

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 3725

Port of GLOUCESTER Date of First Survey 27<sup>th</sup> June 1919 Date of Last Survey 3<sup>rd</sup> Oct 1919 No. of Visits 12  
 No. in Reg. Book on the Iron or Steel TANKER "SHARON" Port belonging to GLOUCESTER  
 Built at GLOUCESTER By whom PUSEY & JONES CO When built 1919  
 Owners Emergency Fleet Corporation Owners' Address Philadelphia  
 Yard No. Electric Light Installation fitted by PUSEY & JONES CO When fitted 1919

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

2-125 KVA. GENERAL ELECT. TURBO GEN. SETS. 240 VOLTS  
3 PHASE, 60 CYCLE - DIRECT CONNECTED TO 4 KW EXCITER  
 Capacity of Dynamo 301 Amperes at 240 Volts, whether continuous or alternating current A.C.  
 Where is Dynamo fixed ENGINE RM BALCONY 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 NO AUXILIARY BOARD

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 —  
 Are the fuses of non-oxidisable 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 NONE USED  
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases YES

Total number of lights provided for 168 arranged in the following groups:—  
 A 4 lights each of 100 WATT candle power requiring a total current of 4 Amperes  
 B 47 lights each of 25 WATT candle power requiring a total current of 11 Amperes  
 C 104 lights each of 40 " candle power requiring a total current of 37.8 Amperes  
 D lights each of candle power requiring a total current of Amperes  
 E lights each of candle power requiring a total current of Amperes  
2 Mast head light with 2 lamps each of 60 WATT candle power requiring a total current of 2 Amperes.  
2 Side light with 2 lamps each of 60 WATT candle power requiring a total current of 2 Amperes  
6-6LT Cargo lights of 2160 WATTS candle power, whether incandescent or arc lights INCAND  
 If arc lights, what protection is provided against fire, sparks, &c. —

There are the switches controlling the masthead and side lights placed MAIN SWITCH BOARD WITH TELL TALE IN P.H.

### DESCRIPTION OF CABLES.

Main cable carrying 301 Amperes, comprised of 3 <sup>parallel</sup> wires, each # 10B+5S <sup>BYS</sup> S.W.G. diameter, .74601 square inches total sectional area  
 Branch cables carrying 8 Amperes, comprised of 2 wires, each # 10B+5S S.W.G. diameter, .01631 square inches total sectional area  
 Branch cables carrying 3 Amperes, comprised of 2 wires, each # 14B+5S S.W.G. diameter, .00645 square inches total sectional area  
 Cables to lamps carrying .5 Amperes, comprised of 2 wires, each # 14B+5S S.W.G. diameter, .00645 square inches total sectional area  
 Cargo light cables carrying 3 Amperes, comprised of 2 wires, each # 14B+5S S.W.G. diameter, .00645 square inches total sectional area

### DESCRIPTION OF INSULATION, PROTECTION, ETC.

LEADED & ARMORED CABLE

Splices in cables, how made, insulated, and protected NO JOINTS MADE IN CABLE

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances — 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 —  
 Are there any joints in or branches from the cable leading from dynamo to main switch board —

How are the cables led through the ship, and how protected CABLES ARE LED THROUGH BEAMS IN BULKHEAD BUSHINGS, AND THROUGH BHDS + DECKS THROUGH STUFFING TUBES



**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  
L+A CABLE

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat L+A CABLE IN PIPE

What special protection has been provided for the cables near boiler casings L+A.

What special protection has been provided for the cables in engine room L+A.

How are cables carried through beams LEAD BUSHINGS through bulkheads, &c. STUFFING TUBES

How are cables carried through decks KIRKING PIPES

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 L+A CABLE COVERED WITH SHEET IRON CASING

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 PORTABLES How fixed SWITCH + RECEPT

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 ON SW. BOARD

**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 SPECIAL OIL TIGHT FIX.

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.

S. Schlesinger Electrical Engineers Date Aug-28-19

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 200 FT.

Distance between dynamo or electric motors and steering compass 200 FT.

The nearest cables to the compasses are as follows:—

A cable carrying	<u>25</u> Amperes	<u>2</u> feet from standard compass	<u>2</u> feet from steering compass
A cable carrying	<u>3</u> Amperes	<u>5</u> feet from standard compass	<u>11</u> feet from steering compass
A cable carrying	Amperes	feet from standard compass	feet from steering compass

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.

Joseph S. Stubb Gen Supt. Builder's Signature. Date August 29, 1919

**GENERAL REMARKS.**

THERE IS NO MAGNETIC EFFECT ON COMPASSES DUE TO THE FACT THAT ALTERNATING CURRENT IS USED. FOR SPECIAL PROTECTION STEEL SHEATH IS REMOVED FROM CABLE WHERE SAME COMES IN CONTACT WITH COMPASSES.

The installation has been well fitted and proved satisfactory on trial

THE RECORD Eleeight A. T. Thomas Surveyor to Lloyd's Register of Shipping.

Committee's Minute Elec Lt

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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