

FRI JUL 23 1920

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2660.

Port of Yokohama Date of First Survey Dec 8 Date of Last Survey May 15th No. of Visits 1
 No. in Reg. Book 169 on the Iron or Steel 1/2 "WAGO MARU" Port belonging to URAGA
 Built at Uruga By whom Uruga Dock Co Ltd When built 1920-5
 Owners Nagasaki Kisen Kaisha Owners' Address 35 Nakamachi Kobe
 Yard No. 169 Electric Light Installation fitted by Uruga Dock Co Ltd When fitted 1920-5

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Single vertical engine direct connected to 12 K.W. compound wound generator
 Capacity of Dynamo 120 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Lower Engine Room platform Whether single or double wire system is used double
 Position of Main Switch Board In Eng. Room near Dynamo 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 Upper deck fwd 1-2 sw. Shelter deck aft 2-5 sw.
Engine Room & Shelter deck forward 3-6 sw. Cargo lamps & upper deck aft 4-11 sw.
Independent switches are fitted to all lamps in accommodation spaces.
 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 No 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 10 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 186 arranged in the following groups:—
 A Upper deck fwd lights each of 15 lights of 16 candle power requiring a total current of 3 Amperes
 B Shelter deck aft lights each of 40 " " 16 candle power requiring a total current of 8 Amperes
 C Eng. & Blr Room & Shelter deck fwd lights each of 63 " " 16 candle power requiring a total current of 12.6 Amperes
 D Cargo lights & U. dk. aft lights each of 64 " " 16, 32, 1500 candle power requiring a total current of 21.5 Amperes
 E Wardroom lights each of 16 candle power requiring a total current of 1 Amperes
2 Mast head light with DF lamps each of 32 candle power requiring a total current of 2.24 Amperes
2 Side light with DF lamps each of 32 candle power requiring a total current of 2.24 Amperes
8 Cargo lights of 4 lamps each, 32 candle power, whether incandescent or arc lights Incandescent
 If arc lights, what protection is provided against fire, sparks, &c. No arc lamps fitted

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

DESCRIPTION OF CABLES.

Main cable carrying	<u>120</u> Amperes, comprised of	<u>110</u> wires, each	<u>20</u> S.W.G. diameter,	<u>.110</u> square inches total sectional area
Branch cables carrying	<u>3</u> Amperes, comprised of	<u>15</u> wires, each	<u>20</u> S.W.G. diameter,	<u>.015</u> square inches total sectional area
Branch cables carrying	<u>8.12, 6.25</u> Amperes, comprised of	<u>30</u> wires, each	<u>20</u> S.W.G. diameter,	<u>.03</u> square inches total sectional area
Leads to lamps carrying	<u>0.2</u> Amperes, comprised of	<u>1</u> wires, each	<u>18</u> S.W.G. diameter,	<u>.002</u> square inches total sectional area
Cargo light cables carrying	<u>1.6</u> Amperes, comprised of	<u>7</u> wires, each	<u>20</u> S.W.G. diameter,	<u>.007</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Rubber, tape, lead covered and armoured and part carried through beams and steel tubing

Joints in cables, how made, insulated, and protected

W.T. Cast iron junction boxes with porcelain bases

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 Led through beams & insulated, Clipped to lower angle of deck girders, Armoured, and in places led through steel tubing.

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 *Steel tubing*

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

What special protection has been provided for the cables near boiler casings *Armoured cable in steel tubing*

What special protection has been provided for the cables in engine room *Armoured cable & part in steel tubing*

How are cables carried through beams *Sole in beams insulated* through bulkheads, &c. *W.T. Stuffing boxes.*

How are cables carried through decks *W.T. Stuffing boxes fiber lined*

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

If so, how are they protected *Armoured cable*

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

If so, how are the lamp fittings and cable terminals specially protected *Portable lamp & cable plugged in, in C.I. terminal box*

Where are the main switches and fuses for these lights fitted *In distribution box in engine room.*

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 *Plugged in, in C.I. terminal box*

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 *Main Switch Board*

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.

Thraga Dock Co Ltd

Electrical Engineers

Date *25-5-20.*

COMPASSES.

Distance between dynamo or electric motors and standard compass *about 63 ft from wireless room.*

Distance between dynamo or electric motors and steering compass *" " " "*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>10</i> Amperes	<i>7</i> feet from standard compass	<i>6</i> feet from steering compass
A cable carrying	<i>5.6</i> Amperes	<i>5</i> feet from standard compass	<i>8</i> feet from steering compass
A cable carrying	<i>2</i> Amperes	<i>7</i> feet from standard compass	<i>6</i> 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.

K. Ushiohku

Builder's Signature.

Date *1-6-20*

GENERAL REMARKS.

The Electrical installation of vessel is as stated in this and appears to be in accordance with the Committee's requirements & eligible in my opinion to have notation, in Register Book, Electric light fitted.

It is submitted that

this vessel is eligible for

THE RECORD Elec. light.

W.D. 27/7/20

A.D. Buchanan

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 9 AUG. 1921

TUE. 23 AUG. 1921

WED. 18 APR. 1922

TUE. 22 AUG. 1922

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