

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2790

Port of PHILADELPHIA Date of First Survey Jan 8th 1914 Date of Last Survey Jan 8th 1914 No. of Visits 39
 No. in Reg. Book on the ~~Iron~~ or Steel S.S. "SABINE SUN" Port belonging to Philadelphia
 Built at CHESTER PA. By whom SUN SHIPBUILDING CO. When built 1917
 Owners U.S. SHIPPING BOARD Owners' Address Washington, D.C.
 Yard No. 2 Electric Light Installation fitted by MESSRS CHAS. CORY & SON INC. When fitted 1918

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2-10-K.W. 110 VOLT ENGINE DRIVEN STURTEVANT GENERATING SETS

Capacity of Dynamo 91 Amperes at 110 Volts, whether continuous or alternating current CONTINUOUS
 Where is Dynamo fixed IN ENGINE ROOM ON DYNAMO PLATFORM Whether single or double wire system is used DOUBLE
 Position of Main Switch Board IN ENGINE ROOM having switches to groups 9 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each 1 FORWARD, 4 CIRCUIT DISTRIBUTION PANEL ON BRIDGE DECK

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 NO
 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 50 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 N.E.C. FUSES ONLY
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases YES

Total number of lights provided for 256 arranged in the following groups:—

A	<u>256</u> lights each of <u>40 WATTS</u> candle power requiring a total current of <u>94</u> Amperes
B	lights each of <u>25 WATTS</u> candle power requiring a total current of <u> </u> Amperes
C	lights each of <u> </u> candle power requiring a total current of <u> </u> Amperes
D	lights each of <u> </u> candle power requiring a total current of <u> </u> Amperes
E	lights each of <u> </u> candle power requiring a total current of <u> </u> Amperes
	<u>1</u> Mast head light with <u>2</u> lamps each of <u>32</u> candle power requiring a total current of <u>ONE</u> Amperes
	<u>2</u> Side light with <u>2</u> lamps each of <u>32</u> candle power requiring a total current of <u>TWO</u> Amperes
	<u>6-6 LIGHT</u> Cargo lights of <u>240 WATTS PER CLUSTER</u> candle power, whether incandescent or arc lights <u>INCANDESCENT</u>

If arc lights, what protection is provided against fire, sparks, &c. NO ARC LAMPS INSTALLED

Where are the switches controlling the masthead and side lights placed ON TELL TALE PANEL IN PILOT HOUSE

DESCRIPTION OF CABLES.

Main cable carrying 91 Amperes, comprised of 61 wires, each 17 B. & S. #6 diameter, .0974 square inches total sectional area
 Branch cables carrying 12 Amperes, comprised of 1 wires, each 12 B. & S. #6 diameter, .0051 square inches total sectional area
 Branch cables carrying 25 Amperes, comprised of 19 wires, each 18 B. & S. #6 diameter, .0251 square inches total sectional area
 Leads to lamps carrying 36 Amperes, comprised of 1 wires, each 14 B. & S. #6 diameter, .0032 square inches total sectional area
 Cargo light cables carrying 2.18 Amperes, comprised of 1 wires, each 14 B. & S. #6 diameter, .0032 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

NEXT TO THE CONDUCTOR (A) A LAYER OF VULCANIZED RUBBER COMPOUND (B) A LAYER OF COTTON BRAID (C) A WEATHERPROOF PRESERVATIVE COMPOUND (D) AN OUTER BRAID (E) A WEATHERPROOF PRESERVATIVE COMPOUND

Joints in cables, how made, insulated, and protected JOINTS ARE SPLICED, SOLDERED, COVERED WITH A LAYER OF RUBBER COMPOUND AND A LAYER OF TAPE. IN GENERAL, CONNECTIONS ARE MADE IN JUNCTION BOXES OR MOULDING.

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 CABLES ARE CARRIED EITHER IN CONDUIT OR MOULDING ACCORDING TO LOCATION. IN ALL EXPOSED PLACES CONDUIT IS USED.



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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 CONDUIT

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat CONDUIT (HOWEVER NONE ARE CARRIED CLOSE TO THESE SOURCES)

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

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

How are cables carried through beams CONDUIT through bulkheads, &c. CONDUIT OR RUBBER BUSHING

How are cables carried through decks CONDUIT

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 CARRIED IN CONDUIT WITH WATERTIGHT JUNCTION BOXES

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

If so, how are the lamp fittings and cable terminals specially protected GUARDED S.T. FIXTURES

Where are the main switches and fuses for these lights fitted IN ENGINE ROOM (IN PASSAGE)

If in the spaces, how are they specially protected

Are any switches or fuses fitted in bunkers No

Cargo light cables, whether portable or permanently fixed PORTABLE ON OPEN DECK 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 SWITCHBOARD

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 YES (SWITCH & RECEPTACLE IN COMPANION)

How are the lamps specially protected in places liable to the accumulation of vapour or gas STEAM TIGHT GLOBE FIXTURES

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.

CHAS. CORY & SONS, INC. Electrical Engineers Date MARCH 8, 1918

COMPASSES.

Distance between dynamo or electric motors and standard compass 350 FEET

Distance between dynamo or electric motors and steering compass 350 FEET

The nearest cables to the compasses are as follows:—

A cable carrying 25 WATTS Amperes LAMP IN COMPASS feet from standard compass LAMP IN COMPASS feet from steering compass

A cable carrying 25 WATTS Amperes 6 feet from standard compass 4 feet from steering compass

A cable carrying _____ Amperes _____ feet from standard compass _____ feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power

The maximum deviation due to electric currents, etc., was found to be _____ degrees on _____ course in the case of the standard compass and _____ degree on _____ course in the case of the steering compass.

Robert H. Gray Shipbuilder & Co. Builder's Signature. Date _____

GENERAL REMARKS.

This installation has been well fitted, and found satisfactory under full powers

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

JUD 14/5/18.

J. Avey
Surveyor to Lloyd's Register of Shipping.

Committee's Minute Elec. Light

16c, 116.—Transfer.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

