

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 14

Port of Toronto, Ont. Date of First Survey _____ Date of Last Survey 15th Sept 1916 No. of Visits _____
 No. in _____ on the Iron or Steel Steamer Locolite Port belonging to Sarnia
 Reg. Book 309 Built at Collingwood, Ont. By whom Collingwood Shipbuilding Co When built 1916
 Owners Imperial Oil Co. Ltd Owners' Address Sarnia
 Yard No. 46 Electric Light Installation fitted by Collingwood Shipbuilding Co When fitted 1916

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1 Direct Current ^{10 kilowatt} Generator built by The Electric & Ordnance Accessories Co Ltd
Birmingham direct connected to a Vickers reciprocating engine
 Capacity of Dynamo 91 Amperes at 110 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed In Engine Room Stbd. Side Trid Whether single or double wire system is used double
 Position of Main Switch Board Along side of Dynamo having switches to groups A, B, C, D, E, F, G, H, J, K, of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each A - fore end of engine room 6 switches; C - Poop (outside after
companionway) 5 switches; D - Texas 4 switches; E - Pump Room (outside companionway) 6 switches; F - Forecastle (after
end stbd. passage) 6 switches; G - navigation lights (Tallies in Pilot House) 6 switches; H - Searchlight (in Pilot House) 1 switch
K - Cabins Aft in stbd. passage way 6 switches
 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 no reductions 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 100 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 _____ arranged in the following groups:—

A Engine Room	3 lights each of	16	candle power requiring a total current of		Amperes
B Boiler Room	10 storage Battery for electric whistle				
C Poop	4 lights each of 1 of 32 cp. and 4 of 16		candle power requiring a total current of	22	Amperes
D Texas	22 " " of 16 cp. and 4 of 32 cp.			9 1/2	Amperes
E Pump Room	13 lights each of	16	candle power requiring a total current of	6 1/2	Amperes
F Forecastle	20 " " of 16 cp.	16		11	Amperes
G Navigation	6 lights each of	32	candle power requiring a total current of	6	Amperes
H Wireless					
J Searchlight	lights each of		candle power requiring a total current of	20	Amperes
K Cabins Aft	29 " " of 16 cp.	16		15 1/2	Amperes
4 Mast head light with 1 pr lamps each of	32		candle power requiring a total current of	3	Amperes
2 Side light with 1 pr lamps each of	32		candle power requiring a total current of	2	Amperes
6 cluster Cargo lights of 6 of 16 cp. = 96			candle power, whether incandescent or arc lights	Incandescent	

If arc lights, what protection is provided against fire, sparks, &c. No Arc lights

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

DESCRIPTION OF CABLES.

Main cable carrying	91	Amperes, comprised of	19	wires, each	14	S.W.G. diameter,	.095	square inches total sectional area
Branch cables carrying	44	Amperes, comprised of	7	wires, each	16	S.W.G. diameter,	.022	square inches total sectional area
Branch cables carrying	22	Amperes, comprised of	7	wires, each	20	S.W.G. diameter,	.009	square inches total sectional area
Leads to lamps carrying	3	Amperes, comprised of	7	wires, each	22	S.W.G. diameter,	.0042	square inches total sectional area
Cargo light cables carrying	3	Amperes, comprised of	1	wires, each	16	S.W.G. diameter,	.0032	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Rubber covered cable in galv. iron conduits dynamo to main switch
board - Rubber covered cables in galv. iron conduits main switch board
to junction boxes and from junction boxes to lamps
 Joints in cables, how made, insulated, and protected All made at switches at 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 galv. iron conduits



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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 *in water tight gal.*

iron conduits

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

What special protection has been provided for the cables near boiler casings *in galv. iron conduits*

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

How are cables carried through beams *in conduits* through bulkheads, &c. *Run on deck*

How are cables carried through decks *in conduits with water tight flanges.*

Are any cables run through coal bunkers *Yes* or cargo spaces *NO* or spaces which may be used for carrying cargo, stores, or baggage *Yes to lamps only*

If so, how are they protected *in galv. iron conduits under beams*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *yes vapour proof lamps*

If so, how are the lamp fittings and cable terminals specially protected *in vapour proof lamp base, conduits secured into base*

Where are the main switches and fuses for these lights fitted *in junction boxes (or switchboards) outside these spaces*

If in the spaces, how are they specially protected *not in spaces*

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 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 *Yes*

Are any switches, fuses, or joints of cables fitted in the pump room or companion *No - in junction box (or switchboard) outside Companion room*

How are the lamps specially protected in places liable to the accumulation of vapour or gas *in Vapour proof lamps*

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.

John S. Heath

Electrical Engineers

Date *18th Oct 1916*

COMPASSES.

Distance between dynamo or electric motors and standard compass

about 140 feet

Distance between dynamo or electric motors and steering compass

about 135 "

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>1/4</i>	<i>1</i>	<i>1</i>	<i>1</i>
<i>40</i>	<i>3</i>	<i>5</i>	<i>5</i>
<i>7</i>	<i>7</i>	<i>6</i>	<i>6</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 *no difference* degrees on _____ course in the case of the _____ standard compass and *no difference* degrees on _____ course in the case of the steering compass.

John S. Heath

Builder's Signature.

Date *18th Oct 1916*

GENERAL REMARKS.

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

J.W.D.
10/11/16

J.R.T. Benson

Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 17 NOV 1916*