

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 7907

Port of Belfast Date of First Survey Dec 31 Date of Last Survey Jan 23rd No. of Visits 8
 No. in Reg. Book S.S. War Tylhou on the Iron or Steel Port belonging to London
 Built at Belfast By whom Harland & Wolff L^{td} When built 1918
 Owners The Shipping Controller Owners' Address _____
 Yard No. 534 Electric Light Installation fitted by Harland & Wolff L^{td} When fitted 1918

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Enclosed, Forced Lubrication Single Cylinder Engine & Dynamo with Cylinder 5 1/2" x 5" Stroke Speed 520 R.P.M.

Capacity of Dynamo 100 Amperes at 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. of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each One in Chart Room containing 7 switches

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 or 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 151 arranged in the following groups:—

A	<u>Accom.</u>	<u>31</u> lights each of <u>16</u> candle power requiring a total current of <u>15</u> Amperes
B	<u>Deck</u>	<u>47</u> lights each of <u>32</u> candle power requiring a total current of <u>14.1</u> Amperes
C	<u>Navigation</u>	<u>4</u> lights each of <u>32 C.P.</u> 3 lbs of <u>8</u> candle power requiring a total current of <u>5.7</u> Amperes
D	<u>Cargo etc.</u>	<u>32</u> lights each of <u>16 C.P.</u> 2 lbs of <u>32</u> candle power requiring a total current of <u>18.4</u> Amperes
E	<u>Engines</u>	<u>32</u> lights each of <u>16 C.P.</u> candle power requiring a total current of <u>16</u> Amperes
1	<u>Must head light with 1 lamp</u>	<u>32</u> candle power requiring a total current of <u>1.2</u> Amperes
2	<u>Side light with 1 lamp</u>	<u>32</u> candle power requiring a total current of <u>1.2</u> Amperes
5	<u>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 In Chart Room.

DESCRIPTION OF CABLES.

Main cable carrying 18.4 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .022 square inches total sectional area

Branch cables carrying _____ Amperes, comprised of _____ wires, each _____ L.S.G. diameter, _____ square inches total sectional area

Branch cables carrying 4.2 Amperes, comprised of 1 wires, each 14 L.S.G. diameter, .00503 square inches total sectional area

Leads to lamps carrying 1.8 Amperes, comprised of 1 wires, each 17 L.S.G. diameter, .00246 square inches total sectional area

Cargo light cables carrying 3 Amperes, comprised of 108 wires, each 38 L.S.G. diameter, .00503 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables & branch wiring exposed are 600 megohm, C.P. A. grade vulcanized india rubber, armoured & white braided. also 1/17 A.P. 254 lead covered cable.

Joints in cables, how made, insulated, and protected Joints made in W.Y. junction boxes on decks & four lamp 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 _____ 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, Crews Quarters & lead covered in accommodation



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

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

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

How are cables carried through decks In iron deck pipes bushed or with gland. fibre or lead.

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 & braided cables protected by steel plating

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 Permanently How fixed Armoured & braided cable clipped to bulkheads.

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 —

The installation is — supplied with a voltmeter and — an amperemeter, fixed on bulkhead 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 — 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.

For HARLAND & WOLFF, LTD. J. Johnston Electrical Engineers Date 31st July 1918

COMPASSES.

Distance between dynamo or electric motors and standard compass 110 ft from Dynamo 22' from Wireless Rotary Court.

Distance between dynamo or electric motors and steering compass 102 " " 16' " " "

The nearest cables to the compasses are as follows:—

A cable carrying	<u>5.7</u>	Amperes	<u>11</u>	feet from standard compass	<u>5</u>	feet from steering compass
A cable carrying	<u>14.1</u>	Amperes	<u>16</u>	feet from standard compass	<u>10</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 2 1/2 degrees on all course in the case of the standard compass and 2 1/2 degrees on all course in the case of the steering compass.

For HARLAND & WOLFF, LTD. J. Johnston Builder's Signature. Date 31st July 1918

GENERAL REMARKS.

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

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

R. L. Beveridge
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. 18.—5m.54.

