

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 9380.

Port of Middlesbrough Date of First Survey Whale Date of Last Survey Building No. of Visits -
 No. in Sup Reg. Book 106 on the Iron or Steel S.S. "Miura" Port belonging to Cardiff
 Built at Middlesbrough By whom Smith's Dock Co. Ltd. When built 1916
 Owners Heale & West, Ltd. Owners' Address Cardiff
 Yard No. 638 Electric Light Installation fitted by Smith's Dock Co. Ltd. When fitted 1916

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Multipolar Compound wound Dynamo and Vertical Engine
 Capacity of Dynamo 40 Amperes at 110 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 A, B, C of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Each light and group of lights fitted with switches as required

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 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 56 arranged in the following groups:—

A Forward	12	lights each of	16	candle power requiring a total current of	6	Amperes
B Bridge Deck	19	lights each of	16 & 32	candle power requiring a total current of	12	Amperes
C Engine Room	25	lights each of	16	candle power requiring a total current of	12.5	Amperes
D		lights each of		candle power requiring a total current of		Amperes
E		lights each of		candle power requiring a total current of		Amperes
3 Mast head light with	1	lamps each of	32	candle power requiring a total current of	3	Amperes
2 Side light with	1	lamps each of	32	candle power requiring a total current of	2	Amperes
1 Cargo lights of	4		16	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 Chart Room

DESCRIPTION OF CABLES.

Main cable carrying 30.5 Amperes, comprised of 7 wires, each 14 S.W.G. diameter, .035 square inches total sectional area
 Branch cables carrying 12 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .0070 square inches total sectional area
 Branch cables carrying 6 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .0070 square inches total sectional area
 Leads to lamps carrying 5 Amperes, comprised of 3 wires, each 22 S.W.G. diameter, .0018 square inches total sectional area
 Cargo light cables carrying 2 Amperes, comprised of 1 wires, each 14 S.W.G. diameter, .0050 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

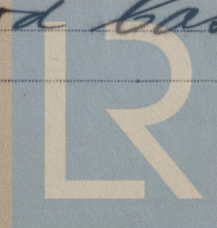
2,500 Megohms Grade Single Lead covered Cable

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

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances ✓ 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 ✓

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 Strong Wood casing



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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 Gal Iron pipes

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Lead covered

What special protection has been provided for the cables near boiler casings Wood casing Lead covered

What special protection has been provided for the cables in engine room Wood casing Lead covered

How are cables carried through beams Holes bored with lead through bulkheads, &c. Watertight Gal Iron pipes

How are cables carried through decks Watertight Gal Iron pipes

Are any cables run through coal bunkers Yes or cargo spaces Yes or spaces which may be used for carrying cargo, stores, or baggage

If so, how are they protected Strong Wood casing

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage Yes

If so, how are the lamp fittings and cable terminals specially protected Cast Iron lid

Where are the main switches and fuses for these lights fitted Engine Room

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 Brass bracket on Bulk

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 Main 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 ✓

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 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 SMITH'S DOCK CO. L^d
W. H. Humphreys

Electrical Engineers

Date July 5th 1916

COMPASSES.

Distance between dynamo or electric motors and standard compass 30 ft.

Distance between dynamo or electric motors and steering compass 30 ft.

The nearest cables to the compasses are as follows:—

A cable carrying <u>.5</u> Amperes <u>1</u> feet from standard compass <u>1</u> feet from steering compass
A cable carrying <u>Amperes</u> <u>feet</u> from standard compass <u>feet</u> from steering compass
A cable carrying <u>Amperes</u> <u>feet</u> from standard compass <u>feet</u> 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 every course in the case of the standard compass and Nil degrees on every course in the case of the steering compass.

FOR SMITH'S DOCK CO. L^d

Julianus

Builder's Signature.

Date July 5th 1916

GENERAL REMARKS.

This Electric light Installation has been fitted on board in accordance with the Rules and tried under full working conditions with satisfactory results.

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

AWD 11/2/16

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

Committee's Minute



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