

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1896

Port of Baltimore Md Date of First Survey 11 April Date of Last Survey 14 May No. of Visits 10
 No. in Reg. Book on the Iron or Steel Steamer "Munplace" Port belonging to New York
 Built at Sparrows Pt. Md. By whom Maryland Steel Co. When built 1916
 Owners Manson Steamship Line Owners' Address New York
 Yard No. 154 Electric Light Installation fitted by Maryland Steel Co. When fitted 1916

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1 Generating set - rated at 10 H.W. direct coupled.
to engine 6 1/2" x 5" x 475 Revs.

Capacity of Dynamo 80 Amperes at 125 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 Near Dynamo having switches to groups 11 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Bridge Deck aft - 4

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 25 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 129 arranged in the following groups :-

A	<u>13 + 17</u>	lights each of	<u>20</u>	candle power requiring a total current of	<u>3 + 4</u>	Amperes
B	<u>27 + 5</u>	lights each of	<u>20</u>	candle power requiring a total current of	<u>6 + 1</u>	Amperes
C	<u>15</u>	lights each of	<u>20</u>	candle power requiring a total current of	<u>3</u>	Amperes
D	<u>20</u>	lights each of	<u>20</u>	candle power requiring a total current of	<u>4</u>	Amperes
E	<u>22</u>	lights each of	<u>20</u>	candle power requiring a total current of	<u>5</u>	Amperes
<u>2</u>	Mast head light with <u>2</u> lamps each of	<u>20</u>	candle power requiring a total current of	<u>1/2</u>	Amperes	
<u>2</u>	Side light with <u>2</u> lamps each of	<u>20</u>	candle power requiring a total current of	<u>1/2</u>	Amperes	

6 clusters of 4 lights Cargo lights of 20 candle power, whether incandescent or arc lights incandescent

If arc lights, what protection is provided against fire, sparks, &c. Search light only of 20 Amps.

Where are the switches controlling the masthead and side lights placed Pilot House

DESCRIPTION OF CABLES.

Main cable carrying	<u>80</u>	Amperes, comprised of	<u>61</u>	wires, each	<u>.045</u> " S.W.G. diameter,	<u>.098</u> square inches total sectional area
Branch cables carrying	<u>20</u>	Amperes, comprised of	<u>7</u>	wires, each	<u>.16</u> S.W.G. diameter,	<u>.022</u> square inches total sectional area
Branch cables carrying	<u>12</u>	Amperes, comprised of	<u>7</u>	wires, each	<u>.18</u> S.W.G. diameter,	<u>.0125</u> square inches total sectional area
Leads to lamps carrying	<u>2</u>	Amperes, comprised of	<u>1</u>	wires, each	<u>.15</u> S.W.G. diameter,	<u>.0041</u> square inches total sectional area
Cargo light cables carrying	<u>1</u>	Amperes, comprised of	<u>41</u>	wires, each	S.W.G. diameter,	<u>.0041</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Wire is rubber covered & braided, lead covered and armoured with plated double galvanised steel wire

Joints in cables, how made, insulated, and protected Mostly screw fittings 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 In lead covering & armoured



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 & armoured*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead covered & armoured*

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

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

How are cables carried through beams *In armoured cable through bulkheads, &c. ditto with glands.*

How are cables carried through decks *Through tubes with stuffing boxes.*

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 *Run along deck longitudinally, armoured cable.*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *Yes*

If so, how are the lamp fittings and cable terminals specially protected *Lamps in watertight globes with wire cages.*

Where are the main switches and fuses for these lights fitted *In engine room.*

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 *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 *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.

Maryland Steel Company
J. Anderson Electrical Engineers Date *Supt*

COMPASSES.

Distance between dynamo or electric motors and standard compass *100 ft*

Distance between dynamo or electric motors and steering compass *100 ft*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
20	8	8	8
1	5	5	5
25	1	1	1

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 *Nil* degrees on *✓* course in the case of the standard compass and *Nil* degrees on *✓* course in the case of the steering compass.

Maryland Steel Company
J. Anderson Builder's Signature. Date *Supt*

GENERAL REMARKS.

This installation has been fitted in an efficient manner in accordance with the Rules of this Society. The generator has been tested under full load & worked satisfactorily. Side & Mast head lights tested.

It is submitted that this vessel is eligible for THE RECORD Elec. light. *J.W.D. 9/6/16.* Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute FRI.-9 JUN. 1916

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.