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REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 3518

Nov. 28-1919.

t of GLOUCESTER Date of First Survey Feb 24th/19 Date of Last Survey Nov. 6th 1919 No. of Visits 31

in Book on the ~~Iron~~ or Steel CARGO "DANIEL WEBSTER" Port belonging to GLOUCESTER

Built at GLOUCESTER By whom PUSEY+JONES CO When built 1919

ers U.S. Shipping Board Owners' Address Gloucester City N.J.

No. Electric Light Installation fitted by PUSEY+JONES CO When fitted 1919

CRIPTION OF DYNAMO, ENGINE, ETC.

2-125 K.V.A. WESTINGHOUSE ELECT. CO. TURBO GENERATOR SETS, 240 VOLTS
1 PHASE - 60 CYCLE - DIRECT CONNECTED TO 3½ KW EXCITER.

pacity of Dynamo 300 Amperes at 240 Volts, whether continuous or alternating current A.C.

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

sition of Main Switch Board " " " having switches to groups — of lights, &c., as below

sitions of auxiliary switch boards and numbers of switches on each NO AUXILIARY SWITCHBOARD

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

re the fuses of non-oxidizable metal YES and constructed to fuse at an excess of 100% per cent over the normal current

re 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

re all switches and fuses constructed of incombustible materials and fitted on incombustible bases YES

otal number of lights provided for 155 arranged in the following groups :—

31	lights each of	25 WATTS	candle power requiring a total current of	7 Amperes
112	lights each of	40 "	candle power requiring a total current of	41 Amperes
12	lights each of	60 "	candle power requiring a total current of	7 Amperes
	lights each of		candle power requiring a total current of	Amperes
	lights each of		candle power requiring a total current of	Amperes
1 Mast head light with 2	lamps each of	60 WATTS	candle power requiring a total current of	Amperes
2 Side light with 2	lamps each of	" "	candle power requiring a total current of	Amperes
9 Cargo lights of	360 WATTS		candle power, whether incandescent or arc lights	

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

Where are the switches controlling the masthead and side lights placed MAIN SWITCHBOARD WITH TELL TALE IN P.H.

ESCRIPTION OF CABLES.

Main cable carrying 300	Amperes, comprised of 3 #1/0	wires, each	1/0 B.S.	S.W.G. diameter, .249 .24867	square inches total sectional area
Branch cables carrying 35	Amperes, comprised of 2-#2	wires, each	2	S.W.G. diameter, .1045 .10426	square inches total sectional area
Branch cables carrying 20	Amperes, comprised of 2-#10	wires, each	10	S.W.G. diameter, .01634 .016310	square inches total sectional area
Leads to lamps carrying 5	Amperes, comprised of 2-#14	wires, each	14	S.W.G. diameter, .00642 .006450	square inches total sectional area
Cargo light cables carrying 3	Amperes, comprised of 2-#14	wires, each	14	S.W.G. diameter, .00642 .006450	square inches total sectional area

ESCRIPTION OF INSULATION, PROTECTION, ETC.

LEADED + ARMORED CABLE

Joints 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 LEAD BUSHINGS AND THROUGH BHDS + DECKS IN STUFFING TUBES.

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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 L+A CABLE IN PIPE

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

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

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

How are cables carried through decks KICKPIPES

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 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 —

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* ON SWBD.

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° Farhenheit 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.

I S Schlesinger *Electrical Engineers* Date Oct-24-19

COMPASSES.

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

Distance between dynamo or electric motors and steering compass 220 FT.

The nearest cables to the compasses are as follows:—

A cable carrying .5 *Amperes* 2 *feet from standard compass* 2 *feet from steering compass*

A cable carrying 3 *Amperes* 5 *feet from standard compass* 10 *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 G. Stull Jr. Gen Supt.
The Pusey & Jones Co. Gloucester Yds. Builder's Signature. Date Oct 24-19

Cml

GENERAL REMARKS.

THERE IS NO MAGNETIC EFFECT ON COMPASS DUE TO THE FACT THAT ALTERNATING CURRENT IS USED. FOR SPECIAL PROTECTION STEEL SHEATH IS REMOVED FROM CABLE WHERE SAME COMES NEAR COMPASSES. This installation has been well fitted and proved satisfactory on trial

It is submitted that this vessel is eligible for THE RECORD. ELEC: LIGHT. 449 19/12/19

T. Adamson Surveyor to Lloyd's Register of Shipping.

Committee's Minute Elec Lt

Im.8,18.—Transfer.

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