

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 54

Port of Cleveland, Ohio Date of First Survey 20. 9. 15 Date of Last Survey 22. 11. 15 No. of Visits 1  
 No. in Reg. Book on the Iron or Steel S/S Jaguar Port belonging to New York  
 Built at Ecorse, Mich. by whom Great Lakes Eng. Wks. When built 1915  
 Owners Clyde Steamship Co. Owners' Address New York  
 Yard No. 147 Electric Light Installation fitted by Great Lakes Eng. Wks. When fitted 1915

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Am 10 H.P. Crocker-Whitely 4 Pole Generator Coupled with  
D.C. current direct connected to American Blowers Eng  
 Capacity of Dynamo 89 Amperes at 115 Volts, whether continuous or alternating current D.C.  
 Where is Dynamo fixed Main Deck Stb Side Whether single or double wire system is used double  
 Position of Main Switch Board Stb Side of Ship having switches to groups 12 in all of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each One 6 circuit aux. switch board located in Starboard hull way in midship cabins

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 125% 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 no

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

Total number of lights provided for 138 arranged in the following groups:—

A 6 Switches	34	lights each of	16 C.P.	candle power requiring a total current of	17	Amperes
B 4 Switches	52	lights each of	16 C.P.	candle power requiring a total current of	26	Amperes
C 1 Switch	6	lights each of	32 C.P.	candle power requiring a total current of	6	Amperes
D 6 Switches	46	lights each of	16 C.P.	candle power requiring a total current of	23	Amperes
E		lights each of		candle power requiring a total current of		Amperes
2 Mast head light with	2	lamps each of	32	candle power requiring a total current of	4	Amperes
2 Side light with	2	lamps each of	32	candle power requiring a total current of	4	Amperes
32 Cargo lights of	16			candle power, whether incandescent or arc lights		Incandescent

If arc lights, what protection is provided against fire, sparks, &c. Note Cargo lights are of 4 light clusters. 8 Clusters in all

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

## DESCRIPTION OF CABLES.

Main cable carrying	75	Amperes, comprised of	#20 B&S 4 gauge strand	133000	C.M.	1.046
Branch cables carrying	26	Amperes, comprised of	#8 B&S	16509	C.M.	0.129
Branch cables carrying	26	Amperes, comprised of	#10 B&S	10381	C.M.	0.0815
Leads to lamps carrying	7	Amperes, comprised of	#14 B&S	4106	C.M.	0.12
Cargo light cables carrying	2	Amperes, comprised of	#14 strand Portable Cable	4106	C.M.	0.12

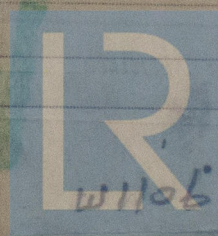
## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Heavy rubber insulation covered with braided  
water proof paper and carried through steel conduit shielded  
or rust proof through out vessel except in cabins where  
wires are laid in lead wood molding  
 Joints in cables, how made, insulated, and protected joints are soldered then taped with 30% pure rubber then taped with friction tape painted with insulating paint and covered in water tight junction boxes. In cabins joints are made in molding

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



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**DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.**

Are they in places always accessible Yes cables can be drawn out of conduit

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 "

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

How are cables carried through beams Steel conduit through bulkheads, &c. Steel conduit

How are cables carried through decks Steel conduit made water tight

Are any cables run through coal bunkers Yes 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 clamped securely to 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 ✓

Cargo light cables, whether portable or permanently fixed Portable How fixed metal plug 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 on main switch board

**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.

*Great Lakes Engineering Works,*

*A. T. Thomas*

Electrical Engineers

Date 16<sup>th</sup> Feb 1916

**COMPASSES.**

Distance between dynamo or electric motors and standard compass

about 40 feet

Distance between dynamo or electric motors and steering compass

about 25 feet

The nearest cables to the compasses are as follows:—

A cable carrying <u>1/8</u>	Ampere <u>Close to</u>	<u>feet from standard compass</u>	<u>Close to</u>	<u>feet from steering compass</u>
A cable carrying <u>6</u>	Ampere <u>About 8</u>	<u>feet from standard compass</u>	<u>About 6</u>	<u>feet from steering compass</u>
A cable carrying <u>20</u>	Ampere <u>About 40</u>	<u>feet from standard compass</u>	<u>About 25</u>	<u>feet from steering compass</u>

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 all course in the case of the standard compass and nil degrees on all course in the case of the steering compass.

*Great Lakes Engineering Works,*

*A. T. Thomas*

Builder's Signature.

Date 16<sup>th</sup> Feb 1916

**GENERAL REMARKS.**

This installation has been well fitted, and proved satisfactory on trial

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

AWD 6/4/16

A. T. Thomas.  
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.