

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 744

Port of Seattle Wash USA Date of First Survey Oct 3. 1918 Date of Last Survey Nov 2. 1918 No. of Visits 8
 No. in on the Steel Screw Steamer "WESTPOOL" Port belonging to Seattle
 Reg. Book FIRST ENTRY Built at Seattle By whom J. F. Duthe & Co When built 1918
 Owners US Shipping Board & Emergency Fleet Corp Owners' Address -
 Yard No. 20 Electric Light Installation fitted by J. F. Duthe & Co When fitted 1918

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two Engberg 10 KW Dynamos direct connected to 6 1/2 x 5" single vertical steam engines

Capacity of Dynamo 90 Amperes at 110 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Platform in Engine room Whether single or double wire system is used Double
 Position of Main Switch Board Engine room beside dynamos having switches to groups A. B. C. D. E. F of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Forecastle 4 switches, Fore Bridge house 4 switches, Upper engine room 3 panels 6 switches, Lower engine room 6 switches, Crews quarters aft 4 switches and in Wheel house 4 switches.
 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 ~~unchanged~~ 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
 Are the fuses of non-oxidizable metal yes and constructed to fuse at an excess of 25 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 No wire fuses
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases

Total number of lights provided for 164 arranged in the following groups:—
 A Forecastle 16 lights each of 40 Watts candle power requiring a total current of 640 Watts Amperes
 B Fore Bridge 31 lights each of 40 " candle power requiring a total current of 1240 " Amperes
 C Upper Engine room 47 lights each of 40 " candle power requiring a total current of 1880 " Amperes
 D Lower Engine room 33 lights each of 40 " candle power requiring a total current of 1320 " Amperes
 E Crews quarters aft 23 lights each of 40 " candle power requiring a total current of 920 " Amperes
 F Wheel House 10 lights each of 40 " 409 20 " candle power requiring a total current of 320 " Amperes
2 Mast head light with 1 lamps each of 40 " candle power requiring a total current of 80 " Amperes
2 Side light with 1 lamps each of 40 " candle power requiring a total current of 80 " Amperes
10 Cargo lights of 4-10 Watts each candle power, whether incandescent or arc lights Incandescent

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

Where are the switches controlling the masthead and side lights placed In Wheel House

DESCRIPTION OF CABLES.

Main cable carrying 90 Amperes, comprised of 7 wires, each 0.1400 S.W.G. diameter, 133.110 square inches total sectional area
 Branch cables carrying 100 Amperes, comprised of 7 wires, each 0.0733 S.W.G. diameter, 41.742 square inches total sectional area
 Branch cables carrying 40 Amperes, comprised of 7 wires, each 0.0485 S.W.G. diameter, 16.509 square inches total sectional area
 Leads to lamps carrying 5 Amperes, comprised of 1 wires, each 4.106 S.W.G. diameter, 4.106 square inches total sectional area
 Cargo light cables carrying 8 Amperes, comprised of 1 wires, each 4.106 S.W.G. diameter, 4.106 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Insulation vulcanized rubber and cotton braid saturated with pure wax compound

Joints in cables, how made, insulated, and protected All joints soldered and bound with rubber and friction tape and painted with P & B insulating paint.

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 No

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 Run in metal conduits and stuffing boxes at bulkheads except fore bridge where run in wood mouldings



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Metal Conduits & WT fittings*

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

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

What special protection has been provided for the cables in engine room *Metal Conduits and WT fittings*

How are cables carried through beams *In metal Conduits* through bulkheads, &c. *Conduits & stuffing boxes*

How are cables carried through decks *Conduits & stuffing boxes*

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 *Metal Conduits*

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 *WT plug connections*

Where are the main switches and fuses for these lights fitted *Upper engine*

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

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 *In 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 *400* 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.

C. O. Bretherton for Electrical Engineers Date *12/14/18*

COMPASSES.

Distance between dynamo or electric motors and standard compass } *about 110 feet*

Distance between dynamo or electric motors and steering compass }

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>Search Light</i>	<i>40 Watts</i>	<i>8</i>	<i>8</i>
A cable carrying	<i>7</i>	<i>8</i>	<i>8</i>
A cable carrying			

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 *Various* courses in the case of the standard compass and *Nil* degrees on *Various* courses in the case of the steering compass.

C. O. Bretherton - Chief Engineer for Builder's Signature. Date *12/14/18*

GENERAL REMARKS.

The Electric Lighting installation of good quality and workmanship, tested under working conditions and found satisfactory, eligible, in my opinion, to be noted in the Register Book

It is submitted that this vessel is eligible for

THE RECORD. ELEC LIGHT

J. J. Fowler
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Elec Lt.

8/1/19



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