

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2401

Port of Yokohama Date of First Survey 7th Sept Date of Last Survey 23rd Sept No. of Visits 6
 No. in Reg. Book on the Iron or Steel Twin. S. S. " Meiwu Maru " Port belonging to Dairen
 Built at Uraga By whom Uraga Dock Co Ltd When built 9 - 18
 Owners Meiji Kaiun Kabushiki Kaisha Owners' Address Kobe
 Yard No. 145 Electric Light Installation fitted by Uraga Dock Co Ltd When fitted 9 - 18

DESCRIPTION OF DYNAMO, ENGINE, ETC.

*Set on fore side replaced by a 25 KW set -
Hole 11.35*
 (2) - 10 K.W. sets, Single cylinder, Inverted Enclosed type steam engines direct coupled to pole D. C. generators.
 Capacity of Dynamo each 100 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Lower platform Engine room Whether single or double wire system is used Double
 Position of Main Switch Board at Dynamos having switches to groups 5 in Number of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Forecastle I of 10, Chart room I of 8, Lower bridge House 2 of 9, each; Shelter deck Pantry 3 of 10 each; Mess room 2 of 10; Shelter deck Locker I of 11; Midship Alley-way 2 of 10 each; E. room 4 of 10 each; Poop Alley-way 2 of 10 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 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
 Are the fuses of non-oxidizable metal Tin Lead Alloy and constructed to fuse at an excess of 85 % per cent over the normal current
 Are all fuses fitted in easily accessible positions Yes Are the fuses of standard dimensions Main only 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

Total number of lights provided for 244. arranged in the following groups:—

A	= 85	lights each of	16. C. P.	candle power requiring a total current of	26.	Amperes
B	= 70	lights each of	16. C. P.	candle power requiring a total current of	21.	Amperes
C	= 105	lights each of	16. C. P.	candle power requiring a total current of	32.	Amperes
D	= 70	lights each of	16. C. P.	candle power requiring a total current of	21.	Amperes
E	Wireless	lights each of	3 K.W. set	candle power requiring a total current of	30.	Amperes
2	Mast head light with	1	lamps each of	32	candle power requiring a total current of	1.3.
2	Side light with	1	lamps each of	32	candle power requiring a total current of	1.3.
10	Cargo lights	Each	4x50 C.P. = 200	candle power, whether incandescent or arc lights	Incandescent	

If arc lights, what protection is provided against fire, sparks, &c. No arc lamps used.

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

DESCRIPTION OF CABLES.

A	Main cable carrying	100	each Amperes, comprised of	110	wires, each	20	S.W.G. diameter,	.1100	square inches total sectional area
B	Branch cables carrying	26	Amperes, comprised of	30	wires, each	20	S.W.G. diameter,	.0300	square inches total sectional area
C	Branch cables carrying	32	Amperes, comprised of	30	wires, each	20	S.W.G. diameter,	.0300	square inches total sectional area
D	Branch cables carrying	21	Amperes, comprised of	30	wires, each	20	S.W.G. diameter,	.0300	square inches total sectional area
E	Wireless	30	Amperes, comprised of	30	wires, each	20	S.W.G. diameter,	.0300	square inches total sectional area
	Leads to lamps carrying	2	Amperes, comprised of	1	wires, each	18	S.W.G. diameter,	.0018	square inches total sectional area
	Cargo light cables carrying	4	Amperes, comprised of	7	wires, each	20	S.W.G. diameter,	.0070	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered Armoured where liable to damage: lead covered in all living rooms.

Joints in cables, how made, insulated, and protected No joints, Cast Iron Watertight junction boxes used.

Connectors

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 None

Are there any joints in or branches from the cable leading from dynamo to main switch board None

How are the cables led through the ship, and how protected In holds along side Shelter Dk side girders, In E.R. in

Iron tubing; in living rooms lead covered;



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible **Yes Accessible.**

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture **Lead covered where exposed to damp or weather.**

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat **Lead covered in iron tubes**

What special protection has been provided for the cables near boiler casings **Kept clear of casing.**

What special protection has been provided for the cables in engine room **Lead covered in iron tubes where exposed to mechanical injury**

How are cables carried through beams **fibre linings;** through bulkheads, &c. **Sockets; Watertight.**

How are cables carried through decks **Iron deck tubes, 18" high; fibre 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 **Lead covered armoured cable; Strongly secured to Shelter deck.**

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage **None portables used.**

If so, how are the lamp fittings and cable terminals specially protected **Cast iron boxes.**

Where are the main switches and fuses for these lights fitted **in stowhold.**

If in the spaces, how are they specially protected **Not in the spaces.**

Are any switches or fuses fitted in bunkers **No.**

Cargo light cables, whether portable or permanently fixed **Portable.** How fixed **Screw connectors.**

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel **Double wiring used throughout.**

How are the returns from the lamps connected to the hull **XX**

Are all the joints with the hull in accessible positions **XX**

Is the installation supplied with a voltmeter **Yes 2.** and with an amperemeter **Yes,** fixed **At Dynamo**

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.

Electrical Engineers Date

COMPASSES.

Distance between dynamo or electric motors and standard compass **40 feet to Wireless Motor.**

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

The nearest cables to the compasses are as follows:—

A cable carrying	5	Amperes	10	feet from standard compass	15	feet from steering compass
A cable carrying	5	Amperes	12	feet from standard compass	20	feet from steering compass
A cable carrying	1	Amperes	0	feet from standard compass	0	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.

U. Kammura Builder's Signature. Date

GENERAL REMARKS. The installation of this vessel has been fitted in accordance with the Society's Rules, the materials and workmanship are good, and the engines have been satisfactorily tried under steam.

It is submitted that this vessel is eligible for THE RECORD. Elec. light. 35 Kw. JWD. 20/11/18.

James Cairns Surveyor to Lloyd's Register of Shipping.

Committee's Minute



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