

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 Reg. Book 309 on the Iron or Steel Steamer Locolite Port belonging to Sarnia
 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 - fwd 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 (Tallab in Pilot House) 6 switches; J - 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:—

Group	Description	Candle Power	Current (Amperes)
A	Engine Room 3 lights each of 16	48	16
B	Pilot House 10 storage Battery for electric whistle	-	-
C	Poop 48 lights each of 10 of 32 cp. and 4 of 16 cp.	480	22
D	Texas 22 " " " " " " " "	220	9 1/2
E	Pump Room 13 lights each of 16	208	11
F	Forecastle 20 " " " " " " " "	240	6
G	Navigation 6 lights each of 32	192	6
H	Wireless	-	-
J	Searchlight lights each of 16	16	20
K	Cabins aft 29 " " " " " " " "	348	15 1/2
4	Mast head light with 1/2 lamps each of 32	32	3
2	Side light with 1/2 lamps each of 32	32	2
6	cluster Cargo lights of 6 of 16 cp = 96	96	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

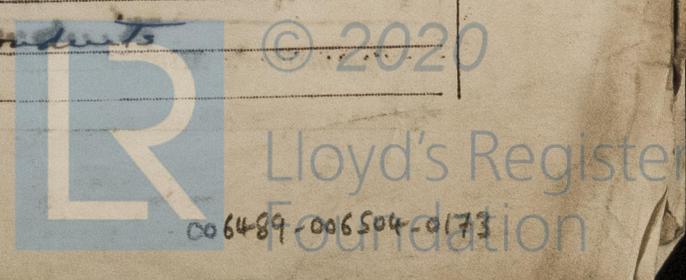
DESCRIPTION OF INSULATION, PROTECTION, ETC.

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



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 gals.

Iron conduits

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

What special protection has been provided for the cables near boiler casings In gals. 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

If so, how are they protected in galon 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 screwed 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

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	<u>7</u>	Amperes	<u>1</u>	feet from standard compass	<u>1</u>	feet from steering compass
A cable carrying	<u>40</u>	Amperes	<u>3</u>	feet from standard compass	<u>5</u>	feet from steering compass
A cable carrying	<u>7</u>	Amperes	<u>7</u>	feet from standard compass	<u>6</u>	feet from steering compass

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.P.F. Benson

Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 17 NOV 1916



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