

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 60

Port of Port Arthur Ontario Date of First Survey Dec. 23-19 Date of Last Survey Aug. 5-19 No. of Visits 18
 No. in Reg. Book on the Iron or Steel S.S. Steamer "Canadian Sailer" Port belonging to Montreal Que.
 Built at Port Arthur Ontario By whom Port Arthur Shipbuilding Co. When built 1919
 Owners Canadian Government Owners' Address Ottawa Ontario.
 Yard No. (40) Electric Light Installation fitted by Port Arthur Shipbuilding Co. When fitted 1919

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Generator built by- Enberg Electrical Mechanical Works St. Joseph Mich. U.S.A. Type M.P. 6. No. 2947 Bore 6"
 Speed 450 R.P.M.
 Capacity of Dynamo 87 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 starboard side having switches to groups 17 groups of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each One port side accommodation, one starboard side accommodation, one in poop, & one in fore-castle.

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-oxidisable metal Yes and constructed to fuse at an excess of 1% 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 147 arranged in the following groups :-

A Fore-castle (9) lights each of	60 Watt candle power requiring a total current of	4 1/2 Amperes
B Cargo holds (12) lights each of	" " candle power requiring a total current of	2 Amperes
P.S. Accommodation (24) lights each of	" " candle power requiring a total current of	12 Amperes
C.S.S. (18) lights each of	" " candle power requiring a total current of	9 Amperes
Deck lights (4) lights each of	" " candle power requiring a total current of	5 Amperes
Engine & boiler (4) lights each of	" " candle power requiring a total current of	1 Amperes
Marcenia (10) lights each of	" " candle power requiring a total current of	2 Amperes
1 Mast head light with 2 lamps each of	" " candle power requiring a total current of	1 Amperes
2 Side light with 2 lamps each of	" " candle power requiring a total current of	2 Amperes
Twelve Cargo lights of	" " candle power, whether incandescent or arc lights	Incandescent

If arc lights, what protection is provided against fire, sparks, &c. None
 Where are the switches controlling the masthead and side lights placed Telltale in Pilot House.

DESCRIPTION OF CABLES.

Main cable carrying	65 Amperes, comprised of	7 wires, each	10 10 ^{B.S.} diameter, .057 square inches total sectional area
Branch cables carrying	10 Amperes, comprised of	7 wires, each	18 18 ^{B.S.} diameter, .102 square inches total sectional area
Branch cables carrying	12 Amperes, comprised of	7 wires, each	18 18 ^{B.S.} diameter, .102 square inches total sectional area
Leads to lamps carrying	1 Amperes, comprised of	7 wires, each	20 20 ^{B.S.} diameter, .032 square inches total sectional area
Cargo light cables carrying	2 Amperes, comprised of	7 wires, each	20 20 ^{B.S.} diameter, .032 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Rubber and lead covered in accommodation, ✓ Rubber covered, leaded and armoured in cargo holds, and Engine room spaces. ✓
 Joints in cables, how made, insulated, and protected None ✓
 Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances No joints 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 No joints ✓
 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 Fastened every 12' on steel channels. ✓



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 **In galvanized pipe** ✓

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

What special protection has been provided for the cables near boiler casings **steel armoured cables** ✓

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

How are cables carried through beams **Lead bushings** ✓ through bulkheads, &c. **W.T. packing glands** ✓

How are cables carried through decks **Brass water tight packing glands** ✓

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 **Clipped every 12' on channels** ^{beams} **running along inside 4" channels** ✓

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, ~~stores~~, or baggage **For cargo** ✓

If so, how are the lamp fittings and cable terminals specially protected **Special cargo fixtures of cast iron** ✓

Where are the main switches and fuses for these lights fitted **In Engine Room on main switch board** ✓

If in the spaces, how are they specially protected **None** ✓

Are any switches or fuses fitted in bunkers **No** ✓

Cargo light cables, whether portable or permanently fixed **Fixed** How fixed **Fastened to deck** ✓

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 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 _____ 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.

Electrical Engineers

Date **Aug. 1919**

COMPASSES.

Distance between dynamo or electric motors and standard compass **About 65 feet**

Distance between dynamo or electric motors and steering compass **About 70 feet**

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
1	15	10	10
2	15	10	10
1	15	10	10

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 **None** degrees on **None** course in the case of the standard compass and **None** degrees on **None** course in the case of the steering compass.

J. F. Page
Builder's Signature.

Date

GENERAL REMARKS.

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

11/9/19

J. Mac Corquindale

Surveyor to Lloyd's Register of Shipping.

Im. 4. 18.—Transfer.

Committee's Minute **TUE 16 SEP 1919**

FRI OCT 8 1920



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.