

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 8045

Port of *Belfast* Date of First Survey *18th Sept* Date of Last Survey *31st Oct* No. of Visits *12*
 No. in on the *Iron or Steel* *S. S. War Icarus* Port belonging to *London*
 Reg. Book Built at *Belfast* By whom *Harland & Wolff Ltd* When built *1918*
 Owners *The Shipping Controller* Owners' Address *London*
 Yard No. *540* Electric Light Installation fitted by *Harland & Wolff Ltd* When fitted *1918*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two forced lubrication, single cylinder engine & dynamo with cylinders 5 1/2" x 5" stroke, speed 520 R.P.M.

Capacity of Dynamo *100* Volts, whether continuous or alternating current *continuous*
 Where is Dynamo fixed *in Engine Room* Whether single or double wire system is used *Double*
 Position of Main Switch Board *in Engine Room* having switches to groups *A, B, C, D & E, &c.* of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each

If cut outs 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 cut outs fitted to both flow and return wires of cables of all circuits including lamp circuits *yes*

Are the cut outs of non-oxidizable metal *yes* and constructed to fuse at an excess of *100* 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 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 *236* arranged in the following groups:—

A <i>Eng. Rm.</i> 31 lights each of <i>16</i> candle power requiring a total current of <i>9.3</i> Amperes
B <i>Fore & Aft</i> 4 lights each of <i>32</i> candle power requiring a total current of <i>14.4</i> Amperes
C <i>Engine Room</i> 16 lights each of <i>16</i> candle power requiring a total current of <i>29.0</i> Amperes
D <i>Cargo</i> 54 lights each of <i>16</i> candle power requiring a total current of <i>24.0</i> Amperes
E <i>Crew</i> 46 lights each of <i>16</i> candle power requiring a total current of <i>13.8</i> Amperes
<i>1</i> Mast head light with <i>1</i> lamp each of <i>2 1/2 or 32</i> candle power requiring a total current of <i>1.2</i> Amperes
<i>2</i> Side lights with <i>1</i> lamp each of <i>5.8 or 32</i> candle power requiring a total current of <i>2.4</i> Amperes
<i>5</i> Cargo lights of <i>96</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 *on Bridge*

DESCRIPTION OF CABLES.

Main cable carrying <i>20.2</i> Amperes, comprised of <i>7</i> wires, each <i>16</i> L.S.G. diameter, <i>.022</i> square inches total sectional area
Branch cables carrying <i>2.5</i> Amperes, comprised of <i>7</i> wires, each <i>20</i> L.S.G. diameter, <i>.00701</i> square inches total sectional area
Branch cables carrying <i>Amperes</i> , comprised of <i>wires</i> , each <i>L.S.G. diameter</i> , <i>square inches</i> total sectional area
Leads to lamps carrying <i>1.8</i> Amperes, comprised of <i>1</i> wires, each <i>17</i> L.S.G. diameter, <i>.00246</i> square inches total sectional area
Cargo light cables carrying <i>3.0</i> Amperes, comprised of <i>90</i> wires, each <i>36</i> L.S.G. diameter, <i>.00407</i> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables & branch wiring exposed, are 600 megohm C.M. & A. grade, V.I.R. armoured white braided cables also 4/4 G.P. 254 lead covered cable

Joints in cables, how made, insulated, and protected *joints made in W.T. junction boxes on deck & porcelain junction boxes with iron protecting cover in Engine Room*

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 *cables clipped direct to bulkhead & protected by armouring & braiding in Eng Rm, galley & crew quarters & lead covd in Accom.*

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 in piping.

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

What special protection has been provided for the cables near boiler casings Armoured & braided cables.

What special protection has been provided for the cables in engine room Armoured & braided cables.

How are cables carried through beams Beams lashed with lead or fibre through bulkheads, &c. In glands if W.T. otherwise lead or fibre.

How are cables carried through decks In iron deck pipes lashed or with gland

Are any cables run through coal bunkers yes or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage yes

If so, how are they protected Lead coat wire & Armoured & braided wire in galvanized iron pipe.

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 none

Where are the main switches and cut outs for these lights fitted none

If in the spaces, how are they specially protected none

Are any switches or cut outs fitted in bunkers no

Cargo light cables, whether portable or permanently fixed Permanently How fixed Armoured & braided cable clipped to bulkhead.

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel none

How are the returns from the lamps connected to the hull none

Are all the joints with the hull in accessible positions none

The installation is none supplied with a voltmeter and none an amperemeter, fixed on main switch in Engine Room.

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

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 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.



Electrical Engineers

Date 29/11/18

COMPASSES.

Distance between dynamo or electric motors and standard compass 146 ft from Dynamo 132 ft from Wireless Rotary

Distance between dynamo or electric motors and steering compass 140 " " " 136 " " "

The nearest cables to the compasses are as follows:—

A cable carrying	<u>6.0</u> Amperes	<u>8</u> feet from standard compass	<u>5</u> feet from steering compass
A cable carrying	<u>4.0</u> Amperes	<u>20</u> feet from standard compass	<u>13</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 yes

The maximum deviation due to electric currents, etc., was found to be nil degrees on all courses in the case of the standard compass and nil degrees on all courses in the case of the steering compass.

For HARLAND & WOLFF LTD.

Builder's Signature.

Date

29/11/18

GENERAL REMARKS.

This installation is of good description, and has been fitted in accordance with the Rules, and instructions of the Controller of Shipping.

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

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 13-2m34.



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