

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 70562

Port of Newcastle on Tyne Date of First Survey 3rd Dec 17 Date of Last Survey 24th Dec 17 No. of Visits 11
 No. in Reg. Book on the Iron or Steel S.S. British Light Port belonging to Palmer & S. B. Co. Ltd
 Built at Jarrow By whom Palmer & S. B. Co. Ltd When built 1917
 Owners Admiralty Owners' Address Palmer & S. B. Co. Ltd
 Yard No. 878 Electric Light Installation fitted by Palmer & S. B. Co. Ltd When fitted 1917

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2 in hp Direct coupled Vertical Engine, Sets.

Capacity of Dynamo 100 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Engine Room Whether single or double wire system is used Double
 Position of Main Switch Board Engine Room having switches to groups 4 in hp of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each None

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 None 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 50% 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 arranged in the following groups :-

A After Accommodation	lights each of <u>(42 of 16 cp)</u>	candle power requiring a total current of	<u>23.3</u>	Amperes
B Midship	lights each of <u>(16 of 50 cp)</u>	candle power requiring a total current of	<u>44.6</u>	Amperes
C Eng + Bls Room	lights each of <u>25 of 16 cp</u>	candle power requiring a total current of	<u>6.25</u>	Amperes
D Marconi	lights each of <u>16 of 50 cp</u>	candle power requiring a total current of	<u>?</u>	Amperes
E	lights each of	candle power requiring a total current of	<u>—</u>	Amperes
2 Mast head light with	1 lamps each of <u>32</u>	candle power requiring a total current of	<u>2.2</u>	Amperes
2 Side light with	1 lamps each of <u>32</u>	candle power requiring a total current of	<u>2.2</u>	Amperes
4 Cargo lights of	<u>400</u>	candle power, whether incandescent or arc lights	<u>Incandescent</u>	

If arc lights, what protection is provided against fire, sparks, &c. None

Where are the switches controlling the masthead and side lights placed Wheel House

DESCRIPTION OF CABLES.

Main cable carrying 74 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .094 square inches total sectional area
 Branch cables carrying 44.6 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .094 square inches total sectional area
 Branch cables carrying 23.3 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .022 square inches total sectional area
 Leads to lamps carrying 1 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area
 Cargo light cables carrying 12.8 Amperes, comprised of 176 wires, each 38 S.W.G. diameter, .0049 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered cables in cabins + Accommodation etc.
V.I.R. + Armoured in Engine Room etc.

Joints in cables, how made, insulated, and protected No joints

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 In piping on Fore + Aft gangway - cables Armoured

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

Sheet Iron covering

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Sheet Iron boxes

What special protection has been provided for the cables near boiler casings Armoured cable

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

How are cables carried through beams Lead bushes through bulkheads, &c. AP Glands

How are cables carried through decks Galv. Iron Deck Pipes

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 Armoured cables in Galv. iron pipes

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 portable How fixed

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 Switchboard

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 Yes

Are any switches, fuses, or joints of cables fitted in the pump room or companion No

How are the lamps specially protected in places liable to the accumulation of vapour or gas None fitted

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 2500 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.

For Palmers Shipbuilding & Iron Co., Ltd.

Electrical Engineers

Date 21/1/18

COMPASSES.

Distance between dynamo or electric motors and standard compass 275 ft

Distance between dynamo or electric motors and steering compass 270 ft

The nearest cables to the compasses are as follows:—

A cable carrying 8 Amperes 12 feet from standard compass 10 feet from steering compass

A cable carrying 25 Amperes on feet from standard compass 6 feet from steering compass

A cable carrying 25 Amperes 6 feet from standard compass on feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power ?

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 ✓ course in the case of the steering compass.

Builder's Signature. Date 20/1/18

GENERAL REMARKS.

The electric lighting installation of this vessel has been fitted in accordance with the rules and satisfactorily tested with all lights burning.

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

J.W.D. 24/1/18.

George Murdoch
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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