

REPORT ON ELECTRIC LIGHTING INSTALLATION.

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Port of PHILADELPHIA Date of First Survey NOV. 9th Date of Last Survey DEC. 10th No. of Visits 7 No. 5380No. in Reg. Book on the ~~Iron~~ Steel STERNWHEELER "CASCAJALES" Port belonging to BARRANQUILLA, COLOMBIABuilt at CHESTER, PA.Owners TROPICAL OIL CO.By whom SUN S.B. & D.D. CO.When built 1926Yard No. 99Electric Light Installation fitted by SUN S.B. & D.D. CO.When fitted 1926

DESCRIPTION OF DYNAMO, ENGINE, ETC.

ONE GENERAL ELECTRIC CO. TYPE M.P. FORM C, 475 R.P.M. DIRECT CONNECTED TO G.E. VERTICAL STEAM ENGINE, ARRANGED FOR 80-125 LBS. PRESSURE.Capacity of Dynamo 91 ✓Amperes at 110 ✓Volts, whether continuous or alternating current DIRECT ✓Where is Dynamo fixed MAIN DECK ✓Whether single or double wire system is used DOUBLE ✓Position of Main Switch Board MAIN DECK ✓having switches to groups AS UNDER ✓

of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each NONE ✓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 YESIf 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 YESAre the fuses of non-oxidizable metal YESand constructed to fuse at an excess of 100

per cent over the normal current

Are all fuses fitted in easily accessible positions YESAre the fuses of standard dimensions YES

If wire fuses are used

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases YESTotal number of lights provided for 131

arranged in the following groups:—

A	<u>2</u>	lights each of	<u>1000 WATTS</u>	candle power requiring a total current of	<u>18</u>	Amperes
B	<u>129</u>	lights each of	<u>50</u>	"	<u>59</u>	Amperes
C		lights each of		candle power requiring a total current of		Amperes
D		lights each of		candle power requiring a total current of		Amperes
E		lights each of		candle power requiring a total current of		Amperes
	<u>2</u>	Mast head light with	<u>50 WATTS</u>	candle power requiring a total current of		Amperes
	<u>2</u>	Side light with	<u>50</u>	"	<u>1</u>	Amperes
		Cargo lights of		candle power requiring a total current of	<u>1</u>	Amperes

If arc lights, what protection is provided against fire, sparks, &c. NONE USEDWhere are the switches controlling the masthead and side lights placed MAIN BOARD WITH TELLTALE IN WHEEL HOUSE

DESCRIPTION OF CABLES.

Main cable carrying	<u>91</u>	Amperes, comprised of	<u>2</u>	wires, each	<u>#2</u>	<u>B&S</u>	S.W.G. diameter, <u>.1042</u> ✓	square inches total sectional area
Branch cables carrying	<u>11</u>	Amperes, comprised of	<u>2</u>	wires, each	<u>#14</u>	<u>B&S</u>	S.W.G. diameter, <u>.0062</u> ✓	square inches total sectional area
Branch cables carrying	<u>9</u>	Amperes, comprised of	<u>2</u>	wires, each	<u>#14</u>	<u>B&S</u>	S.W.G. diameter, <u>.0062</u> ✓	square inches total sectional area
Leads to lamps carrying	<u>—</u>	Amperes, comprised of	<u>—</u>	wires, each	<u>—</u>	<u>—</u>	S.W.G. diameter, <u>—</u>	square inches total sectional area
Cargo light cables carrying	<u>—</u>	Amperes, comprised of	<u>—</u>	wires, each	<u>—</u>	<u>—</u>	S.W.G. diameter, <u>—</u>	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

TWIN RUBBER-COVERED WIRE ENCASED IN $\frac{3}{64}$ LEAD SHEATH.Joints in cables, how made, insulated, and protected NO JOINTSAre 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 —Are there any joints in or branches from the cable leading from dynamo to main switch board NOHow are the cables led through the ship, and how protected LEAD COVERED CABLE RUN IN CONDUIT

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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 **LEAD COVERED IN CONDUITS.**

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat **LEAD COVERED CABLE IN CONDUITS.**

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

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

How are cables carried through beams **IN CONDUITS.** through bulkheads, &c. **IN CONDUITS.**

How are cables carried through decks **IN CONDUITS.**

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 **NO.**

If so, how are the lamp fittings and cable terminals specially protected **—**

Where are the main switches and fuses for these lights fitted **—**

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 **NONE USED** 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 **NO.**

How are the lamps specially protected in places liable to the accumulation of vapour or gas **VAPOUR-PROOF 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.

(Sgd.) **T. M. Jackson**

Electrical Engineers

Date **Jan. 3rd 1927.**

COMPASSES.

Distance between dynamo or electric motors and standard compass **NO COMPASS.**

Distance between dynamo or electric motors and steering compass **"**

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
A cable carrying	Amperes	feet from standard compass	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 _____ degrees on _____ course in the case of the steering compass.

Builder's Signature. Date

GENERAL REMARKS.

THE INSTALLATION HAS BEEN SATISFACTORILY FITTED ON BOARD, IT WAS TRIED WITH ALL LIGHTS ON, AND FOUND SATISFACTORY.

FEE \$100.00 **It is submitted that this vessel is eligible for THE RECORD Elec light.**

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

NEW YORK JAN 12 1927

Note: Elec. light



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.