

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2438

Port of Philadelphia Date of First Survey 24 June Date of Last Survey 20 Aug 1916 No. of Visits 16

No. in Reg. Book on the Iron or Steel S.S. "Standard Arrow" Port belonging to New York
Built at Camden, New Jersey, U.S.A. by whom New York Shipbuilding Co. built
Owners Standard Oil Co. Owners' Address 26 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 182 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, F. (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, F. (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	12.7	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	12.7	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 6/16 wires, each .0032 S.W.G. diameter, .1962 square inches total sectional area
Branch cables carrying 35 Amperes, comprised of 7/17 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 15 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.



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 w/ Conduit through bulkheads, &c. w/ Conduit

How are cables carried through decks w/ 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, 19 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>

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.

Hall Magoun 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

New York OCT 19 1916



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.