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REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 13

Port of Chicago. Ill. Date of First Survey 4-5-17 Date of Last Survey 26-6-17 No. of Visits 5
 No. in Reg. Book on the Iron or Steel S.S. "DANE BROG" Port belonging to Copenhagen.
 Built at Chicago. Ill. By whom Chicago Shipbuilding Co. When built 1917
 Owners Svensen & Jaspersen. Owners' Address Copenhagen.
 Yard No. 82 Electric Light Installation fitted by Builders When fitted 1917

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 7 1/2 H. W. Ingberg Generator with direct-coupled totally enclosed engine.

Capacity of Dynamo 68 Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Starboard Side 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, D, E of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each One in Captain's Alleyway, One in Mess Room, One in Alleyway in Crew's Quarters Aft. Each with five 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 10 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 119 arranged in the following groups:—

A	21	lights each of	40 watt	candle power requiring a total current of	7 1/2	Amperes
B	26	lights each of	40 watt	candle power requiring a total current of	9 1/2	Amperes
C	28	lights each of	25 watt	candle power requiring a total current of	10 1/2	Amperes
D	32	lights each of	40 watt	candle power requiring a total current of	11 1/2	Amperes
E	6	lights each of	25 watt	candle power requiring a total current of	14 1/2	Amperes
2	Mast head light with	1 lamp each of	60 watt	candle power requiring a total current of	1 1/2	Amperes
2	Side light with	1 lamp each of	60 "	candle power requiring a total current of	1 1/2	Amperes
16	Cargo lights of	40 watt	candle power, whether incandescent or arc lights	<u>Incandescent</u>		

If arc lights, what protection is provided against fire, sparks, &c. Yes

Where are the switches controlling the masthead and side lights placed Chart Room

DESCRIPTION OF CABLES.

Main cable carrying 88 Amperes, comprised of 1 wires, each No 2 B & S. diameter, 66370 square inches total sectional area
 Branch cables carrying 25 Amperes, comprised of 1 wires, each " 10 S.W.G. diameter, 10380 square inches total sectional area
 Branch cables carrying 12 Amperes, comprised of 1 wires, each " 14 S.W.G. diameter, 4107 square inches total sectional area
 Leads to lamps carrying 12 Amperes, comprised of 1 wires, each " 14 S.W.G. diameter, 4107 square inches total sectional area
 Cargo light cables carrying 6 Amperes, comprised of 1 wires, each " 10 S.W.G. diameter, 10380 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanised Rubber double braided, led through galv. iron conduit.
In cabins is wood moulding. All cables to Specifications and Tests of National Board of Fire Underwriters.
 Joints in cables, how made, insulated, and protected Soldered, rubbered, and friction taped, in iron boxes where iron conduits are used.

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 Galv. iron conduit.



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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 Conduit and watertight fittings

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

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

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

How are cables carried through beams Conduit through bulkheads, &c. W. T. Fittings ✓

How are cables carried through decks Conduit W. T. Fittings ✓

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 In W. T. Conduit secured to deck beams

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 on 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 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.

COMPASSES.

Distance between dynamo or electric motors and standard compass About 50 Feet

Distance between dynamo or electric motors and steering compass ditto

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>25</u>	<u>2</u>	<u>2</u>	<u>2</u>
<u>25</u>	<u>2</u>	<u>2</u>	<u>2</u>

Have the compasses been adjusted with and without the electric installation at work at full power Not officially

The maximum deviation due to electric currents, etc., was found to be ✓ degrees on ✓ course in the case of the standard compass and ✓ degrees on ✓ course in the case of the steering compass.

GENERAL REMARKS.

The above Installation has been fitted in a satisfactory manner and proved satisfactory under test.

It is submitted that this vessel is eligible to THE RECORD. Elec Light.

H. R. Whelland

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Elec Light

NEW YORK JUL 24 1917

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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.