Rpt. 13.

REC'D NEW YORK Oct 23 1917 Received at London Office WED. NOV 28 1917

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 443.

Port of Portland Oregon Date of First Survey 6/1 Date of Last Survey 7/14 No. of Visits 16

No. in Reg. Book — on the ~~Iron or~~ Steel S.S. War Baron Port belonging to London

Built at Portland, Oregon By whom North West Steel Company When built 1917.

Owners Cunard S.S. Co. Owners' Address Liverpool

Yard No. 1 Electric Light Installation fitted by McPage, McKenny & Co. When fitted 1917.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two 15 Kw. 115 Volt General Electric Co Compound Wound Generators Direct connected to single cylinder Reciprocating Engine

Capacity of Dynamo 136 Amperes at 115 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed on platform in engine room Whether single or double wire system is used Double

Position of Main Switch Board on platform in eng room having switches to groups 9 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each One in chart house 6 sws: Two in port passage of for'd deck house 6 & 8 switches: Two in Stbd passage midships deck house 6 sws. each One in crews quarters aft, 6 sws: One in Engine room 10 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 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 Yes

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 Stamped on fuses

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 298 arranged in the following groups :—

A	9	lights each of	40 Watts	32	candle power requiring a total current of	3	Amperes
B	54	lights each of	40 watts	32	candle power requiring a total current of	18	Amperes
C	51	lights each of	40 Watts	32	candle power requiring a total current of	17	Amperes
D	38	lights each of	40 Watts	32	candle power requiring a total current of	13	Amperes
E	46	lights each of	40 Watts	32	candle power requiring a total current of	15	Amperes
1	Mast head light with 1	lamps each of	40 Watts	32	candle power requiring a total current of	.32	Amperes
2	Side light with 1	lamps each of	40 Watts	32	candle power requiring a total current of	.64	Amperes
80	Cargo lights of	40 Watts		32	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 chart house

DESCRIPTION OF CABLES.

Main cable carrying 225 (136) Amperes, comprised of 4 wires, each 0000 B&S S.W.G. diameter, (846405) 211000 c.m. ~~square inches~~ total sectional area

Branch cables carrying 50 Amperes, comprised of 6 wires, each #6 B&S S.W.G. diameter, (157500) 26000 c.m. ~~square inches~~ total sectional area

Branch cables carrying 35 Amperes, comprised of 6 wires, each #8 B&S S.W.G. diameter, (99060) 16510 c.m. ~~square inches~~ total sectional area

Leads to lamps carrying 25 Amperes, comprised of 4 wires, each #10 B&S S.W.G. diameter, (41336) 10380 c.m. ~~square inches~~ total sectional area

Cargo light cables carrying included above Amperes, comprised of ____ wires, each ____ S.W.G. diameter, ____ square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Rubber Covered - Double braided National Electrical Code Std.

Joints in cables, how made, insulated, and protected Soldered & taped - Splicing compound & Friction tape, then painted with P & B. Electrical 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 Yes

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 In metal conduits & Wood moulding in living quarters.

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 in metal conduits

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat in metal conduits

What special protection has been provided for the cables near boiler casings in metal conduits

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

How are cables carried through beams Metal conduits *through bulkheads, &c.* Metal conduits ✓

How are cables carried through decks Metal conduits, well locked and packed ✓

Are any cables run through coal bunkers no *or cargo spaces* Yes *or spaces which may be used for carrying cargo, stores, or baggage* Yes

If so, how are they protected in metal conduits

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage Yes

If so, how are the lamp fittings and cable terminals specially protected W.T. switches & Receptacles

Where are the main switches and fuses for these lights fitted In houses on bridge deck

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 Two, *and with an amperemeter* Yes Two, *fixed* on switchboard

~~**VESSELS BUILT FOR CARRYING PETROLEUM.**~~ Not so built

~~*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 1000 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.

LePage McKenny + Co Electrical Engineers Date July 20/1917

G.H. Swope mgr.

COMPASSES.

Distance between dynamo or electric motors and standard compass About 150 ft.

Distance between dynamo or electric motors and steering compass " "

The nearest cables to the compasses are as follows:—

A cable carrying	12	*Amperes*	12	*feet from standard compass*	10	*feet from steering compass*
A cable carrying	35	*Amperes*	25	*feet from standard compass*	16	*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 Yes

The maximum deviation due to electric currents, etc., was found to be Nil *degrees on* — *course in the case of the standard compass and* Nil *degrees on* — *course in the case of the steering compass.*

Willamette Iron & Steel Works
B. Ball
President
Builder's Signature. Date July 21 1917

GENERAL REMARKS.

The above Installation has been made in accordance with the Rules, the materials and workmanships are good and on trial all worked satisfactorily

It is submitted that this vessel is eligible for THE RECORD. Elec. light. JWD 30/11/17.

J. H. Yates
Surveyor to Lloyd's Register of Shipping.

Committee's Minute Elec Light