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REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1499

Port of *Boston, Mass* Date of First Survey *6.6.21* Date of Last Survey *2.7.21* No. of Visits *6*
No. in on the ~~Steel~~ *S.S. "ILLINOIS"* Port belonging to *Port Arthur, Texas*
Reg. Book Built at *Bath, Me.* By whom *The Texas Steamship Company* When built *1921-7*
Owners *The Texas Company* Owners' Address *17 Battery Place, New York*
Yard No. *31* Electric Light Installation fitted by *The Texas Steamship Company* When fitted *1921*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two 10 K.W. General Electric generators, direct driven by vertical steam engines.

Capacity of Dynamo *91* Amperes at *110* Volts, whether continuous or alternating current *Continuous*

Where is Dynamo fixed *Engine room* Whether single or double wire system is used *double*

Position of Main Switch Board *Engine room* having switches to groups *A to L* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *1 in machine shop with 3: 2 in aft. quarters with 6 each: 1 in aft. quarters started with 6: 1 in poop with 3: 1 in bridge house with 6: 1 in bridge with 6: 1 in forecabin with 8.*

Are fuses 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 *No*

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 *All but lamp circuit*

Are the fuses of non-oxidizable metal *Yes* and constructed to fuse at an excess of *less than 100 per cent* over the normal current

Are all fuses fitted in easily accessible positions *Yes* Are the fuses of standard dimensions *Inclosed type* 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 *on fuse cases*

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases *Yes*

Total number of lights provided for *228* arranged in the following groups:—

A Hospital heater	lights each of	<i>✓</i>	candle power requiring a total current of	<i>13</i>	Amperes
B Pump room 12	lights each of	<i>80</i>	candle power requiring a total current of	<i>10.8</i>	Amperes
C Quarters fwd 41	lights each of	<i>32</i>	candle power requiring a total current of	<i>19.7</i>	Amperes
D Wireless	lights each of	<i>✓</i>	candle power requiring a total current of	<i>18</i>	Amperes
E Quarters aft 73	lights each of	<i>32</i>	candle power requiring a total current of	<i>30</i>	Amperes
F { Mast head light with	lamps each of	<i>48</i>	candle power requiring a total current of	<i>3.3</i>	Amperes
Side light with	lamps each of	<i>48</i>	candle power requiring a total current of		
G 8	Cargo lights of	<i>320</i>	candle power, whether incandescent or arc lights	<i>incandescent</i>	

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

Where are the switches controlling the masthead and side lights placed *Engine room + pilot house.*

DESCRIPTION OF CABLES.

Main cable carrying	<i>91</i> Amperes, comprised of	<i>19</i> wires, each	<i>.074</i> S.W.G. diameter,	<i>.083</i> square inches total sectional area
Branch cables carrying	<i>13</i> Amperes, comprised of	<i>7</i> wires, each	<i>.04</i> S.W.G. diameter,	<i>.014</i> square inches total sectional area
Branch cables carrying	<i>10.8</i> Amperes, comprised of	<i>7</i> wires, each	<i>.04</i> S.W.G. diameter,	<i>.014</i> square inches total sectional area
Leads to lamps carrying	<i>4</i> Amperes, comprised of	<i>1</i> wires, each	<i>.064</i> S.W.G. diameter,	<i>.003</i> square inches total sectional area
Cargo light cables carrying	<i>4</i> Amperes, comprised of	<i>2</i> wires, each	<i>.064</i> S.W.G. diameter,	<i>.003</i> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Heavy rubber insulation covered with braided waterproof fibre, & carried in steel conduit throughout.

Joints in cables, how made, insulated, and protected *Soldered, well taped, and made in metal junction boxes throughout.*

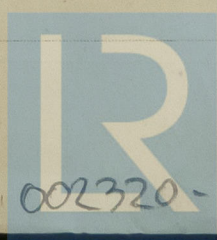
Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances *Yes* Are all joints in accessible

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 *Steel Conduits.*

Special Fees *\$175.00*



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Lloyd's Register
Foundation

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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 Steel conduit made tight
What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Steel conduit
What special protection has been provided for the cables near boiler casings Steel conduit
What special protection has been provided for the cables in engine room Steel conduit
How are cables carried through beams Steel conduit through bulkheads, &c. Steel conduit made tight
How are cables carried through decks Steel conduit made tight
Are any cables run through coal bunkers Yes or cargo spaces No or spaces which may be used for carrying cargo, stores, or baggage Yes
If so, how are they protected Steel conduit run high up under decks
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 Vessel burns oil fuel. If compelled to use coal, lights + fittings in coal bins will be removed
Where are the main switches and fuses for these lights fitted Engine room
If in the spaces, how are they specially protected No
Are any switches or fuses fitted in bunkers No
Cargo light cables, whether portable or permanently fixed Permanently fixed How fixed Standards on poop, bridge + forecastle
In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel No
How are the returns from the lamps connected to the hull No
Are all the joints with the hull in accessible positions No
Is the installation supplied with a voltmeter Yes and with an amperemeter Yes fixed on 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 Yes
Are any switches, fuses, or joints of cables fitted in the pump room or companion No
How are the lamps specially protected in places liable to the accumulation of vapour or gas Heavy air tight glass globes with wire guard

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.

The Texas Steamship Co
per Capt. Drake Mgr Electrical Engineers Date

COMPASSES.

Distance between dynamo or electric motors and standard compass about 200 feet
Distance between dynamo or electric motors and steering compass about 200 feet

The nearest cables to the compasses are as follows:—

A cable carrying Binnacle 2 Amperes close to feet from standard compass close to feet from steering compass
A cable carrying Signal light 33 Amperes about 6 feet from standard compass about 6 feet from steering compass
A cable carrying Search 30 Amperes about 12 feet from standard compass about 12 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 — degrees on — course in the case of the standard compass and — degrees on — course in the case of the steering compass.

The Texas Steamship Co
per Capt. Drake Mgr Builder's Signature. Date

GENERAL REMARKS. This electric light installation has been fitted in accordance with the rules and the workmanship and material are good. It has been satisfactorily tried under full load, and it is now in good and safe working condition, & eligible in my opinion to receive the notation, "Elec. Light," in the Register Book. This is a duplicate of the

S.S. "REAPER" Boston report 1430.

This vessel is eligible for
THE RECORD, see Light Bell 20/24
Committee's Minute New York AUG - 2 1921

Elect Light

Wm Stewart
Surveyor to Lloyd's Register of Shipping.

98. of Boston, Mass. Continuation of Report No. 1499 dated 6.6.21 — 2.7.21 on the

Electric Light Installation
- of the -
Steamer "ILLINOIS" of Port Arthur.

Groups of Lights Continued.

Lower E. Room	8	lights each of 32 c.p. requiring a total current of 6 Amps.
Upper "	25	" " 32 " " 10 "
Bailer	42	" " 32 " " 15.3 "
Poop	3	" " 32 " " 1.2 "

Description of Cable Continued

D. & Carrying maximum 30 Amps. Comprised of 7 wires each .064, .022 sq. in. total area
E.F.H.T.K.L. 30 7 .014