Rpt. 13.

Received at London Office THU. 27 JUN. 1918

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 153

REC'D NEW YORK May 21 1918

Port of Cleveland Ohio Date of First Survey 22. 1. 18 Date of Last Survey 29. 4. 18 No. of Visits 6

No. in Reg. Book — on the ~~Iron or~~ Steel S.S. Lake St Regis Port belonging to Ashtabula

Built at Ashtabula. O. By whom The St. Lake. Eng. Wks When built 1918. 4

Owners 45 Shipping Board Emergency Fleet Owners' Address Washington.

Yard No. 178 Electric Light Installation fitted by The St. Lake. Eng Works When fitted 1918

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 4 Pole Dynamo, direct connected to Reciprocating Engine at 450 R.P.M.

Capacity of Dynamo 80 Amperes at 125 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 ditto having switches to groups of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each One in Midship Accomodation, 6 Circuits One in aft Cabin, 4 Circuits, One in Forecastle, 2 Circuits

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 ~~in~~ including lamp circuits Yes.

Are the fuses of non-oxidizable metal Yes and constructed to fuse at an excess of 25 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 Plug fuses

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 146 arranged in the following groups :—

A	Midship. Accom.	46 lights	each of	6 - 30 Watt 40 - 25 "	candle power requiring a total current of	9.4 Amperes
B	Aft. do	16 lights	each of	25 Watt	candle power requiring a total current of	3.2 Amperes
C	Forecastle	8 lights	each of	25 "	candle power requiring a total current of	1.7 Amperes
D	Decks	22 lights	each of	60 "	candle power requiring a total current of	10.7 Amperes
E	E. & B. Spaces	46 lights	each of	2 - 25 Watt 44 - 60 "	candle power requiring a total current of	21.6 Amperes
2	Mast head light with	1	lamps each of	100 Watt	candle power requiring a total current of	1.6 Amperes
2	Side light with	1	lamps each of	100 "	candle power requiring a total current of	1.6 Amperes

8 Cargo lights of 4 - 25 Watt lamps candle power, whether incandescent or arc lights Incandescent.

If arc lights, what protection is provided against fire, sparks, &c. Screened. One 35 Amp. Deck Light fitted on independent Circuit. Wiring fitted. ditto

Where are the switches controlling the masthead and side lights placed

DESCRIPTION OF CABLES.

Main cable carrying Capacity 150 Amperes, comprised of 19 wires, each 12 B.S. S.W.G. diameter, 133079 ~~square inches~~ Cir. Mil total sectional area (80 see above)

Branch cables carrying 70 Amperes, comprised of 7 wires, each 12 ~~S.W.~~G. diameter, 41743 ~~square inches~~ total sectional area

Branch cables carrying 50 Amperes, comprised of 7 wires, each 14 ~~S.W.~~G. diameter, 26250 ~~square inches~~ total sectional area

Leads to lamps carrying 15 Amperes, comprised of 1 wires, each 14 ~~S.W.~~G. diameter, 4107 ~~square inches~~ total sectional area

Cargo light cables carrying 13 Amperes, comprised of 37 wires, each 30 ~~S.W.~~G. diameter, 37157 ~~square inches~~ total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Standard, Rubber covered, double braided, to specifications and test of Board of Fire Underwriters

Joints in cables, how made, insulated, and protected Soldered, rubbered and taped.

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 Steel Conduit when exposed, Armoured casings in Cabins

W 150-0001

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 Steel Conduit

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Steel 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 Steel Conduit *through bulkheads, &c.* W.T. fittings ✓

How are cables carried through decks 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 Steel Conduit Cliffed to each beam, steel casing where necessary.

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* Ply. Boxes

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* Engine 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° Farhenheit 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.

Great Lakes Engineering Works,
Electrical Engineers *Date* 5-23-18

COMPASSES.

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

Distance between dynamo or electric motors and steering compass ditto.

The nearest cables to the compasses are as follows:—

A cable carrying .25 *Amperes* .5 *feet from standard compass* .5 *feet from steering compass*

A cable carrying — *Amperes* — *feet from standard compass* — *feet from steering compass*

A cable carrying — *Amperes* — *feet from standard compass* — *feet from steering compass*

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

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.*

Great Lakes Engineering Works,
Builder's Signature. *Date*

GENERAL REMARKS.

The above installation has been fitted in a satisfactory manner. The materials and workmanship employed, so far as can be seen are sound and good.

It is submitted that this vessel is eligible for THE RECORD. Elec. light. JWD 3/7/18 SDM

W. Lane
Surveyor to Lloyd's Register of Shipping.

Committee's Minute Elec. Light

New York JUN 4 1918

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

50,1,18.—Transfer.