

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 15

Port of PORT ARTHUR, ONTARIO. Date of First Survey 31/10/16. Date of Last Survey 17/2/17. No. of Visits 20
 No. in 93 on the Iron or Steel Screw Steamer "CLEVELAND" Port belonging to Haugesund, Norway
 Built at Superior, Wisconsin By whom Superior Shipbuilding Co. When built 11/16
 Owners J. E. DAVIDSON, Owners' Address BAY CITY, Michigan
 Card No. 525 Electric Light Installation fitted by SUPERIOR SHIPBUILDING CO. When fitted 2/17.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

"ENBERG" 7 1/2 K.W. 110 volt generator direct connected to an "ENBERG" Vertical Engine,
 speed 525 R.P.M.

Capacity of Dynamo 68 Amperes at 110 Volts, whether continuous or alternating current continuous ✓

Where is Dynamo fixed Lower starboard Engine Room Whether single or double wire system is used Double ✓

Position of Main Switch Board Low. Starbd. Engine room having switches to groups 15 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each 1 port Hall, 5 switches; 1 steward's hall 5 switches; 4 circuit tell tale board in pilot house.

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 33 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 YES

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

Total number of lights provided for 165 arranged in the following groups:—

A	34	lights each of	27-25 W	candle power requiring a total current of	8.7	Amperes
B	34	lights each of	25 W	candle power requiring a total current of	7.5	Amperes
C	6	lights each of	25 W	candle power requiring a total current of	1.3	Amperes
D	20	lights each of	40 W	candle power requiring a total current of	7.3	Amperes
E	28	lights each of	25 W	candle power requiring a total current of	6.3	Amperes
3	Mast head light with	1	lamps each of	40 W	candle power requiring a total current of	2.2
	anchor "	1	lamps each of	40 W	candle power requiring a total current of	Amperes
2	Side light with	1	lamps each of	40 W	candle power requiring a total current of	1.5
4	portable	Cargo lights of	40 W	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 36.54 Amperes, comprised of 7 wires, each 19 S.W.G. diameter, .0087865 square inches total sectional area
 Branch cables carrying 2 Amperes, comprised of 1 wires, each 14 S.W.G. diameter, .0050256 square inches total sectional area
 Branch cables carrying 1.8 Amperes, comprised of 1 wires, each 16 S.W.G. diameter, .0032170 square inches total sectional area
 Leads to lamps carrying .5 Amperes, comprised of 1 wires, each 16 S.W.G. diameter, .0032170 square inches total sectional area
 Cargo light cables carrying Amperes, comprised of 26 wires, each 30 S.W.G. diameter, .0032 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Rubber covered, double braided, cargo light cables, flexible, rubber and hemp covered.
all cables and wiring in galvanized conduit pipe.

Joints in cables, how made, insulated, and protected Twisted and soldered, rubber tape and tarred tape.

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 RUN IN GALVANIZED CONDUIT PIPE.

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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 METAL CONDUIT
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 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
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 METAL CONDUITS CASED UNDER BEAMS BY 2" PLANK
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 NONE
Where are the main switches and fuses for these lights fitted NONE
If in the spaces, how are they specially protected NONE
Are any switches or fuses fitted in bunkers NO
Cargo light cables, whether portable or permanently fixed PORTABLE How fixed FROM SIDE OF HOUSES & BHDS.
In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel NONE
How are the returns from the lamps connected to the hull NONE
Are all the joints with the hull in accessible positions NONE
Is the installation supplied with a voltmeter YES, and with an amperemeter YES, fixed ON MAIN 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 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.

The Superior Shipbuilding Co. Superior, Wis.

Electrical Engineers

Date March 29 1917

COMPASSES.

Distance between dynamo or electric motors and standard compass 60 feet,

Distance between dynamo or electric motors and steering compass 56 feet.

The nearest cables to the compasses are as follows:—

A cable carrying Amperes feet from standard compass 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

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.

The Superior Shipbuilding Co. Superior, Wis.

Builder's Signature.

Date

GENERAL REMARKS. Installation completed on the 17th day of February, 1917 and tested clear after 24 hours running test.

The workmanship and materials are good.

Port Arthur, February 23rd, 1917.

It is submitted that this vessel is eligible for THE RECORD. Elec light. JWR 30/4/17

Robert Lunn

Surveyor to Lloyd's Register of Shipping.

Committee's Minute FEB - MAY 1917

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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