

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 14883

New York  
Date of First Survey 12 Nov 17 Date of Last Survey 24 Nov 17 No. of Visits 8  
on the Iron Steel S/S M. Sealine Port belonging to  
Built at Hooker Island New York By whom Standard S.B. Corp. When built 1918-3  
Electric Light Installation fitted by J.P. Barr & Co. When fitted 1918.

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two (2) 15 K.W. Westinghouse D.C. Generators direct connected to  
single cylinder H.P. Engines - forced lubrication  
of Dynamo 136 Amperes at 110 Volts, whether continuous or alternating current Continuous  
Dynamo fixed dynamo in middle of engine Whether single or double wire system is used Double  
Main Switch Board near dynamo having switches to groups A, B, C, D, E, F of lights, &c., as below  
of auxiliary switch boards and numbers of switches on each A. Engine room - 6 switches, B. Midship Accommodation  
Crews Forward 8 switches, C. Engine room Accommodation 5 switches, D. Navigation 7 switches, E. Refrigerating  
room 4 switches, F. Hatch & 1st E. Hatch and Deck 2 switches, G. Wireless 1 switch.

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  
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  
fuses of non-oxidizable metal W.C. Enclosed tubes and constructed to fuse at an excess of 100 per cent over the normal current  
fuses fitted in easily accessible positions Yes Are the fuses of standard dimensions Yes If wire fuses are used  
permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit Yes  
switches and fuses constructed of incombustible materials and fitted on incombustible bases Yes  
Number of lights provided for 154 arranged in the following groups:—

Do. 2	38	lights each of 25 WATT = 20	candle power requiring a total current of 8.7	Amperes
Do. 2	21	lights each of 25 "	candle power requiring a total current of 4.8	Amperes
Do. 2	34	lights each of 25 "	candle power requiring a total current of 7.8	Amperes
Do. 2	24	lights each of 25 "	candle power requiring a total current of 5.5	Amperes
Do. 2	15	lights each of 25 "	candle power requiring a total current of 3.9	Amperes
Do. 2	10	lights each of 25 "	candle power requiring a total current of 6.1	Amperes
Do. 2	30	lights each of 25 "	candle power requiring a total current of 30.	Amperes
Do. 2	35	lights each of 25 "	candle power requiring a total current of 35.	Amperes
Do. 2	1	lamps each of 40 W = 32	candle power requiring a total current of .9	Amperes
Do. 2	1	lamps each of 40 W = 32	candle power requiring a total current of .9	Amperes
Do. 2	6	Cargo lights of 6 lamps each = 25 W	candle power, whether incandescent or arc lights	

lights, what protection is provided against fire, sparks, &c.

are the switches controlling the masthead and side lights placed Control Panel in Chart room

## DESCRIPTION OF CABLES.

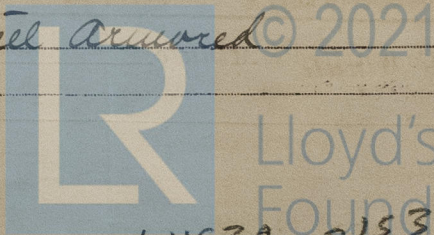
Cable carrying 171 Amperes, comprised of 38 wires, each 16 +	RS S.W.G. diameter, .1312	square inches total sectional area
Cables carrying 35 Amperes, comprised of 7 wires, each 17 +	B&S S.W.G. diameter, .0206	square inches total sectional area
Cables carrying 20 Amperes, comprised of 7 wires, each 18	B&S S.W.G. diameter, .0129	square inches total sectional area
Lamps carrying 3 Amperes, comprised of 1 wires, each 16	B&S S.W.G. diameter, .0032	square inches total sectional area
Light cables carrying 1.4 Amperes, comprised of 47 wires, each 31 -	B&S S.W.G. diameter, .0032	square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

The cables are insulated their entire length with a Para rubber Compound  
applied and vulcanized. Covered with 2 wires Cotton Braids  
impregnated with a moisture repellent Compound - solution where in Conduit  
the lead sheathing and lead covered in accommodation  
cables, how made, insulated, and protected joints on cables in Conduit made in watertight brass or  
brass boxes - at all the joints in the armored cables - where lead covered  
the joints are made at the fixture, switch or junction terminal block  
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

any joints in or branches from the cable leading from dynamo to main switch board

the cables led through the ship, and how protected in Conduit and Steel Armored



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**DESCRIPTION OF INSULATION, PROTECTION, ETC. continued.**

Are they in places always accessible *except in Lock and Bunkers*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *in galvanized pipes*

Conduit made up watertight and steel armored and lead covered

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Conduit or steel armored <sup>lead</sup> covered*

What special protection has been provided for the cables near boiler casings *Conduit + steel armored - lead covered*

What special protection has been provided for the cables in engine room *steel armored and lead covered also conduit*

How are cables carried through beams *steel armored or in conduit through bulkheads, &c. in conduit made watertight*

How are cables carried through decks *through conduit made up watertight*

Are any cables run through coal bunkers *yes* or cargo spaces *yes* or spaces which may be used for carrying cargo, stores, or baggage

If so, how are they protected *steel armored cables or double leaded rubber cov. some in conduit*

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 *screwed fittings with fixtures, lead covered <sup>of fixtures</sup> or glass*

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 *isolable from* How fixed *plug connections boxes*

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 to *Main 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

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.

*S. J. Darrico* Electrical Engineers Date *Apr 27/18*

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *130*

Distance between dynamo or electric motors and steering compass *170*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>30</i>	<i>6</i>	<i>4</i>	<i>8</i>
<i>14</i>	<i>0</i>	<i>8</i>	<i>0</i>
<i>14</i>	<i>8</i>	<i>0</i>	<i>0</i>

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

*W. J. Darrico* Builder's Signature. Date

**GENERAL REMARKS.**

*The fitting of the wires throughout this vessel is as stated in this report and appears to be in accordance with the Committee's requirements.*

It is submitted that this vessel is eligible for

THE RECORD. Elec. light.

*W. J. D.*

*4/6/18.*

*Elec. light*

*G. J. Hudson*

Surveyor to Lloyd's Register of Shipping.

Reg. 1.10—Transfer.

Committee's Minute



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Surveyor's Signature

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.