

Rpt. 13.

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REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 54

Port of *Pensacola Fla* Date of First Survey *Feb 5th 1920* Date of Last Survey *9 June* No. of Visits *15*
 No. in *on the* *Steel* *City of Vernon* Port belonging to *Pensacola*
 Reg. Book *178091* Built at *Pensacola Fla* By whom *Pensacola Shipbuilding Co.* When built *1920*
 Owners *United States Shipping Board* Owners' Address
 Yard No. *941* Electric Light Installation fitted by *Pensacola Shipbuilding Co.* When fitted *1920*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two sets by General Electric Co. Enclosed type (single engine)
 Capacity of Dynamo *150* Amperes at *115* Volts, whether continuous or alternating current *Continuous*
 Where is Dynamo fixed *Upper deck platform* Whether single or double wire system is used *Double*
 Position of Main Switch Board *Up* having switches to groups *fifteen* of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each *Midships: Search light, Saloon, navigation lights, Prop, After Cargo, Engine room, Engineers Quarters, Petty Officer's Quarters, Gunnel, Engine room (Port), Boiler room, Gauge Glasses, Forward Cargo, Machine Shop.*
 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 *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 *243* arranged in the following groups:—
 A *Searchlight* lights each of *8 000* candle power requiring a total current of *36* Amperes
 B *Eng. & Wh. Space 119* lights each of *16* candle power requiring a total current of *29.6* Amperes
 C *Midship Accom. 30* lights each of *16* candle power requiring a total current of *7.5* Amperes
 D *Bridge Accom. 75* lights each of *16* candle power requiring a total current of *16* Amperes
 E *After Accom. 29* lights each of *16* candle power requiring a total current of *7* Amperes
Two Mast head light with *Two* lamps each of *32* candle power requiring a total current of *2* Amperes
Two Side light with *Two* lamps each of *32* candle power requiring a total current of *2* Amperes
Twenty four Cargo lights of *16* candle power, whether incandescent or arc lights *Incandescent*
 If arc lights, what protection is provided against fire, sparks, &c. *No Arc lamps*
 Where are the switches controlling the masthead and side lights placed *Pilot House*

DESCRIPTION OF CABLES.

	Amperes	wires	each	CIR. MILS.	S.W.G. diameter	square inches total sectional area
Main cable carrying	150	19	7005		.10452	✓
Branch cables carrying	16	7	3750		.02062	✓
Branch cables carrying	7.5	7	2358		.01297	✓
Leads to lamps carrying	7	7	2358		.01297	✓
Cargo light cables carrying	5	19	869		.01297	✓

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Double Braid: Rubber covered. run in Steel conduits of suitable size for each circuit
 Joints in cables, how made, insulated, and protected *All joints soldered and fitted in approved connecting boxes.*
 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 *Steel conduits*



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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 *Steel Conduits*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *No*

What special protection has been provided for the cables near boiler casings *No*

What special protection has been provided for the cables in engine room *No*

How are cables carried through beams *Steel Conduits* through bulkheads, &c. *Stuffing Boxes*

How are cables carried through decks *No Y. Deck flanges*

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 *Steel Conduits*

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 *Watertight Bulkhead fittings*

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 *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 *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.

J. H. Pearce

Electrical Engineers

Date *November 20th 1920*

COMPASSES.

Distance between dynamo or electric motors and standard compass *40ft*

Distance between dynamo or electric motors and steering compass *40ft*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>104</i>	<i>1'</i>	<i>1'</i>	<i>1'</i>
<i>80</i>	<i>8'</i>	<i>14'</i>	<i>14'</i>
<i>✓</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>

Have the compasses been adjusted with and without the electric installation at work at full power *Not adjusted*

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 *November 20th 1920*

GENERAL REMARKS.

This installation has been efficiently fitted on board and tried under steam and found satisfactory

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

See Light Bell 15/12/20

W. C. Lewis

Surveyor to Lloyd's Register of Shipping.

Committee's Minute.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.