

Rpt. 13.

Received at London Office

19

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2438

Port of *Philadelphia* Date of First Survey *24 June* Date of Last Survey *24 Aug 1916* No. of Visits *16*
 No. in on the *Iron or Steel* *S.P. "Standard" Arrow* Port belonging to *New York*
 Reg. Book Built at *Camden, New Jersey, U.S.A.* by whom *New York Shipbuilding Co.* built
 Owners *Standard Oil Co.* Owners' Address *36 Broadway, New York City, U.S.A.*
 Yard No. *167* Electric Light Installation fitted by *New York Shipbuilding Co.* When fitted *1916*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Direct Connected Generator & Steam Eng. built by General Elect. Co. Schenectady, New York, U.S.A.

Capacity of Dynamo *18* Amperes at *110* Volts, whether continuous or alternating current *Continuous*

Where is Dynamo fixed *Engine Room Gallery aft.* Whether single or double wire system is used *Double*

Position of Main Switch Board " " " " having switches to groups of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *"A" Engine Room (10); "A" Boiler Room (8)*
"B" Upper Deck (10); "B" Upper Deck P. (8); "C" Poop Deck (10); "C" Shelter Deck (14)
"D" Pump Room (14); "D" Shelter Deck P. (8); "E" Shelter Deck (8).

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 *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 *250* arranged in the following groups:—

A	43	lights each of	40W	candle power requiring a total current of	15.4	Amperes	
A'	39	lights each of	40W	candle power requiring a total current of	14.0	Amperes	
B	34	lights each of	40W	candle power requiring a total current of	12.2	Amperes	
B'	27	lights each of	40W	candle power requiring a total current of	9.7	Amperes	
C	34	lights each of	40W	candle power requiring a total current of	12.2	Amperes	
C'	51	lights each of	40W	candle power requiring a total current of	18.3	Amperes	
D	13	lights each of	40W	candle power requiring a total current of	4.6	Amperes	
D'	20	lights each of	40W	candle power requiring a total current of	7.2	Amperes	
E	27	lights each of	40W	candle power requiring a total current of	9.7	Amperes	
1	Mast head light with	4	lamps each of	16	candle power requiring a total current of	1	Amperes
1	Side light with	2	lamps each of	16	candle power requiring a total current of	1	Amperes
6	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 *Switchboard in Pilot House*

DESCRIPTION OF CABLES.

Main cable carrying *181* Amperes, comprised of *6 1/16* wires, each *.0032* S.W.G. diameter, *.1962* square inches total sectional area
 Branch cables carrying *35* Amperes, comprised of *7 1/17* wires, each *.0025* S.W.G. diameter, *.0178* square inches total sectional area
 Branch cables carrying *15.4* Amperes, comprised of *7 20* wires, each *.0010* S.W.G. diameter, *.0071* square inches total sectional area
 Leads to lamps carrying *5* Amperes, comprised of *7 23* wires, each *.0004* S.W.G. diameter, *.0034* square inches total sectional area
 Cargo light cables carrying *4.3* Amperes, comprised of *7 23* wires, each *.0004* S.W.G. diameter, *.0034* square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

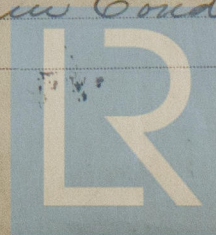
Complete Conduit installation; exposed in all places except living quarters where it is concealed behind wood work.

Joints in cables, how made, insulated, and protected *Good mechanical joint; soldered, taped & painted with insulating compound.*

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 *Completely encased in 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 Conduits

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

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

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

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

How are cables carried through decks in Conduit

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

If so, how are they protected

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

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 Engine Room

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 none

How are the lamps specially protected in places liable to the accumulation of vapour or gas Vapor proof lamps; special design

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.

APPROVED FOR NEW YORK SHIPBUILDING CO.

12 Oct 1916, 10

A. A. Honor

Electrical Engineers

Date 12th Oct 1916

COMPASSES.

Distance between dynamo or electric motors and standard compass approximately 150 ft.

Distance between dynamo or electric motors and steering compass " 140 ft.

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>✓</u>	<u>1</u>	<u>1</u>	<u>1</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 Yes

The maximum deviation due to electric currents, etc., was found to be nil degrees on all course in the case of the standard compass and nil degrees on all course in the case of the steering compass.

Hallagoun

Builder's Signature.

Date 12th Oct. 1916

GENERAL REMARKS.

The installation has been well fitted and proved satisfactory on trial

It is submitted that this vessel is eligible for

THE RECORD Elec. light.

A. T. Honor

Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

AWD 13/11/16
Elec. Light

New York OCT 19 1916



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