

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 41735

Port of Glasgow Date of First Survey 27.9.1921 Date of Last Survey 1.2.22 No. of Visits 4
 Built on the Iron or Steel S.S. Drake Port belonging to London
 Built at Ayr By whom Messrs The Ayr S.B.C.O When built 1922
 Owners The General St. Nav. Co. Ltd Owners' Address
 No. 373 Electric Light Installation fitted by Messrs Claude Hamilton & Co When fitted 1922

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Total H.P. 9

one 5 1/2 x 5 1/2" Enclosed type high speed steam engine direct coupled to a
compound wound ship lighting dynamo running at 480 R.P.M.

Capacity of Dynamo 90 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Engine Rm. Whether single or double wire system is used double

Position of Main Switch Board Engine Rm. having switches to groups 8 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each none

Fuses are fitted on main switch board to the cables of main circuit yes and on each auxiliary 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

Whether is wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits

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 there 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 188 arranged in the following groups:—

<u>26</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>13</u>	Amperes
<u>24</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>12</u>	Amperes
<u>26</u>	lights each of	<u>—</u>	candle power requiring a total current of	<u>13</u>	Amperes
<u>38</u>	lights each of	<u>—</u>	candle power requiring a total current of	<u>19</u>	Amperes
<u>6</u>	lights each of	<u>32</u>	candle power requiring a total current of	<u>6</u>	Amperes
<u>11</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>6.6</u>	Amperes
<u>24</u>	lights each of	<u>—</u>	candle power requiring a total current of	<u>12</u>	Amperes
<u>33</u>	lights each of	<u>—</u>	candle power requiring a total current of	<u>16.5</u>	Amperes
<u>2</u>	Mast head light with	<u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>2</u> Amperes
<u>2</u>	Side light with	<u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>2</u> Amperes
<u>8</u>	Cargo lights of	<u>each 6-16</u>	candle power, whether incandescent or arc lights	<u>incandescent</u>	

Are lights, what protection is provided against fire, sparks, &c. no are lamps fitted

Where are the switches controlling the masthead and side lights placed In wheel house.

DESCRIPTION OF CABLES.

in cable carrying	<u>90</u>	Amperes, comprised of	<u>19</u>	wires, each	<u>.053"</u>	S.W.G. diameter, <u>.1</u>	square inches total sectional area
inch cables carrying	<u>19</u>	Amperes, comprised of	<u>4</u>	wires, each	<u>.064"</u>	S.W.G. diameter, <u>.0225</u>	square inches total sectional area
inch cables carrying	<u>18</u>	Amperes, comprised of	<u>4</u>	wires, each	<u>.052"</u>	S.W.G. diameter, <u>.0146</u>	square inches total sectional area
leads to lamps carrying	<u>2</u>	Amperes, comprised of	<u>3</u>	wires, each	<u>.029"</u>	S.W.G. diameter, <u>.002</u>	square inches total sectional area
argo light cables carrying	<u>12</u>	Amperes, comprised of	<u>7</u>	wires, each	<u>.052"</u>	S.W.G. diameter, <u>.0146</u>	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

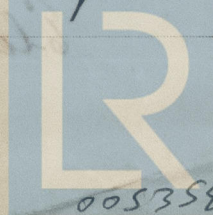
Copper wire insulated with pure & vulcanized india rubber
taped and lead covered or armoured.

How are the 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 Lead covered or armoured & fixed to bulkheads or under decks by means of brass or iron clips.



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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 covered.

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

Lead covered.

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

Armoured with Galvanised Steel Wire

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

Armoured with Galvanised Steel Wire

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 galvanised steel wire

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

Cast Iron guards

Where are the main switches and fuses for these lights fitted

outside space.

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

Connection box.

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

1.

and with an amperemeter

yes

1.

, fixed

in bulkhead 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 2500 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.

Electrical Engineers

Date 14 Feb. 22

COMPASSES.

Distance between dynamo or electric motors and standard compass

60

Distance between dynamo or electric motors and steering compass

68

The nearest cables to the compasses are as follows:—

A cable carrying

12

Amperes

20

feet from standard compass

22

feet from steering compass

A cable carrying

3

Amperes

10

feet from standard compass

10

feet from steering compass

A cable carrying

2

Amperes

in

feet from standard compass

in

feet from steering compass

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.

AILS A SHIPBUILDING CO., LIMITED.

G. H. Howell

Secretary.

Builder's Signature.

Date

16 Feb. 1922.

GENERAL REMARKS.

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

FAK = 190.0
Exp 1.1.0

21/2/22.
23/2/22

Elec. Light. J. Rankin

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW

21 FEB 1922

Elec. Light.



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