

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 6799.

Port of Belfast Date of First Survey May 3rd Date of Last Survey June 8th No. of Visits 10
 No. in Reg. Book on the Iron or Steel T.S.S. "Mousitar" Port belonging to London
 Built at Belfast By whom Werns & Horniman Blackby When built 1910
 Owners Werns & Horniman Owners' Address London
 Yard No. 291 Electric Light Installation fitted by The Sunderland Forge & Eng Co^{ys} When fitted 1910

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Bipolar compound wound dynamo by Werns & Horniman
 coupled to single acting enclosed engine by Werns & Horniman
 Capacity of Dynamo 120 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed In recess at top of engine room Whether single or double wire system is used Double

Position of Main Switch Board Close to dynamo having switches to groups five of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each There are none

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 - slate and porcelain used

Total number of lights provided for 200 arranged in the following groups:-

A	61	lights each of	16	candle power requiring a total current of	36.6	Amperes
B	38	lights each of	16	candle power requiring a total current of	22.8	Amperes
C	35	lights each of	16	candle power requiring a total current of	21.	Amperes
D	16	lights each of	16	candle power requiring a total current of	9.6	Amperes
E	50	lights each of	16	candle power requiring a total current of	30.	Amperes
<u>400</u>	Mast head light with	1	lamps each of	32	candle power requiring a total current of	1.2
<u>400</u>	Side light with	1	lamps each of	32	candle power requiring a total current of	1.2
<u>Five</u>	Cargo lights of		160	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 In Warehouse on Bridge

DESCRIPTION OF CABLES.

Main cable carrying 120 Amperes, comprised of 37 wires, each 15 L.S.G. diameter, .151 square inches total sectional area
 Branch cables carrying 22.8 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .0285 square inches total sectional area
 Branch cables carrying 9.6 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, .0724 square inches total sectional area
 Leads to lamps carrying 1.8 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .00181 square inches total sectional area
 Cargo light cables carrying 6 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, .00414 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Engine Rooms and Mains in Power decks, lead covered armoured and braided wire 2500 Megohm grade.
Wiring in berths lead covered

Joints in cables, how made, insulated, and protected There are none

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 —

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 Wire cables pass through beams
holes bushed with fibre ferrules

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

Lead covered ✓

wire used. ✓

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

Lead covered armoured and braided ✓

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

Lead covered armoured and braided ✓

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

do do do do ✓

How are cables carried through beams

Holes bushed with fibre ✓

through bulkheads, &c.

Walworth glands used. ✓

How are cables carried through decks

Galvanised iron deck tubes used. ✓

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

Lead covered armoured and braided wire used. ✓

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

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

The installation is supplied with a voltmeter and

with an amperemeter, fixed on switchboard ✓

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

98 ✓

per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than
statute mile after 24 hours' immersion in seawater.

2500 ✓

megohms per

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.

PRO THE SUNDERLAND FORGE & ENGINEERING CO. LTD.

A. W. G. W. L.

Electrical Engineers

Date 21. June 1910

COMPASSES.

Distance between dynamo or electric motors and standard compass

150 feet

Distance between dynamo or electric motors and steering compass

140 feet.

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
12	15	5	5
9.6	50	40	40
1.8	15	5	5

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
standard compass and

Nil

degrees on

all

courses in the case of the

Nil

degrees on

all

courses in the case of the steering compass.

PRO WORKMAN & CO., LIMITED.

R. P. R. W. L.

SECRETARY.

Builder's Signature.

Date

GENERAL REMARKS.

This installation appears to be 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.

J. W. R.

R. F. R. W. L.

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

Committee's Minute



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