

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 3325

Port of GLoucester Date of First Survey 27th June 1919 Date of Last Survey 3rd 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	<u>4</u>	lights each of	<u>100 WATT</u>	candle power requiring a total current of	<u>4</u>	Amperes
B	<u>47</u>	lights each of	<u>25 WATT</u>	candle power requiring a total current of	<u>11</u>	Amperes
C	<u>104</u>	lights each of	<u>40 "</u>	candle power requiring a total current of	<u>37.8</u>	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
	<u>2</u>	Mast head light with	<u>2</u> lamps each of <u>60 WATT</u>	candle power requiring a total current of	<u>2</u>	Amperes
	<u>2</u>	Side light with	<u>2</u> lamps each of <u>60 WATT</u>	candle power requiring a total current of	<u>2</u>	Amperes

6-GLT 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 T.H.

DESCRIPTION OF CABLES.

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

DESCRIPTION OF INSULATION, PROTECTION, ETC.

LEADED ARMORED CABLE

Joins 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 BHD'S + 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 **KICKING 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 **500** 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	Amperes	feet from standard compass	feet from steering compass
25	2	2	2
3	5	11	11

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. Stahl 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 *Elec Light* **A. T. Thomas** Surveyor to Lloyd's Register of Shipping.

Committee's Minute *Elec Lt*



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