

REPORT ON ELECTRIC LIGHTING INSTALLATION. No.

Port of *Belfast* Date of First Survey *Aug 2nd 1917* Date of Last Survey *Dec 19th 1917* No. of Visits *7*
 No. in Reg. Books on the *Iron or Steel* *S.S. War Cobra* Port belonging to *London*
 Built at *Belfast* By whom *Harland & Wolff L^{td}* When built *1917*
 Owners *The Shipping Controller* Address _____
 Yard No. *533* Electric Light Installation fitted by *Harland & Wolff L^{td}* When fitted *1917*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One enclosed, forced lubrication single cylinder engine & dynamo with cylinder $5\frac{1}{2} \times 5$ 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 Aft. Accom. *31* lights each of *16* candle power requiring a total current of *15* Amperes

B Midship " *47* lights each of *32* candle power requiring a total current of *14.1* Amperes

C Navigation *4* lights each of *32* C.P. 3 lts of *8* candle power requiring a total current of *5.7* Amperes

D Cargo, etc *32* lights each of *16* C.P. & 2 lts of *32* candle power requiring a total current of *18.4* Amperes

E Engines *32* lights each of *16* C.P. candle power requiring a total current of *16* Amperes

1. Mast head light with *1* lamp each of *32* candle power requiring a total current of *1.2* Amperes

2. Side light with *1* lamp each of *32* candle power requiring a total current of *1.2* Amperes

5 Cargo lights of *96* candle power, whether incandescent or arc lights *Incandescent*

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 megohms B.M.A. Grade Vulcanised 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.I. junction boxes on decks & 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 _____ 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 armoring & braiding, in Eng. Room, Gallery, Crew's quarters & lead cov^d 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.t. otherwise fibre or lead

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

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 by strong plating & housed in channel Beams

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 Subd 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 _____

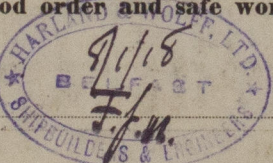
How are the lamps specially protected in places liable to the accumulation of vapour or gas _____

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.

S. Johnston



Electrical Engineers

Date

COMPASSES.

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

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 Nil degrees on all course in the case of the standard compass and Nil degrees on all course in the case of the steering compass.

S. Johnston



Builder's Signature.

Date

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.

JWD 17/1/18
JSM

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

Committee's Minute



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