

Mar 5-1920

Rpt. 13.

TUE. APR. 6 1920
Received at London Office

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1284

Port of Boston Date of First Survey Jan 9, 1920 Date of Last Survey 13 Feb 1920 No. of Visits 7
 No. in 4 on the Steel ROANOKE Port belonging to New York
 Built at Bath, Me. By whom The Texas Steamship Co. When built 1920
 Owners The Texas Co. Owners' Address 17 Battery Place, New York City.
 Card No. 21 Electric Light Installation fitted by The Texas Steamship Co. When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two 10 K-W General Electric generators, direct driven by vertical steam engines
 Capacity of each 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, B, C, D, E, F, G, H, J, K, L, M of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each One on #1 pump room companion with 6, One on #2 pump room companion with 6, One in bridge house with 4, One in pipe alley with 2, One in aft quarters port with 6, One in aft quarters starboard with 6, Two in E.R. with 2 each, One in B.R. entrance with 6, One in steering engine room with 2
 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 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 circuits
 Are the fuses of non-oxidisable 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 Enclosed 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 Heaters lights each of candle power requiring a total current of 13 Amperes
 B Pump Room 12 lights each of average 80 candle power requiring a total current of 10.8 Amperes
 C Quarters Fore 41 lights each of 32 candle power requiring a total current of 19.7 Amperes
 D Wireless lights each of candle power requiring a total current of 18 Amperes
 E Searchlight lights each of candle power requiring a total current of 30 Amperes
 F Mast head light with 1 lamps each of 48 candle power requiring a total current of 3.3 Amperes
 G Side light with 1 lamps each of 48 candle power requiring a total current of 3.3 Amperes
 H Cargo lights of 320 candle power, whether incandescent or are lights incandescent
 If arc lights, what protection is provided against fire, sparks, &c. yes

Where are the switches controlling the masthead and side lights placed engine room & pilot house

DESCRIPTION OF CABLES.

Main cable carrying 91 Amperes, comprised of 19 wires, each .074 S.W.G. diameter, .083 square inches total sectional area
 Branch cables carrying 13 Amperes, comprised of 7 wires, each .04 S.W.G. diameter, .012 square inches total sectional area
 Branch cables carrying 10.8 Amperes, comprised of 7 wires, each .04 S.W.G. diameter, .012 square inches total sectional area
 Leads to lamps carrying 4 Amperes, comprised of 1 wires, each .064 S.W.G. diameter, .003 square inches total sectional area
 Cargo light cables carrying 4 Amperes, comprised of 1 wires, each .064 S.W.G. diameter, .003 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 & 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 noHow are the cables led through the ship, and how protected steel conduits throughout

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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 conduits made tight
 What special protection has been provided for the cables near galleys or oil lamps or other sources of heat? steel conduits
 What special protection has been provided for the cables near boiler casings? steel conduits
 What special protection has been provided for the cables in engine room? steel conduits
 How are cables carried through beams? steel conduits through bulkheads, &c. steel conduits made tight
 How are cables carried through decks? steel conduits made water 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 conduits run high up under deck
 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 bunkers 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? ✓
 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 with 2 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 frame

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 W. S. Drake mgr. Electrical Engineers Date

COMPASSES.

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

The nearest cables to the compasses are as follows:—

Cable	Amperes	Distance from standard compass	Distance from steering compass
A cable carrying Binnacle	1/4	close to	close to
A cable carrying Signal lights	3.3	about 6	about 6
A cable carrying Searchlight	30	about 12	about 12

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

The Texas Steamship Co.
 per W. S. Drake mgr. Builder's Signature. Date

GENERAL REMARKS. This Electric Light Installation has been fitted in accordance with the Rules, & the workmanship & material are good. It has been satisfactorily tried under full load & it is now in good & safe working condition & eligible, in my opinion to receive the notation 'ELEC. LIGHT' in the Register Book. This is a duplicate of the Oregon, Boston report 1215.

It is submitted yes
 this vessel is eligible for
 THE RECORD. ELEC. LIGHT 7/4/20
 Committee's Minute. Elec. Lt Wm. Stewart & John S. Heck
 Surveyor to Lloyd's Register of Shipping.

New York MAR - 9 1920

Electric Lighting Installation

steamer ROANOKE of New York

Groups of Lights continued.

Location	No. of Lights	Wattage	Current
Quarters Aft.	73	each of 32 cp	requiring a total current of 30 amps
Lower E. R.	18	" " " 32 "	" " " " 6 "
Upper E. R.	25	" " " 32 "	" " " " 10 "
Boiler room	42	" " " 32 "	" " " " 15.3 "
Poop	3	" " " 32 "	" " " " 1.2 "

Description of Cables continued

E. G. carrying a maximum of 30 amps comprised of 7 wires each .064" dia. .022" total sectional area
 H, J, K, L, M " " " 30 " " 7 " " .04 " .014 " " "

J. S. H.
 W. S.

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