

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 101.

Port of CLEVELAND, OHIO Date of First Survey 25 June / Date of Last Survey 19 July No. of Visits 5
 No. in on the ~~Iron or Steel~~ S.S. 'KIOWA' Port belonging to New York
 Reg. Book Built at Cleveland O. By whom The American Shipbuilding Co When built 1917
 Owners Owners' Address
 Yard No. 466 Electric Light Installation fitted by The American Shipbuilding Co When fitted 1917

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 7. K. W. 4 Pole compound wound dynamo, coupled to reciprocating engine 525 R.P.M.

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

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

Position of Main Switch Board with having switches to groups ✓ of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each One in aft Cabin, two in
Master's Cabin, 5 Circuits each.

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 50 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 125 arranged in the following groups:—

A Forecastle 9 lights each of 32 candle power requiring a total current of 3.5 Amperes

B E. & S. Deck 33 lights each of 32 candle power requiring a total current of 10 Amperes

C Master's Cabin 43 lights each of 32 candle power requiring a total current of 16 Amperes

D Aft Cabin 20 lights each of 16 candle power requiring a total current of 10 Amperes

E Cargo lights 16 lights each of 16 candle power requiring a total current of 8 Amperes

2 Mast head light with 1 lamps each of 32 candle power requiring a total current of 2 Amperes

2 Side light with 1 lamps each of 32 candle power requiring a total current of 2 Amperes

16 Cargo lights of 16 candle power, whether incandescent or arc lights Incandescent

If arc lights, what protection is provided against fire, sparks, &c. None used

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

DESCRIPTION OF CABLES.

Main cable carrying 68 Amperes, comprised of 7 wires, each 4 S.W.G. diameter 59295 square inches total sectional area

Branch cables carrying 24 Amperes, comprised of 7 wires, each 10 S.W.G. diameter, 72667 square inches total sectional area

Branch cables carrying 24 Amperes, comprised of 7 wires, each 10 S.W.G. diameter, 72667 square inches total sectional area

Leads to lamps carrying 12 Amperes, comprised of 1 wires, each 14 S.W.G. diameter, 4107 square inches total sectional area

Cargo light cables carrying 13 Amperes, comprised of 37 wires, each 30 S.W.G. diameter, 37158 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

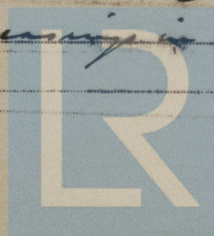
Rubber covered, double braided, & specification and test of
National Board of Fire Underwriters.

Joints in cables, how made, insulated, and protected In cast iron junction boxes, soldered,
rubbed and taped.

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 Steel conduit, most wiring in cabin



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 *Conduits and*
ministry at fittings

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

What special protection has been provided for the cables near boiler casings *Conduits*

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

How are cables carried through beams *Conduits* through bulkheads, &c. *W. T. fittings*

How are cables carried through decks *W. T. fittings*

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 conduit secured 2 deck beams, clear of damage.*

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 *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* and with an amperemeter *Yes*, fixed *Eng Room*

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.

The American Ship Bldg Co Electrical Engineers Date *July 3 1917*

COMPASSES.

Distance between dynamo or electric motors and standard compass *About 50 ft.*

Distance between dynamo or electric motors and steering compass *with.*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>25</i>	Ampere	<i>5</i>	feet from standard compass	<i>5</i>	feet from steering compass
A cable carrying	<i>5</i>	Ampere	<i>5</i>	feet from standard compass	<i>5</i>	feet from steering compass
A cable carrying	<i>5</i>	Ampere	<i>5</i>	feet from standard compass	<i>5</i>	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 *all* course in the case of the standard compass and *Nil* degrees on *all* course in the case of the steering compass.

The American Ship Bldg Co Builder's Signature. Date *July 3 1917*

GENERAL REMARKS.

The above installation has been fitted in a satisfactory manner. The material and workmanship employed being sound and good.

It is submitted that this vessel is eligible for

THE RECORD. Elec. light.

Committee's Minute.

Elec. light

New York JUL 3 1 1917

Surveyor to Lloyd's Register of Shipping.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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