

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No.

Port of Galveston, Texas. Date of First Survey Feb-1918. Date of Last Survey July-1918 No. of Visits 24No. in Reg. Book on the Iron-hulled Wood Screw Steamer "WAR MYSTERY" Port belonging to London.Built at Orange, Texas. By whom National Shipbuilding Co. When built 1918.Owners Cunard Line Owners' Address Liverpool & London.Yard No. 8 Electric Light Installation fitted by Lund & Miller. When fitted 1918.

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two 5 K. W. direct connected generating sets of the General Electric Type:- Engine made by the American Blower Co., Type A.

Capacity of Dynamo 42 ✓ Amperes at 110 ✓ Volts, whether continuous or alternating current continuous ✓Where is Dynamo fixed On special platform above main engines. Whether single or double wire system is used Double wired system ✓Position of Main Switch Board On bulkhead by dynamo's having switches to groups of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each

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 10% per cent over the normal currentAre 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 100 arranged in the following groups:-

A	14	lights each of	100	candle power requiring a total current of	$3\frac{1}{4}$	Amperes
B	12	lights each of	96	candle power requiring a total current of	3	Amperes
C	12	lights each of	96	candle power requiring a total current of	3	Amperes
D	12	lights each of	96	candle power requiring a total current of	3	Amperes
E	14	lights each of	100	candle power requiring a total current of	$3\frac{1}{4}$	Amperes
1	Mast head light with 2	lamps each of	8	candle power requiring a total current of	$\frac{1}{4}$	Amperes
2	Side light with 4	lamps each of	8	candle power requiring a total current of	$\frac{1}{4}$	Amperes
6	Cargo lights of		40	candle power, whether incandescent or arc lights	incandescent	

If arc lights, what protection is provided against fire, sparks, &amp;c.

Where are the switches controlling the masthead and side lights placed In wheel house.

## DESCRIPTION OF CABLES.

532 Mils dia = 53,824 for Mils = 67 amperes  
 Main cable carrying 65 Amperes, comprised of 2 wires, each .232" S.W.G. diameter, 1.07 C.M. square inches total sectional area  
 80 mils dia = 6400 ✓ Cu Mils = 19 amperes  
 Branch cables carrying 14 Amperes, comprised of 2 wires, each .0800" S.W.G. diameter, .1740 C.M. square inches total sectional area  
 Branch cables carrying Amperes, comprised of wires, each S.W.G. diameter, square inches total sectional area  
 Leads to lamps carrying Amperes, comprised of wires, each S.W.G. diameter, square inches total sectional area  
 Cargo light cables carrying Amperes, comprised of wires, each S.W.G. diameter, square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Two black threads woven in parallel braids and rubber covered.

Joints in cables, how made, insulated, and protected Mechanical splice made then soldered; a layer of rubber tape and layers of friction tape.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 baggageAre 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 All cables are lead through steel 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 They are in steel conduits and made water-tight.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat In steel conduits.

What special protection has been provided for the cables near boiler casings In steel conduits.

What special protection has been provided for the cables in engine room In steel conduits.

How are cables carried through beams Not any through beams. through bulkheads, &c. Through pipes & made water tight.

How are cables carried through decks Through pipes and made water-tight. ✓

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

If so, how are they protected By steel conduits and encased.

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 All switches and fuses are at switchboard.

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 A watertight outlet box on deck.

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 At 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 \_\_\_\_\_ 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.

John Dragoni Electrical Engineers Date \_\_\_\_\_

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 80 ft.

Distance between dynamo or electric motors and steering compass 85 ft.

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>1</u>	<u>6"</u>	<u>6"</u>	<u>feet from steering compass</u>
<u>2</u>	<u>6"</u>	<u>2'</u>	<u>feet from steering compass</u>
<u>A cable carrying</u>	<u>Amperes</u>	<u>feet from standard compass</u>	<u>feet from steering compass</u>

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 \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the standard compass and \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the steering compass.

NATIONAL SHIP BUILDING CO. OF TEXAS  
Chas. B. Schulte Builder's Signature. Date October 17<sup>th</sup> 1918.

**GENERAL REMARKS.** The dynamo's, switchboard and all wiring were installed under inspection and when completed the dynamo's and all lights were tested out on several occasions and found to be very satisfactory.

A 2 K. W. Machine was installed for the Wireless.

It is submitted that this vessel is eligible for  
THE RECORD. Elec. Light. HW  
19/11/18.

J. B. Grant  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute Elec. Light