

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 893

Port of Seattle Wash Date of First Survey July 24 Date of Last Survey Oct. 22 No. of Visits 10
 No. in on the Wood Motor Ship "BALCATT" Port belonging to Seattle Wash USA
 Reg. Book EST. ENTRY Built at Seattle By whom Patterson, McDonald & Co When built 1919
 Owners J. E. Chilberg Owners' Address 1412 Alaska Building, Seattle
 Card No. Nº 8 Electric Light Installation fitted by Patterson, McDonald & Co When fitted 1919

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Dynamo 60 KW direct connected to a 75 Horse power Fairbanks Morse Oil Engine
 One " 30 " " " 30 " " " " " " " " " "
 Capacity of Dynamo 30 " 60 KW Amperes at 125 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Engine Room platform Whether single or double wire system is used Double
 Position of Main Switch Board Engine Room having switches to groups A. B. F of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Engine room 8 switches. Chart room 7 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 -
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes
 Total number of lights provided for 130 arranged in the following groups:—
 Engine Room 86 lights each of 40 Watts candle power requiring a total current of 32 Amperes
 Chart Room 40 lights each of 40 " " candle power requiring a total current of 14½ Amperes
 lights each of " " candle power requiring a total current of " " Amperes
 lights each of " " candle power requiring a total current of " " Amperes
 lights each of " " candle power requiring a total current of " " Amperes
 { 2 Mast head light with 1 lamps each of 40 Watts candle power requiring a total current of .72 Amperes
 { 2 Side light with 1 lamps each of 40 " " candle power requiring a total current of .72 Amperes
4 Cargo lights of 4 Light Clusters 40 " " candle power, whether incandescent or arc lights Incandescent
 If are lights, what protection is provided against fire, sparks, &c.

Where are the switches controlling the masthead and side lights placed Chart Room

DESCRIPTION OF CABLES.

Main cable carrying 60 Amperes, comprised of 7 wires, each # 10 S.W.G. diameter, .05708 square inches total sectional area
 Branch cables carrying 46 Amperes, comprised of 7 wires, each # 12 S.W.G. diameter, .0358 square inches total sectional area
 Branch cables carrying " Amperes, comprised of " wires, each " S.W.G. diameter, " square inches total sectional area
 Cables to lamps carrying 14 Amperes, comprised of 1 wires, each # 14 S.W.G. diameter, .0032 square inches total sectional area
 Cargo light cables carrying 3 Amperes, comprised of 32 wires, each # 32 S.W.G. diameter, .00158 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanized rubber and cotton braid saturated with pure wax compound and protected in metal conduits.

Joints in cables, how made, insulated, and protected Soldered, bound with rubber and friction tape, and painted with water proof 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.

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 *Metal Conduits*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Metal Conduits*

What special protection has been provided for the cables near ~~litter~~ casings *Metal Conduits*

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

How are cables carried through beams *None* through bulkheads, &c *Metal Conduits & WT fitting*

How are cables carried through decks *Metal Conduits with water tight fittings*

Are any cables run through coal bunkers *—* or cargo spaces *yes* or spaces which may be used for carrying cargo, stores, or baggage *yes*

If so, how are they protected *Metal Conduits*

Are any lamps fitted in ~~coal bunkers~~ 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 *plug boxes and water tight fittings*

Where are the main switches and fuses for these lights fitted *Switchboard in Engine room*

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 *Plug Connections*

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.

A J Marshall for Electrical Eng. Electrical Engineers Date *Nov 19-1919*

COMPASSES.

Distance between dynamo or electric motors and standard compass *150 feet*

Distance between dynamo or electric motors and steering compass *144 feet*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>3</i>	Amperes	<i>8</i>	feet from standard compass	<i>2</i>	feet from steering compass
A cable carrying		Amperes		feet from standard compass		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 *Various* course in the case of standard compass and *Nil* degrees on *Various* course in the case of the steering compass.

A J Marshall *San Supt* Builder's Signature. Date *Nov-19-1919*
Patterson Macdonald
S.B. Co

GENERAL REMARKS.

The Electric Lighting installation of good quality and workmanship, tested under working conditions and found satisfactory. Eligible in my opinion, to be noted in the Register Book.

It is submitted that this vessel is eligible for THE RECORD

Committee's Minute

NYG
31/12/19
New York DEC - 2 1919
Enc LP

James Fowler
Surveyor to Lloyd's Register of Shipping.