

Rpt. 13.

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REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 37

Port of PORT ARTHUR ONT Date of First Survey 9-29-17 Date of Last Survey 10-30-18 No. of Visits
 No. in on the ~~Iron~~ or Steel SINGLE SCREW STEAMER "WAR HORUS" Port belonging to PORT ARTHUR ONTARIO
 Reg. Book Built at PORT ARTHUR ONTARIO By whom PORT ARTHUR SHIPBUILDING CO When built 1918
 Owners IMPERIAL MUNITION BOARD Owners' Address OTTAWA ONTARIO
 Yard No. 30 Electric Light Installation fitted by PORT ARTHUR SHIPBUILDING CO When fitted 1918

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Generator built by Ingers Electrical & Mechanical Works, St Joseph, Mich. U.S.A.
 direct connected to Simplex Engine built by same company.

Capacity of Dynamo 65 Amperes at 115 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 fifteen of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Port & Starboard side cabins, forward and after cabins, Deck fore and aft, Engine & Boiler rooms, comprising 8 circuits. wireless one.

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

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

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

Total number of lights provided for 162 arranged in the following groups:—

A Forward cabin	6 lights each of	60 ^{Watts} candle power	requiring a total current of	3	Amperes
B Deck Lights	16 lights each of	"	candle power requiring a total current of	8	Amperes
C Port Cabin	41 lights each of	"	candle power requiring a total current of	20.5	Amperes
D Starbd. Cabin	27 lights each of	"	candle power requiring a total current of	13.5	Amperes
E After cabin	24 lights each of	"	candle power requiring a total current of	12.00	Amperes
Engine & Boiler Room	35 + 8 = 43	60	candle power requiring a total current of		
One Mast head light with	2 lamps each of	120	candle power requiring a total current of	17.5	Amperes
1 stem light	2	"	"	2.0	
2 Side light with	2 lamps each of	"	candle power requiring a total current of	2.0	Amperes

4 clusters Cargo lights of 4 lights each 60 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 Telltale in Pilot house.

DESCRIPTION OF CABLES. 65 see above

Main cable carrying 90 Amperes, comprised of 7 wires, each #10 ^{B+S.} S.W.G. diameter, 66370 ^{sq. in.} square inches total sectional area
 Branch cables carrying 20 Amperes, comprised of 2 wires, each #10 S.W.G. diameter, 10380 square inches total sectional area
 Branch cables carrying 20 Amperes, comprised of 2 wires, each #10 S.W.G. diameter, 10380 square inches total sectional area
 Leads to lamps carrying 1 Amperes, comprised of 2 wires, each #14 S.W.G. diameter, 4107 square inches total sectional area
 Cargo light cables carrying 4 Amperes, comprised of 2 wires, each #14 S.W.G. diameter, 4107 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

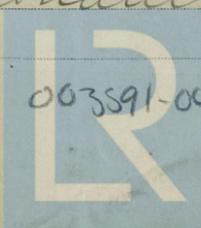
Vulcanized rubber, double braided, led thru galvanized iron conduit
In cabins in wood moldings. All cables to specifications & tests of the
National board of Fire underwriters

Joints in cables, how made, insulated, and protected Soldered, rubbered and friction taped,
In iron boxes where iron conduit is 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 galvanized 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 *conduits and watertight fittings*

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

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

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

How are cables carried through beams *in conduits* through bulkheads, &c. *W.T. conduits* ✓

How are cables carried through decks *in conduits with watertight 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 *galvanized steel conduit, W.T. screwed to beam*

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 *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.

Port Arthur Shipbuilding Co. Limited

J. J. Paige
General Manager

Electrical Engineers

Date *1918*

COMPASSES.

Distance between dynamo or electric motors and standard compass *about 45 feet*

Distance between dynamo or electric motors and steering compass *35 "*

The nearest cables to the compasses are as follows:—

A cable carrying <i>1/2"</i>	Amperes <i>8</i>	feet from standard compass <i>8</i>	feet from steering compass
A cable carrying <i>4</i>	Amperes <i>8</i>	feet from standard compass <i>6</i>	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 _____

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.

Port Arthur Shipbuilding Co. Limited

J. J. Paige
General Manager

Builder's Signature.

Date _____

GENERAL REMARKS.

The above installation has been fitted in a satisfactory manner and proved satisfactory under test. It is understood that a search light and wireless will be fitted at a later date.

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

JWD 10/1/19

Thomas Duce Collins

Surveyor to Lloyd's Register of Shipping.

5c. & 17.—Transfer.

Committee's Minute

FRI. 10 JAN. 1919

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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