this vessel is eligible for THE RECORD. Elec Light FEE = £5-0-0
Recd 18/7/21

A. R. Boyle

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

2m.11.10.—Transfer.



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