

TUE OCT 5 1920

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 166

Port of Toronto Date of First Survey July 15 Date of Last Survey Sept 10/20 No. of Visits 25
 No. in Reg. Book on the Iron or Steel TRANSPET Port belonging to Buenos Aires
 Built at Bollingwood, Ont. By whom Bollingwood S. B. Co. When built 1920
 Owners Compania Transportadora de Petroleos Owners' Address Buenos Aires
of Buenos Aires
 Card No. 68 Electric Light Installation fitted by Bollingwood S. B. Co. When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 7 H.P. General Electric boi generator, direct coupled to a
General Electric boi marine engine 5' x 4' x 5'
 Capacity of Dynamo 63.6 Amperes at 110 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Engine Room both platform Starboard Whether single or double wire system is used Double
 Position of Main Switch Board Eng. Room both platform having switches to groups 6 circuits of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each all distribution boards
Forward cabin 4 circuits. (Pump room 8 circuits) after cabin 4 circuits.
Pilot house 5 circuits. (Fitted on boiler casing on deck outside of Pump room)

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 No wire fuses

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes
 Total number of lights provided for 71 arranged in the following groups:—

Location	Number of lights	Watt	candle power requiring a total current of	Amperes
Eng + Boiler Room	18	40	6 1/2	Amperes
Coop	24	25	5 1/2	Amperes
Pump Room	7	25	1 3/4	Amperes
Forecastle	17	25	3 3/4	Amperes
Search	lights each of	735	20	Amperes
1 Mast head light with 1 lamp each of	32	7/8	Amperes	
2 Side light with 1 lamp each of	32	1 3/4	Amperes	
1 Stern light of	32	7/8	"	

are lights, what protection is provided against fire, sparks, &c. No are lights

There are the switches controlling the masthead and side lights placed In Pilot house.

DESCRIPTION OF CABLES.

Main cable carrying 90 Amperes, comprised of 7 wires, each 1280 S.W.G. diameter, .05983 square inches total sectional area
63.6 See above
 Branch cables carrying 46 Amperes, comprised of 7 wires, each 0800 S.W.G. diameter, .02895 square inches total sectional area
 Branch cables carrying 33 Amperes, comprised of 7 wires, each 0640 S.W.G. diameter, .02011 square inches total sectional area
 " " " 24 " " " 0480 " " " .01281 square inches total sectional area
 Leads to lamps carrying 3 Amperes, comprised of 1 wires, each 0800 S.W.G. diameter, .00502 square inches total sectional area
 Cargo light cables carrying Amperes, comprised of wires, each S.W.G. diameter, square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All wires rubber covered + braided, protected in galvanized
conduit + iron junction boxes. Forward deck houses protected
in wood battens with screwed covers
 Joints in cables, how made, insulated, and protected Extension box system employing
porcelain extension boxes in iron junction boxes

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 In galvanized conduit.



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010236-010245-0218

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 *Galv. Conduit*

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

What special protection has been provided for the cables near boiler casings *Galv. Conduit*

What special protection has been provided for the cables in engine room *Galv. Conduit*

How are cables carried through beams *Galv. Conduit* through bulkheads, &c. *Galv. Conduit*

How are cables carried through decks *Galv. Conduit with water tight bushings*

Are any cables run through coal bunkers *no* or cargo spaces *no* or spaces which may be used for carrying cargo, stores, or baggage *no*

If so, how are they protected *✓*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *None*

If so, how are the lamp fittings and cable terminals specially protected *None*

Where are the main switches and fuses for these lights fitted *None*

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 *None* 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 *Main Switched 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 *yes*

Are any switches, fuses, or joints of cables fitted in the pump room or companion *No*

How are the lamps specially protected in places liable to the accumulation of vapour or gas *Condulets with vapour globes*

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.

John A Burns

Electrical Engineers

Date *Sept 14/20*

COMPASSES.

Distance between dynamo or electric motors and standard compass *116 feet*

Distance between dynamo or electric motors and steering compass *116 feet*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>20</i>	<i>6</i>	<i>6</i>	<i>6</i>
<i>3 1/2</i>	<i>7.5</i>	<i>7.5</i>	<i>7.5</i>
<i>3 3/4</i>	<i>12</i>	<i>12</i>	<i>12</i>

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 *N 39. W.* course in the case of the steering compass.

THE COLLINGWOOD SHIPBUILDING CO. L.TD.

John J. Healy

Managing Director.

Builder's Signature.

Date *Sept 14/20*

GENERAL REMARKS.

The Electric light installation on this vessel has been fitted in accordance with the Rules, tried out under working conditions and found to be satisfactory

It is submitted that

this vessel is capable of

Elec Lt

Roll 6/10/20

Robert C Blyth

Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUE OCT 19 1920*

JM



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.