

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 8069

Port of Belfast Date of First Survey Decr 9 Date of Last Survey January 9 No. of Visits Seven
 No. in Reg. Book on the Iron or Steel S.P. War Beam Port belonging to LONDON
 Built at Belfast By whom Harland & Wolff L^d When built 1919
 Owners The Shipping Controller Owners' Address _____
 Yard No. 545 Electric Light Installation fitted by Harland & Wolff L^d When fitted 1919

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One enclosed forced lubrication, single cylinder engine & dynamo, with cylinders 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 _____

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-oxidisable 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 160 arranged in the following groups:—

A Navigation	4 lights each of 32 C.P. 14 lbs. of 8 candle power requiring a total current of	6.0	Amperes
B Cabin & Crew	9 lights each of 16 C.P. candle power requiring a total current of	18.2	Amperes
C Engine & Boiler	31 lights each of 16 C.P. candle power requiring a total current of	15.9	Amperes
D Cargo	80 lights each of 16 C.P. candle power requiring a total current of	15.0	Amperes
E Wireless	lights each of _____ candle power requiring a total current of	15.0	Amperes
1 Mast head light with 1 lamp each of	32 candle power requiring a total current of	1.2	Amperes
2 Side lights with 1 lamp each of	32 candle power requiring a total current of	2.4	Amperes
5 Cargo lights of	96 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 on Bridge

DESCRIPTION OF CABLES.

Main cable carrying 20.2 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .022 square inches total sectional area
 Branch cables carrying 2.5 Amperes, comprised of 1 wires, each 14 S.W.G. diameter, .005 square inches total sectional area
 Branch cables carrying _____ Amperes, comprised of _____ wires, each _____ S.W.G. diameter, _____ 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 2.5 Amperes, comprised of 90 wires, each 36 S.W.G. diameter, .00407 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 7/17 A.P. 254 lead covered cable
 Joints in cables, how made, insulated, and protected joints made in W.I. junction boxes on decks to 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 covered 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 no or spaces which may be used for carrying cargo, stores, or baggage no

If so, how are they protected Lead covered wire in galvanised iron tube.

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 bulkhead)

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 supplied with a voltmeter Yes, and with an amperemeter Yes, fixed on Panel in Eng. 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 21-1-19

COMPASSES.

Distance between dynamo or electric motors and standard compass 116 ft from Dynamo 17 FT from Wireless Rotary

Distance between dynamo or electric motors and steering compass 112 ft " " 11 FT " " "

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>6.0</u>	<u>10</u>	<u>5</u>	<u>5</u>
<u>15.0</u>	<u>26</u>	<u>22</u>	<u>22</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>

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

HARLAND & WOLFF LTD.

Builder's Signature.

Date 21-1-19

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. HD. 24/1/19

R. F. Beveridge

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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