

REC'D NEW YORK *Apr. 5 - 1920*

Rpt. 13.

REPORT ON ELECTRIC LIGHTING INSTALLATION.

Received at London Office APR 20 1920

No. 3728

Port of GLOUCESTER Date of First Survey Mar 8th 1920 Date of Last Survey Mar 8th 1920 No. of Visits Mar 8th 1920
 No. in Reg. Book on the Iron or Steel CARGO CARRIER "ETHAN ALLEN" Port belonging to GLOUCESTER
 Built at GLOUCESTER By whom PUSEY & JONES CO When built 1920
 Owners Emergency Fleet Corp. U.S. Shipping Board Owners' Address Washington DC
 Yard No. 15 Electric Light Installation fitted by PUSEY & JONES CO When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2-15 KW DIRECT CURRENT-125 VOLT GENERATORS, MFG BY ENGBERG ELECT. & MECH. WORKS.
 DIRECT CONNECTED TO VERTICAL ENGINES
 Capacity of Dynamo 120 Amperes at 125 Volts, whether continuous or alternating current DIRECT

Where is Dynamo fixed ENGINE ROOM BALCONY Whether single or double wire system is used DOUBLE

Position of Main Switch Board " having switches to groups
 Positions of auxiliary switch boards and numbers of switches on each NO AUXILIARY SWITCHES of lights, &c., as below

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
 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 YES
 are the fuses of non-oxidizable 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 180 arranged in the following groups :-

10	lights each of	100 WATT	candle power requiring a total current of	9	Amperes
12	lights each of	50 "	candle power requiring a total current of	7	Amperes
120	lights each of	40 "	candle power requiring a total current of	43	Amperes
38	lights each of	25 "	candle power requiring a total current of	9	Amperes
1	Mast head light with	2 lamps each of 60 WATT	candle power requiring a total current of		Amperes
2	Side light with	2 lamps each of " "	candle power requiring a total current of	1.2	Amperes
9	Cargo lights of	360 WATTS EACH	candle power, whether incandescent or arc lights	2.4	Amperes

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

are the switches controlling the masthead and side lights placed MAIN BOARD WITH TELL TALE IN PILOT HOUSE

SECTION OF CABLES.

able carrying 120 Amperes, comprised of 2 wires, each # 10B15 S.W.G. diameter, .16579 square inches total sectional area
 cables carrying 18 Amperes, comprised of 2 wires, each # 10B15 S.W.G. diameter, .016310 square inches total sectional area
 cables carrying 12 Amperes, comprised of 2 wires, each # 10B15 S.W.G. diameter, .016310 square inches total sectional area
 lamps carrying 4 Amperes, comprised of 2 wires, each # 14B15 S.W.G. diameter, .006450 square inches total sectional area
 cables carrying 10 Amperes, comprised of 2 wires, each # 14B15 S.W.G. diameter, .006450 square inches total sectional area

SECTION OF INSULATION, PROTECTION, ETC.

LEADED ARMORED CABLE
 cables, how made, insulated, and protected NO JOINTS MADE IN CABLE
 joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances Are all joints in accessible
 any joints in or branches from the cable leading from dynamo to main switch board Are all joints in accessible
 cables led through the ship, and how protected CABLES ARE LED THROUGH BEAMS IN LEAD
195, AND THROUGH BHDS. + DECKS IN STUFFING TUBES.

008231-008236-0091



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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 LEADED ARMORED CABLE

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

What special protection has been provided for the cables near boiler casings LIACABLE

What special protection has been provided for the cables in engine room LIACABLE

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

How are cables carried through decks KICK 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 LIACABLE ENCASED WITH SHEET IRON

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 NO

Cargo light cables, whether portable or permanently fixed PORTABLE 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 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 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.

Irvin S. Schlesinger Electrical Engineers Date March 17

COMPASSES.

Distance between dynamo or electric motors and standard compass 220'

Distance between dynamo or electric motors and steering compass 230'

The nearest cables to the compasses are as follows:—

A cable carrying	<u>.5</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>10</u>	feet from steering compass
A cable carrying	<u>2</u>	Amperes	<u>4</u>	feet from standard compass	<u>8</u>	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 NONE degrees on — course in the case of the — standard compass and NONE degrees on — course in the case of the steering compass.

William G. Coee, U.P. & M. Builder's Signature. Date March 16th 1920

GENERAL REMARKS. TO ELIMINATE THE MAGNETIC EFFECT THE STEEL SHEATH IS REMOVED FROM CABLE WHERE SAME COMES NEAR COMPASSES.

This installation is well fitted & ran satisfactorily on trial under full load.

William D. Bates Surveyor to Lloyd's Register of Shipping.

Committee's Minute Elec. Lt. New York APR 6 - 1920



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