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REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 10444

Port of Bristol Date of First Survey Feb 14 Date of Last Survey March No. of Visits 4
 Built at 5/ Bristol City Port belonging to Bristol
 By whom Messrs C. Hill & Son When built 1920
 Owners Address Bristol
 Electric Light Installation fitted by C. Hill & Son When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Engine 12 H.P. "Sissons" Single Crank, forced lubrication
 Direct coupled to Silverstone, multipolar compound wound dynamo
 Capacity of Dynamo 75 Amperes at 100 Volts, whether continuous or alternating current Continuous

There is Dynamo fixed

Position of Main Switch Board

Engine room
Engine room

having switches to groups

5

of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each

Accommodation with local switchboards

Cut outs are fitted on main switch board to the cables of main circuit Yes and on each auxiliary switch boards 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

Where the vessel is wired on the double wire system are cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits

Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of 50% per cent over the normal current

Are all cut outs 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 cut-outs constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 127 arranged in the following groups:—

<u>Navigation</u>	lights each of	<u>32 + 16</u>	candle power requiring a total current of	<u>7.6</u>	Amperes
<u>Accommodation</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>7.8</u>	Amperes
<u>Engine Room</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>15.8</u>	Amperes
<u>Cargo</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>16.8</u>	Amperes
<u>Wireless</u>	lights each of	<u>✓</u>	candle power requiring a total current of	<u>✓</u>	Amperes
<u>2 Mast head light with 1 lamp each of</u>		<u>32</u>	candle power requiring a total current of	<u>2.2</u>	Amperes
<u>2 Side light with 1 lamp each of</u>		<u>32</u>	candle power requiring a total current of	<u>2.2</u>	Amperes
<u>5 Cargo lights of</u>		<u>96</u>	candle power, whether incandescent or arc lights	<u>Incandescent</u>	

If arc lights, what protection is provided against fire, sparks, &c.

Where are the switches controlling the masthead and side lights placed

Wheel house

DESCRIPTION OF CABLES.

Main cable carrying	<u>113</u> Amperes, comprised of	<u>19</u> wires, each	<u>14</u> L.S.G. diameter,	<u>.094</u> square inches total sectional area
Branch cables carrying	<u>34</u> Amperes, comprised of	<u>7</u> wires, each	<u>18</u> L.S.G. diameter,	<u>.125</u> square inches total sectional area
Branch cables carrying	<u>24</u> Amperes, comprised of	<u>7</u> wires, each	<u>20</u> L.S.G. diameter,	<u>.0072</u> square inches total sectional area
Leads to lamps carrying	<u>72</u> Amperes, comprised of	<u>3</u> wires, each	<u>22</u> L.S.G. diameter,	<u>.0018</u> square inches total sectional area
Cargo light cables carrying	<u>24</u> Amperes, comprised of	<u>7</u> wires, each	<u>22</u> L.S.G. diameter,	<u>.0070</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cable makers Ass. 600 meg. Grade V. I. R. Cable lead covered & armoured G. I. wire

Joints in cables, how made, insulated, and protected

Junction Boxes, cast iron covers

Are all the joints of cables thoroughly soldered, resin only having been used as a flux 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

Through frames & lead bushes

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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 & armoured*

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

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

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

How are cables carried through beams *Lead bushed holes* through bulkheads, &c. *Bulkheads W.T. Glass*

How are cables carried through decks *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 *Lead covered & 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 cut outs for these lights fitted *✓*

If in the spaces, how are they specially protected *✓*

Are any switches or cut outs fitted in bunkers *No*

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *Iron plug & socket forces Brass shell*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *Brass studs*

How are the returns from the lamps connected to the hull *Brass studs*

Are all the joints with the hull in accessible positions *Yes*

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas *✓*

Are any switches, cut outs, or joints of cables fitted in the pump room or companion *From all fuel*

How are the lamps specially protected in places liable to the accumulation of vapour or gas *W.T. glasses*

The installation is *Yes* supplied with a voltmeter and *Yes* an amperemeter, fixed *Scotch box*

The copper used is guaranteed to have a conductivity of *100* per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than *600* megohms per statute mile after 24 hours' immersion in seawater.

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.

M. Charl. Hill & Sons Ltd
James L. Peck

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass

Distance between dynamo or electric motors and steering compass

The nearest cables to the compasses are as follows:—

Cable carrying	Amperes	Feet from standard compass	Feet from steering compass
<i>5</i>	<i>Lighting</i>	<i>4</i>	<i>4</i>
<i>5</i>	<i>"</i>	<i>4</i>	<i>4</i>
<i>4</i>	<i>"</i>	<i>4</i>	<i>4</i>

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.

M. Charl. Hill & Sons Ltd
James L. Peck

Builder's Signature

Date

GENERAL REMARKS.

It is submitted that
this vessel is eligible for
THE RECORD ELEC. LIGHT.

H.T.G.
18/3/20

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

Committee's Minute *FRI. MAR 26 1920*



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Foundation

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