

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 4581

Port of PHILADELPHIA Date of First Survey DEC: 22<sup>nd</sup> 1922. Date of Last Survey APR: 11<sup>th</sup> 1923. No. of Visits 18.  
 No. in on the Iron or Steel S.S. "ALAMEDA" Port belonging to PHILADELPHIA.  
 Reg. Book 52448. Built at PHILADELPHIA. By whom THE WM. CRAMP & SONS When built 1919.  
ARNOLD & CRAIG Owners' Address RICHMOND ST. PHILADELPHIA, PA.  
(ARNOLD & CRAIG, MGRS.) Yard No. — Electric Light Installation fitted by THE WM. CRAMP & SONS SKEB. CO. When fitted 1923.

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

TWO GENERATING SETS, MARINE TYPE, ENGINE DRIVEN, 15 K.W., 425 R.P.M., 110 VOLT, COMPOUND WOUND, WITH FORCED LUBRICATION, MADE BY THE GENERAL ELECTRIC CO.

Capacity of Dynamo TWO @ 150 Amperes at 110 Volts, whether continuous or alternating current CONTINUOUS.

Where is Dynamo fixed ENGINE ROOM. Whether single or double wire system is used DOUBLE.

Position of Main Switch Board ENGINE ROOM (FORECASTLE) having switches to groups 7. of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each ENGINE ROOM (4 BR.) UPPER DECK FORWARD FORECASTLE (4 BR.) UPPER DECK AMID; (16 BR.) UPPER DECK AFT (6 BR.) BRIDGE DECK (4 BR.)

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 EXCEPT 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 YES.

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

Total number of lights provided for 240 arranged in the following groups:—

A	4	lights each of	2	candle power requiring a total current of	35. Amperes
B	10	lights each of	16	candle power requiring a total current of	24 Amperes
C	17	lights each of	25	candle power requiring a total current of	5.0 Amperes
D	209	lights each of	50	candle power requiring a total current of	3.74 Amperes
E	TEN 12" FANS	lights each of	40	candle power requiring a total current of	91.96 Amperes
ONE	Mast head light with	lamps each of		candle power requiring a total current of	3.6 Amperes
TWO	Side lights with	lamps each of		candle power requiring a total current of	1.8 Amperes
	Cargo lights of			candle power, whether incandescent or arc lights	1.8 Amperes

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

Where are the switches controlling the masthead and side lights placed IN PILOT HOUSE.

## DESCRIPTION OF CABLES.

Main cable carrying	150	Amperes, comprised of	61	wires, each	16	S.W.G. diameter,	.31	square inches total sectional area
Branch cables carrying	50	Amperes, comprised of	37	wires, each	18	S.W.G. diameter,	.0666	square inches total sectional area
Branch cables carrying	30	Amperes, comprised of	19	wires, each	18	S.W.G. diameter,	.045	square inches total sectional area
Leads to lamps carrying	6	Amperes, comprised of	1	wires, each	14	S.W.G. diameter,	.003225	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.

NEXT TO THE CONDUCTORS (a) A LAYER OF VULCANIZED RUBBER COMPOUND, (b) A LAYER OF COTTON BRAID (c) A BLACK WEATHER-PROOF PRESERVATIVE COMPOUND. TWO CONDUCTORS ARE LAID FLAT & COVERED WITH A WEATHER-PROOF BRAID OVER WHICH IS LAID THE ARMORING OR LEAD & ARMOR AS THE CASE MAY BE.  
 Joints in cables, how made, insulated, and protected JOINTS ARE SPLICED, SOLDERED, COVERED WITH A LAYER OF RUBBER COMPOUND & A LAYER OF TAPE. CONNECTIONS IN GENERAL ARE MADE IN JUNCTION 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 ARMORED & LEAD & ARMORED CABLE PROTECTED BY CONDUIT AT DECKS & BULKHEADS.





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 & ARMORED CABLE.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat NONE LED CLOSE TO THESE SOURCES.

What special protection has been provided for the cables near boiler casings LEAD & ARMORED CABLE & W.T. BOXES.

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

How are cables carried through beams LEAD BUSHINGS. through bulkheads, &c. STUFFING TUBES.

How are cables carried through decks IN CONDUITS WITH STUFFING TUBE AT TOP & BUSHING AT BOTTOM.

Are any cables run through coal bunkers NO or cargo spaces NO or spaces which may be used for carrying cargo, stores, or baggage YES.

If so, how are they protected LEAD & ARMORED CABLE.

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 —

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 GLOBES.

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.

G. Price

Electrical Engineers

Date 3-14-24

COMPASSES.

Distance between dynamo or electric motors and standard compass 250 FT.

Distance between dynamo or electric motors and steering compass 250 FT.

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	Connected to	feet from standard compass	feet from steering compass
<u>1</u>	<u>CONNECTED TO</u>	<u>4.</u>		
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.

The Wm. Cramp & Sons Ship & Engine Building Co.

Wm. Cramp

Builder's Signature.

Date April 23<sup>rd</sup> 1923

GENERAL REMARKS.

THE INSTALLATION HAS BEEN FITTED ON BOARD IN A SATISFACTORY MANNER & IN ACCORDANCE WITH THE RULES, IT WAS TRIED UNDER FULL WORKING CONDITIONS WITH ALL LIGHTS ON AND WAS FOUND SATISFACTORY.

It is submitted that  
FEE \$225.00 this vessel is eligible for  
THE RECORD. Elec. light.

Pd. 19.6.23 L.R.

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

Committee's Minute New York MAY 22 1923

Elect. light



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