

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 845

Port of Seattle Wash USA Date of First Survey April 11th Date of Last Survey May 17th No. of Visits 8
 No. in 1 on the Iron Steamer "TROLLING" Port belonging to New York
 Reg. Book 1875 Built at Seattle By whom Elliott Bay S. S. Co. When built 1919
 Owners Anglo Norwegian Shipping Corp. Owners' Address New York
 Yard No. 1 Electric Light Installation fitted by Elliott Bay Shipbuilding Co. When fitted 1919

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Dynamo 12 1/2 KW direct connected to a 20 HP Fairbanks Morse oil engine
One " 10 KW Belt driven from main engine
 Capacity of Dynamo 109 Amperes at 115 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Engine Room, port side Whether single or double wire system is used Double
 Position of Main Switch Board Engine Room, port side having switches to groups A B C D E of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each None

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 — and at each position where a cable is branched or reduced in size — 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-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 102 arranged in the following groups:—

A Forecastle	15 lights each of	16	candle power requiring a total current of	7 1/2	Amperes
B Prop Deck	48 lights each of	16	candle power requiring a total current of	24	Amperes
C Pilot House	5 lights each of	16	candle power requiring a total current of	2 1/2	Amperes
D Engine Room	16 lights each of	16	candle power requiring a total current of	8	Amperes
E Cargo	12 lights each of	16	candle power requiring a total current of	6	Amperes
2 Mast head light with	interchangeable 2 lamps each of	16	candle power requiring a total current of	1	Amperes
2 Side light with	interchangeable 2 lamps each of	16	candle power requiring a total current of	1	Amperes
3 Cargo lights of 4 " "		16	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 Chart room

DESCRIPTION OF CABLES.

Main cable carrying 109 Amperes, comprised of 2 wires, each # 1 S.W.G. diameter, .14136 square inches total sectional area
 Branch cables carrying 33 Amperes, comprised of 2 wires, each # 8 S.W.G. diameter, .04020 square inches total sectional area
 Branch cables carrying — Amperes, comprised of — wires, each — S.W.G. diameter, — square inches total sectional area
 Leads to lamps carrying 44 Amperes, comprised of 2 wires, each # 8 S.W.G. diameter, .04020 square inches total sectional area
 Cargo light cables carrying 6 Amperes, comprised of 2 wires, each # 14 S.W.G. diameter, .01005 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

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

Joints in cables, how made, insulated, and protected Soldered. Banded with rubber and friction tape and painted with PRB insulating 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 Iron conduits



© 2020

Lloyd's Register Foundation

W695-0164

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 *water tight 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 boiler casings *—*

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

How are cables carried through beams *—* through bulkheads, &c. *water tight stuffing boxes*

How are cables carried through decks *in water tight stuffing boxes.*

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 or spaces which may at times be used for cargo, ~~stores~~, or baggage *yes*

If so, how are the lamp fittings and cable terminals specially protected *plug boxes and portable clusters*

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

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 *on 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.

Elliott Bay Shipbuilders & Carriers Electrical Engineers Date *June 26 - 1919*

COMPASSES

Distance between dynamo or electric motors and standard compass *45 feet*

Distance between dynamo or electric motors and steering compass *45 feet*

The nearest cables to the compasses are as follows:—

A cable carrying	Ampere	feet from standard compass	feet from steering compass
<i>3</i>	<i>6</i>	<i>6</i>	
A cable carrying	Ampere	feet from standard compass	feet from steering compass
A cable carrying	Ampere	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 the standard compass and *Nil* degrees on *Various* course in the case of the steering compass.

Elliott Bay Shipbuilders & Carriers Builder's Signature. Date *June 26 - 1919*

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 ELEC LIGHT *Roll 41* *20/7/19* *James Fowler* Surveyor to Lloyd's Register of Shipping.

Committee's Minute *Elec*