

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 7968

Port of Belfast Date of First Survey May 9<sup>th</sup> Date of Last Survey May 27 No. of Visits 6  
 No. in Reg. Book on the Iron or Steel S.S. War Vetterli Port belonging to London  
 Built at Belfast By whom Harland & Wolff L<sup>ds</sup> When built 1918  
 Owners The Shipping Controller Address London  
 Yard No. 535 Electric Light Installation fitted by Harland & Wolff L<sup>ds</sup> When fitted 1918

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Enclosed, free 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 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 157 arranged in the following groups:—  
 A Aft accoms 30 lights each of 16 candle power requiring a total current of 15 Amperes  
 B Kidship 53 lights each of 2 1/2 candle power requiring a total current of 15.9 Amperes  
 C Navigation 4 lights each of 32 C.P. 4 lights of 8 candle power requiring a total current of 6.0 Amperes  
 D Cargo etc. 32 lights each of 10 C.P. & 2 lbs of 32 candle power requiring a total current of 18.4 Amperes  
 E Engines 32 lights each of 10 C.P. candle power requiring a total current of 16 Amperes  
 1 Mast head light with 1 lamp of 2 1/2 or 32 candle power requiring a total current of 1.2 Amperes  
 2 Side lights with 1 lamp each of 5, 8 or 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

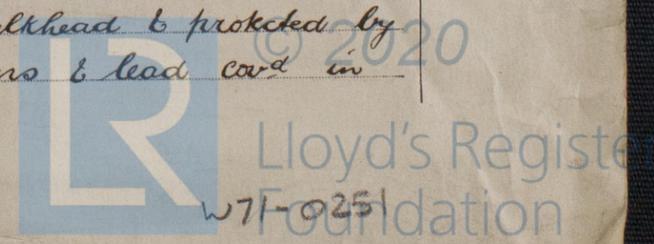
## DESCRIPTION OF CABLES.

Main cable carrying 18.4 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .022 square inches total sectional area  
 Branch cables carrying \_\_\_\_\_ Amperes, comprised of \_\_\_\_\_ wires, each \_\_\_\_\_ S.W.G. diameter, \_\_\_\_\_ square inches total sectional area  
 Branch cables carrying 4.2 Amperes, comprised of 1 wires, each 14 S.W.G. diameter, .00503 square inches total sectional area  
 Leads to lamps carrying 1.8 Amperes, comprised of 1 wires, each 17 S.W.G. diameter, .00246 square inches total sectional area  
 Cargo light cables carrying 3 Amperes, comprised of 108 wires, each 38 S.W.G. diameter, .00503 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables & branch wiring exposed are 600 megohm, C.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, 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 Cables clipped direct to Bulkhead & protected by Armouring & braiding, in Eng-Room, Galley, Crews quarters & lead cord 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.I. otherwise fibre or lead.

How are cables carried through decks In ~~main~~ 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 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 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 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 \_\_\_\_\_

Is the installation <sup>is</sup> supplied with a voltmeter \_\_\_\_\_, and with an amperemeter \_\_\_\_\_, fixed on Swbd in Engine Room

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.



Electrical Engineers

Date 24/5/18

COMPASSES.

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

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

The nearest cables to the compasses are as follows:—

A cable carrying 5.7 Amperes 11 feet from standard compass 5 feet from steering compass

A cable carrying 14.1 Amperes 16 feet from standard compass 10 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.

FOR HARLAND & WOLFF LTD.

Builder's Signature.

Date 24/5/18

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 31/5/18

R. F. Bevenly

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im. 14. Transfer.



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