

# REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 5380

Port of PHILADELPHIA Date of First Survey NOV. 9<sup>th</sup> Date of Last Survey DEC. 10<sup>th</sup> No. of Visits 7  
 No. in Reg. Book on the ~~Iron~~ Steel STERNWHEELER "CASCAJALES" Port belonging to BARRANQUILLA, COLOMBIA  
 Built at CHESTER, PA. By whom SUN S. B. & D. D. CO. When built 1926  
 Owners TROPICAL OIL CO. Owners' Address \_\_\_\_\_  
 Yard No. 99 Electric 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 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-oxidizable 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 NONE USED

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases YES

Total number of lights provided for 131 arranged in the following groups:—

Group	Number of Lights	Watts	Candle Power	Current (Amperes)
A	2	1000	18	18
B	129	50	59	59
C				
D				
E				
2 Mast head light with / lamps each of <u>50 WATTS</u> candle power requiring a total current of / Amperes				
2 Side light with / lamps each of <u>50</u> " candle power requiring a total current of / Amperes				
— Cargo lights of — candle power requiring a total current of / Amperes				

If arc lights, what protection is provided against fire, sparks, &c. NONE USED

Where are the switches controlling the masthead and side lights placed MAIN BOARD WITH TELLTALE IN WHEEL HOUSE

## DESCRIPTION OF CABLES.

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

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

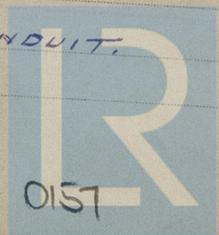
TWIN RUBBER-COVERED WIRE ENCASED IN 3/64 LEAD SHEATH.

Joints in cables, how made, insulated, and protected NO JOINTS

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 —

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 LEAD COVERED CABLE RUN IN CONDUIT



**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. 3<sup>rd</sup> 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.**

**J. M. Buchanan.**

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

**NEW YORK JAN 12 1927**

note: Elec. light



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