

THU. JUL. 22 1920

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 40166

Port of Glasgow Date of First Survey 10/6/20 Date of Last Survey 7/1/20 No. of Visits 5
 No. in Reg. Book on the Steel S.S. Olympian Port belonging to Antwerp
 Built at Whitby By whom Messrs Lloyd Royal Belg When built 1920
 Owners Lloyd Royal Belg Owners' Address Antwerp
 Yard No. H Electric Light Installation fitted by Messrs David Hamilton & Co When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1- $6\frac{1}{2} \times 5$ single cylinder steam engine running at 350 R.P.M. direct coupled to a 10 K.W. 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 6 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 yes 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 182 arranged in the following groups:—

A	60	lights each of	16	candle power requiring a total current of	30	Amperes
B	47	lights each of	"	candle power requiring a total current of	24	Amperes
C	16	lights each of	"	candle power requiring a total current of	8	Amperes
D	27	lights each of	"	candle power requiring a total current of	13.5	Amperes
E		lights each of		candle power requiring a total current of		Amperes
2	Mast head light with	1	lamps each of	32	candle power requiring a total current of	2
2	Side light with	1	lamps each of	32	candle power requiring a total current of	2
5	Cargo lights of	each	5 - 16	candle power, whether incandescent or arc lights	incandescent	

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

Where are the switches controlling the masthead and side lights placed Bridge

DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of 19 wires, each .083 S.W.G. diameter, .1000 square inches total sectional area
 Branch cables carrying 30 Amperes, comprised of 4 wires, each .064 S.W.G. diameter, .0225 square inches total sectional area
 Branch cables carrying 24 Amperes, comprised of 4 wires, each .064 S.W.G. diameter, .0225 square inches total sectional area
 Leads to lamps carrying 3 Amperes, comprised of 1 wires, each .064 S.W.G. diameter, .0030 square inches total sectional area
 Cargo light cables carrying 15 Amperes, comprised of 4 wires, each .036 S.W.G. diameter, .0070 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

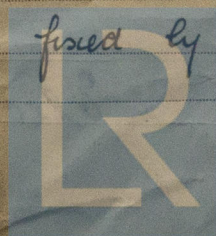
Copper wire insulated with fine and vulcanizing India rubber tape and lead covered or armoured as required

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 Lead covered or armoured
fixed by means of
bars or iron clips to main decks or bulk heads.



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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 or Armoured

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

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. h.t. Glands.

How are cables carried through decks h.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 wires

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.

CLAUD HAMILTON, LIMITED

Electrical Engineers

Date 13th July 20.

COMPASSES.

Distance between dynamo or electric motors and standard compass h.t. 90 feet

Distance between dynamo or electric motors and steering compass 80 feet

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>24</u>	<u>38</u>	<u>34</u>	<u>34</u>
<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>
<u>—</u>	<u>—</u>	<u>—</u>	<u>—</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 any course in the case of the standard compass and nil degrees on any course in the case of the steering compass.

LLOYD ROYAL BELGE (Great Britain) Ltd.

Builder's Signature.

Date 15th July 1920

GENERAL REMARKS.

Shipyard Secretary.

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.

J. S. Rankin.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 21 JUL 1920

Elec. Light.



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