

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 3310

Port of YOKOHAMA Date of First Survey 14-11-23 Date of Last Survey 14-2-24 No. of Visits 10
 No. in Reg. Book on the ~~Iron~~ Steel SC. SR. "FUKKI MARU" Port belonging to ATAMI
 Built at TOKYO By whom ISHIKAWAJIMA S.B. CO. When built 1924
 Owners HASHIMOTO STEAMSHIP CO. Owners' Address KOBE
 Yard No. 331 Electric Light Installation fitted by ISHIKAWAJIMA S.B. & E. CO. When fitted 1924

DESCRIPTION OF DYNAMO, ENGINE, ETC.

COMPOUND WOUND DYHAMO DIRECT COUPLED WITH VERTICAL ENGINE

Capacity of Dynamo 100 ✓ Amperes at 100 ✓ 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 ENGINE ROOM 6 having switches to groups 138 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each AUXILIARY SWITCH BOARDS 8

THESE BOARDS ARE FITTED IN ENGINE ROOM, OILERS ROOM, CARPENTERS SHOP, STEERING ENGINE ROOM, MESS ROOM & PANTRY.

If fuses are fitted on main switch board to the cables of main circuit 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

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 and constructed to fuse at an excess of per cent over the normal current

Are all fuses fitted in easily accessible positions Are the fuses of standard dimensions 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

Total number of lights provided for 138 arranged in the following groups:—

A	<u>49</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>9.8</u>	Amperes
B	<u>8</u>	lights each of	<u>32 C.P. x 4 = 6</u>	candle power requiring a total current of	<u>12.4</u>	Amperes
C	<u>41</u>	lights each of	<u>500 WATTS - 1</u>	candle power requiring a total current of	<u>13.0</u>	Amperes
D	<u>35</u>	lights each of	<u>16 C.P. - 40</u>	candle power requiring a total current of	<u>7.0</u>	Amperes
E		lights each of		candle power requiring a total current of		Amperes
	Mast head light with <u>2</u>	lamps each of	<u>32</u>	candle power requiring a total current of	<u>0.8</u>	Amperes
	Side light with <u>2</u>	lamps each of	<u>32</u>	candle power requiring a total current of	<u>0.8</u>	Amperes
	Cargo lights of <u>500 WATTS</u>			candle power, whether incandescent or arc lights	<u>INCANDESCENT</u>	

If arc lights, what protection is provided against fire, sparks, &c.

Where are the switches controlling the masthead and side lights placed CONTROLLED BY LAMP INDICATOR PLACED IN CHART ROOM.

DESCRIPTION OF CABLES.

Main cable carrying <u>MAX. 46</u> Amperes, comprised of	<u>7</u> wires, each	<u>16</u>	S.W.G. diameter, <u>0.0225</u> square inches total sectional area
Branch cables carrying <u>31</u> Amperes, comprised of	<u>7</u> wires, each	<u>18</u>	S.W.G. diameter, <u>0.0100</u> square inches total sectional area
Branch cables carrying <u>12.9</u> Amperes, comprised of	wires, each	<u>16</u>	S.W.G. diameter, <u>0.003</u> square inches total sectional area
Leads to lamps carrying <u>6.1</u> Amperes, comprised of	wires, each	<u>18</u>	S.W.G. diameter, <u>0.0015</u> square inches total sectional area
Cargo light cables carrying <u>12</u> Amperes, comprised of	<u>162</u> wires, each	<u>36</u>	S.W.G. diameter, <u>0.007</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

The main and branch cables are lead covered and armoured.

Joints in cables, how made, insulated, and protected THE CABLES ARE JOINTED IN CABLE BOXES WHICH ARE MADE OF METAL & WATERTIGHT.

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 METAL AND WOOD CASING SECURED BY METAL STRIPS.

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

LEAD COVERED & ARMoured CABLE USED

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

DITTO.

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

DITTO.

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

DITTO.

How are cables carried through beams

HOLE BUSHED WITH LEAD through bulkheads, &c.

GLANDS.

How are cables carried through decks

TUBES

Are any cables run through coal bunkers

✓

or cargo spaces

or spaces which may be used for carrying cargo, stores, or baggage

If so, how are they protected

METAL AND WOOD CASING

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage

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

Cargo light cables, whether portable or permanently fixed

PORTABLE

How fixed PLUG & SOCKET.

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 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 2000 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.

M. Matsumo Electrical Engineers

Date 23rd Feb '24

COMPASSES.

Distance between dynamo or electric motors and standard compass

Distance between dynamo or electric motors and steering compass

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.

Builder's Signature. Date

GENERAL REMARKS.

The installation has been fitted in accordance with the requirements of the Rules and worked satisfactorily on Trial.

It is submitted that this vessel is eligible for Fee. £225. THE RECORD. Elec. light. JWD 30/5/24 Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. JUN. 3 1924

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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