

WED. 16 OCT. 1918

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 17360

Port of *Brecon* Date of First Survey *20th August 1918* Date of Last Survey *10th October 1918* No. of Visits *9*
 To. in on the *Iron or Steel* *C. O. McGroom* Port belonging to *Brecon*
 Book Built at *1st Harpur* By whom *Amell & Co* When built *1918*
 Owners *Lang & Fullin* Owners' Address *Brecon*
 No. *713* Electric Light Installation fitted by *Wm. A. Jones & Co* When fitted *1918*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One *10 H P Compound Wound Generator coupled to Vertical Open Ported Type, Double-acting Engine all by Messrs Clarke Chapman & Co*

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

There 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 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each

with *2*

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 *118* arranged in the following groups:—

A	<i>Booth</i>	<i>11</i> lights each of <i>16</i>	candle power requiring a total current of <i>4.04</i>	Amperes
B	<i>Captain's Saloon</i>	<i>28</i> lights each of <i>16</i>	candle power requiring a total current of <i>14.9</i>	Amperes
C	<i>Engine Rm</i>	<i>24</i> lights each of <i>16</i>	candle power requiring a total current of <i>15.3</i>	Amperes
D	<i>Accom. Rm</i>	<i>21</i> lights each of <i>16</i>	candle power requiring a total current of <i>13.4</i>	Amperes
E		lights each of	candle power requiring a total current of	Amperes
	<i>2 Mast head light with</i>	<i>2</i> lamps each of <i>32</i>	candle power requiring a total current of <i>2.5</i>	Amperes
	<i>2 Side light with</i>	<i>2</i> lamps each of <i>32</i>	candle power requiring a total current of <i>2.5</i>	Amperes
	<i>5-5 light</i>	Cargo lights of <i>16</i>	candle power, whether incandescent or arc lights <i>Incandescent</i>	

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

Where are the switches controlling the masthead and side lights placed *Chart Room, with Master Switch in Wheel House*

DESCRIPTION OF CABLES.

Main cable carrying	<i>100</i> Amperes, comprised of <i>19</i> wires, each <i>14</i> S.W.G. diameter, <i>.094</i> square inches total sectional area
Branch cables carrying	<i>14.9</i> Amperes, comprised of <i>4</i> wires, each <i>18</i> S.W.G. diameter, <i>.0125</i> square inches total sectional area
Branch cables carrying	Amperes, comprised of wires, each S.W.G. diameter, square inches total sectional area
Leads to lamps carrying	<i>3.2</i> Amperes, comprised of <i>3</i> wires, each <i>20</i> S.W.G. diameter, <i>.003</i> square inches total sectional area
Cargo light cables carrying	<i>3.2</i> Amperes, comprised of <i>3</i> wires, each <i>20</i> S.W.G. diameter, <i>.003</i> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Living & D. R. Single wire armoured & braided cables also single V. D. R. Lead Covered Cables

Joints in cables, how made, insulated, and protected

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 *securely fixed to beams etc with 7/6 T Screws*



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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 Arm'd & braided cables

What special protection has been provided for the cables near boiler casings Arm'd & braided cables in gas barrel tubing

What special protection has been provided for the cables in engine room Arm'd & braided cables

How are cables carried through beams Bushed holes through bulkheads, &c. Bulkhead glands

How are cables carried through decks Deck tubes

Are any cables run through coal bunkers no or cargo spaces no or spaces which may be used for carrying cargo, stores, or baggage yes

If so, how are they protected Armoured & braided

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 on Main Sw 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 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.

Grindlay Ross & Co Ltd Electrical Engineers Date 8th Octr 1918

COMPASSES.

Distance between dynamo or electric motors and standard compass 90 ft

Distance between dynamo or electric motors and steering compass 90 ft

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>14.9</u>	<u>14</u>	<u>13</u>	
<u>4</u>	<u>12</u>	<u>11</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 course in the case of the standard compass and Nil degrees on course in the case of the steering compass.

GENERAL REMARKS.

The fitting of the wires in this vessel is as stated in this report and appears to be in accordance with the Committee's requirements

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

ELEC. LIGHT

28-10-18

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

Committee's Minute

GLASGOW 15 OCT 1918

Elec. Light

APD



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.