

REPORT ON ELECTRIC LIGHTING INSTALLATION. No.

Port of Belfast Date of First Survey Aug 2nd 1917 Date of Last Survey Dec 19-17 No. of Visits 7
 No. in Reg. Book on the Iron or Steel S.S. War Cobra Vessel 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 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 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.

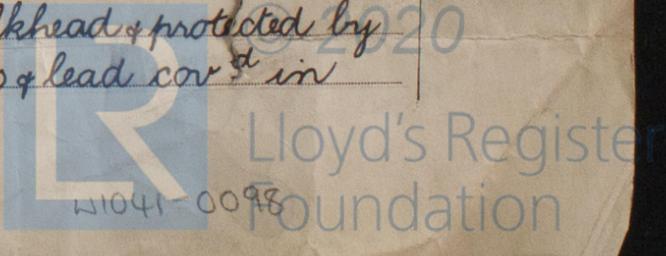
Main cable carrying	18.4 Amperes, comprised of	7 wires, each	16 L.S.G. diameter,	.022 square inches total sectional area
Branch cables carrying	Amperes, comprised of	wires, each	L.S.G. diameter,	square inches total sectional area
Branch cables carrying	4.2 Amperes, comprised of	1 wires, each	14 L.S.G. 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
J.M.

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

Committee's Minute _____



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

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