

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 3454.

Port of SAN FRANCISCO. Date of First Survey Nov 5 Date of Last Survey Jan. 26 No. of Visits 9
 No. in on the Iron or Steel Sc. Sr. "MEMNON" Port belonging to San Francisco.
 Reg. Book 65858 Built at Oakland, Cal. By whom Hanlon D.D. & S.B. Company. When built 1921
 Owners U. S. Shipping Board Owners' Address _____
 Yard No. 88 Electric Light Installation fitted by Hanlon D.D. & S.B. Company. When fitted 1921.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2 Engbergs - 125 Volts - 80 Amperes generators

Capacity of Dynamo 10 K.W. Amperes at 90 - 110 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Upper Engine Room Whether single or double wire system is used Double
 Position of Main Switch Board Bulkhead M. Sw. Bd. having switches to groups _____ of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Forecastle 2. E.R. 8. Aft Quarters 4.
Midship 4.

Circuit

If fuses are fitted on main switch board to the cables of main circuit Breakers 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-oxidisable metal Yes and constructed to fuse at an excess of 10 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

Total number of lights provided for 177 arranged in the following groups:—

A	50	lights each of	40 CP	candle power requiring a total current of	11	Amperes
B	18	lights each of	40 CP	candle power requiring a total current of	4	Amperes
C	42	lights each of	25 CP	candle power requiring a total current of	15	Amperes
D	18	lights each of	40 CP	candle power requiring a total current of	4	Amperes
E		lights each of		candle power requiring a total current of		Amperes
1	Mast head light with	1	lamps each of	32	candle power requiring a total current of	1
1	Side light with	1	lamps each of	32	candle power requiring a total current of	1
9	portable	5	lights ea.	60		
4	"	Cargo lights of	1 light ea.	100	candle power, whether incandescent or are lights	Incandescent

If arc lights, what protection is provided against fire, sparks, &c. No arcs.

Where are the switches controlling the masthead and side lights placed In pilot house with separate switch on main W.Bd. for signal light circuit.

DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of 15 wires, each #8 S.W.G. diameter, .1284 square inches total sectional area
 Branch cables carrying 40 Amperes, comprised of 7 wires, each #12 S.W.G. diameter, .0808 square inches total sectional area
 Branch cables carrying 40 Amperes, comprised of 7 wires, each #12 S.W.G. diameter, .0808 square inches total sectional area
 Leads to lamps carrying 5 Amperes, comprised of 1 wires, each #14 S.W.G. diameter, .0640 square inches total sectional area
 Cargo light cables carrying 10 Amperes, comprised of 1 wires, each #12 S.W.G. diameter, .0808 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

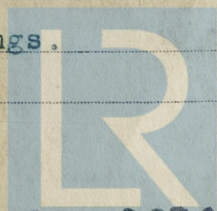
1 feeders D.B. R.C. stranded wire - Branch Cir. R.C. Solid wire.

How are the joints in cables, how made, insulated, and protected Soldered, rubber and friction taped and painted. Joints
all made in junction boxes, outlets and condulets

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 Conduit and water tight fittings.



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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 **Conduit**

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat **Conduit**

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

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

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

How are cables carried through decks **Conduit**

Are any cables run through coal bunkers **No** or cargo spaces **Yes** or spaces which may be used for carrying cargo, stores, or baggage

If so, how are they protected **Conduit**

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 **E.R.Sw.Bd.**

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 **500** 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.

Hanlon Drydock and Shipbuilding Co.

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass **80 Ft.**

Distance between dynamo or electric motors and steering compass **70 Ft.**

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
4	8	8	8
40	8	8	8

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

Hanlon Drydock and Shipbuilding Co.

Builder's Signature.

Date

GENERAL REMARKS. This installation has been fitted in accordance with the Rule Requirements tested under working conditions and found in order and the vessel is eligible, in my opinion, to have record of "Electric Light" in the Register Book.

It is submitted that this vessel is eligible for the Record of Electric Light

Recd 23/3/21

Arthur Rawson

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

New York FEB 23 1921

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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.