

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1175

Port of PHILADELPHIA Date of First Survey 13-4-03 Date of Last Survey May 18-03 No. of Visits 8
 No. in 1 on the Steel S.S. LIGONIER Port belonging to Port Arthur Texas
 Reg. Book 1 Built at Camden N.J By whom New York SBC When built 1903-5
 Owners J. M. Cuffey Petroleum Co Owners' Address Pittsburg, Pa
 Yard No. 9 Electric Light Installation fitted by New York SBC When fitted 1903-5

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1 no 5x5 vertical reciprocating type Engines running at 450 R.P.M.
direct connected to two 5 K.W. 110 volt D.C. Dynamos
 Capacity of 1 Dynamo 400 Amperes at 110 Volts, whether continuous or alternating current Direct

Where is Dynamo fixed On Engine floor - port side

Position of Main Switch Board forward of dynamo having switches to groups Five of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each A. Comdship house - five circuits
B. Engine Hatch four circuits C. Fire Room D. Engine Room port
E. Engine Room Starboard

If cut outs 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 cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits yes

Are the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of 100 per cent over the normal current

Are all cut outs 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 cut-outs constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 92 arranged in the following groups:

A	<u>Forty one</u> lights each of <u>16</u> candle power requiring a total current of <u>20.5</u> Amperes
B	<u>Twenty five</u> lights each of <u>"</u> candle power requiring a total current of <u>12.5</u> Amperes
C	<u>Ten</u> lights each of <u>"</u> candle power requiring a total current of <u>5</u> Amperes
D	<u>Eight</u> lights each of <u>"</u> candle power requiring a total current of <u>4</u> Amperes
E	<u>Eight</u> lights each of <u>"</u> candle power requiring a total current of <u>4</u> Amperes
	<u>3</u> Mast head light with <u>3</u> lamps each of <u>"</u> candle power requiring a total current of <u>1.5</u> Amperes
	<u>2</u> Side light with <u>2</u> lamps each of <u>"</u> candle power requiring a total current of <u>1</u> Amperes
	<u>5</u> Cargo lights of <u>"</u> candle power, whether incandescent or arc lights <u>incandescent</u>

If arc lights, what protection is provided against fire, sparks, &c. none fitted

Where are the switches controlling the masthead and side lights placed wheel house

DESCRIPTION OF CABLES.

Main cable carrying 46 Amperes, comprised of 37 wires, each 18 B+S L.S.G. diameter, .0481 square inches total sectional area
 Branch cables carrying 12.5 Amperes, comprised of 7 wires, each 16 B+S L.S.G. diameter, .0140 square inches total sectional area
 Branch cables carrying 20 Amperes, comprised of 19 wires, each 18 B+S L.S.G. diameter, .0247 square inches total sectional area
 Leads to lamps carrying 1/2 Amperes, comprised of 1 wires, each 14 B+S L.S.G. diameter, .0032 square inches total sectional area
 Cargo light cables carrying 2 Amperes, comprised of 2 wires, each 14 B+S L.S.G. diameter, .0032 square inches total sectional area

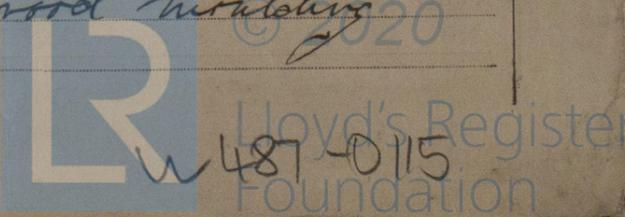
DESCRIPTION OF INSULATION, PROTECTION, ETC.

Insulated with 3/32 rubber - 1/32 waterproof + flameproof raid + in pipe work with second covering of 1/32 braided
 Protected by wood moulding or by iron pipe
 Joints in cables, how made, insulated, and protected Joints made electrically + mechanically perfect without solder, then soldered, then covered with pipe rubber then with strong tape, then painted with waterproof insulating paint

Are all the joints of cables thoroughly soldered, resin only having been used as a flux 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 Iron pipe + wood moulding



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 Iron pipe
+ watertight fixtures

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

What special protection has been provided for the cables near boiler casings _____

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

How are cables carried through beams Iron pipe through bulkheads, none

How are cables carried through decks _____

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 Iron pipe

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 cut outs for these lights fitted _____

If in the spaces, how are they specially protected _____

Are any switches or cut outs 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 Iron wire system

How are the returns from the lamps connected to the hull _____

Are all the joints with the hull in accessible positions _____

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas yes

Are any switches, cut outs, 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 By vapour tight glass fittings

The installation is now supplied with a voltmeter and 2 amperemeters fixed on the main board

The copper used is guaranteed to have a conductivity of 98 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 600 megohms per statute mile after 24 hours' immersion in seawater.

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.

L. C. Richards for N.Y. Shipbuilding Co Electrical Engineers

Date May 22 1903

COMPASSES.

Distance between dynamo or electric motors and standard compass 150'

Distance between dynamo or electric motors and steering compass 150'

The nearest cables to the compasses are as follows:—

A cable carrying <u>2.5</u> Amperes	<u>8</u> feet from standard compass	<u>10</u> feet from steering compass
A cable carrying <u>1/2</u> Amperes	<u>10</u> feet from standard compass	<u>2</u> feet from steering compass
A cable carrying <u>-</u> Amperes	<u>-</u> feet from standard compass	<u>-</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 nothing degrees on _____ course in the case of the standard compass and nothing degrees on _____ course in the case of the steering compass.

New York Shipbuilding Co. by [Signature] Builder's Signature. Date May 23^d 1903

GENERAL REMARKS.

This installation has been fitted in accordance with the Rules of Lloyd's Register of British and Foreign Shipping.

Robert Haig.

Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

This installation appears to be fitted in accordance with the Rules



Lloyd's Register of British and Foreign Shipping
6/6/03

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.