

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 141

Port of Jacksonville, Fla. Date of First Survey 9th August Date of Last Survey 2nd Dec. 1919 No. of Visits 15  
 Book on the Iron or Steel Screw Steamer "JACKSONVILLE" Port belonging to Jacksonville, Fla.  
 Built at Jacksonville, Fla. By whom Merrill Stevens S. B. Corp. When built 1919  
 Owners U.S. Shipping Board (Em. Fleet Corp.) Owners' Address  
 No. 107 Electric Light Installation fitted by Merrill Stevens S. B. Corp. When fitted 1919

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 10 KW. Engberg with 6x6 engine One 15 KW. General Electric with Perry Turbine

Capacity of Dynamo 80 + 125 Amperes at 125 Volts, whether continuous or alternating current D.C.  
 Where is Dynamo fixed engine room floor + 8'0" above eng. floor. Whether single or double wire system is used double.  
 Position of Main Switch Board engine room floor. having switches to groups A. B. C. D. E. of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Eng. room, Forecastle 6 switch, Deck 6 switch, Officers quarters 6 switch, Eng. quarters 6 switch.

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 cut out blocks and to each lamp circuit Yes.  
 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 Yes  
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 198 arranged in the following groups:—  

<u>Forecastle</u>	<u>14</u> lights each of <u>25 Watt</u>	<u>31</u> candle power requiring a total current of <u>3 2/10</u> Amperes
<u>Deck</u>	<u>14</u> lights each of <u>25 Watt</u>	<u>31</u> candle power requiring a total current of <u>3 2/10</u> Amperes
<u>Officers' Bridge</u>	<u>24</u> lights each of <u>25 Watt</u>	<u>31</u> candle power requiring a total current of <u>5 2/10</u> Amperes
<u>Officers' Bridge</u>	<u>32</u> lights each of <u>25 Watt</u>	<u>31</u> candle power requiring a total current of <u>6 4/10</u> Amperes
<u>35 Amp Searchlight</u>	lights each of <u>35000</u>	candle power requiring a total current of <u>35</u> Amperes
<u>1 Mast head light with 2 lamps each of 40 w.</u>		<u>50</u> candle power requiring a total current of <u>73/100</u> Amperes
<u>2 Side light with 1 lamp each of 40 w.</u>		<u>50</u> candle power requiring a total current of <u>36/100</u> Amperes
<u>Reflectors</u>	<u>Cargo lights of 5-40 watt</u>	<u>50</u> candle power, whether incandescent or arc lights <u>incandes. 6 amp.</u>

 Lights Eng. room, Bait room + Bridge space.  
 Are lights, what protection is provided against fire, sparks, &c. no arc lights

Where are the switches controlling the masthead and side lights placed Wheel house on tiller

## DESCRIPTION OF CABLES.

One cable carrying <u>90 + 127</u> Amperes, comprised of <u>2</u> wires, each <u>1/4 2</u> S.W.G. diameter, <u>133128</u> sq. square inches total sectional area
Each cables carrying <u>35</u> Amperes, comprised of <u>2</u> wires, each <u>6</u> S.W.G. diameter, <u>52488</u> sq. square inches total sectional area
Each cables carrying <u>40</u> Amperes, comprised of <u>2</u> wires, each <u>6</u> S.W.G. diameter, <u>52488</u> sq. square inches total sectional area
Is to lamps carrying <u>15</u> Amperes, comprised of <u>2</u> wires, each <u>8</u> S.W.G. diameter, <u>32768</u> sq. square inches total sectional area
Light cables carrying <u>1/10</u> Amperes, comprised of <u>1/16</u> wires, each <u>1/16</u> S.W.G. diameter, <u>1.624</u> sq. square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Enamelled iron standard electric conduit

Are cables, how made, insulated, and protected none.

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

Are the cables led through the ship, and how protected conduits. Enamelled standard electric type.



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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 *all wires in enamelled iron standard electric conduits + marine junction boxes fitted at each outlet.*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *conduits + heat resisting wires*

What special protection has been provided for the cables near boiler casings *conduits + heat resisting wires*

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

How are cables carried through beams *in conduits* through bulkheads, &c. *conduits*

How are cables carried through decks *marine water proof stuffing boxes*

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 *portable* How fixed *standard plug box with deck cable*

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 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 *✓*

Are any switches, fuses, or joints of cables fitted in the pump room or companion *✓*

How are the lamps specially protected in places liable to the accumulation of vapour or gas *✓*

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 250 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.

*Swire's Shipbuilding Co. Ltd.* Electrical Engineers Date *Dec 13 1919*

COMPASSES.

Distance between dynamo or electric motors and standard compass *68'-0"*

Distance between dynamo or electric motors and steering compass *65'-0"*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
35	12'-0	12'-0	feet from steering compass
1	15'-0	15'-0	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 *yes*

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.

*Swire's Shipbuilding Co. Ltd.* Builder's Signature. Date *Dec 13 1919*

GENERAL REMARKS. *This vessel has been fitted with an electric lighting installation as above, and the workmanship is good. On completion it was tried under full working conditions and found satisfactory.*

*Hugh Boyle*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

*Elec Lt*

New York DEC 23 1919

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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