

REPORT ON ELECTRIC LIGHTING INSTALLATION.

Port of Kobe Date of First Survey 27 Aug. Date of Last Survey 20 Oct No. of Visits 10
 No. in Reg. Book on the Iron or Steel S.S. "Kohoku Maru" Port belonging to Osaka
 Built at Kobe By whom Messrs. The Kawasaki D.K. Co. When built 1915
 Owners Messrs. The Osaka Shosen Kaisha Owners' Address Osaka
 Card No. 375 Electric Light Installation fitted by Messrs. The Kawasaki D.K. Co., Ltd When fitted 1915

DESCRIPTION OF DYNAMO, ENGINE, ETC.

The generating set consists of automatic cut off vertical single cylinder enclosed engine, capable of working with 7 K.W. open multipolar type compound wound dynamo.

Capacity of Dynamo 7 K.W. 70 Amperes at 100 Volts, ~~whether~~ continuous ~~or~~ alternating current
 Where is Dynamo fixed Engine room. ~~Whether single or double wire system is used~~
 Position of Main Switch Board Dynamo room. having switches to groups 5 switches of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Distribution box with switch:-
2 on navigation bridge; 4 on bridge deck; 5 on upper deck; 2 in engine and boiler room.

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 100 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 163 arranged in the following groups:-

A	32 lights each of	16	candle power requiring a total current of	19	Amperes
B	14 lights each of	5 & 32	candle power requiring a total current of	7	Amperes
C	94 lights each of	16 & 32	candle power requiring a total current of	22.5	Amperes
D	23 lights each of	16 & 32	candle power requiring a total current of	5.5	Amperes
E	lights each of		candle power requiring a total current of		Amperes
2	Mast head light with a lamp each of	32	candle power requiring a total current of	2.4	Amperes
2	Side light with a lamp each of	32	candle power requiring a total current of	2.4	Amperes
3	Cargo lights of	128	candle power, whether incandescent or arc lights		

If arc lights, what protection is provided against fire, sparks, &c. no

Where are the switches controlling the masthead and side lights placed none.

DESCRIPTION OF CABLES.

Main cable carrying	70 Amperes, comprised of	60 wires, each	#20 S.W.G. diameter,	0.061 square inches total sectional area
Branch cables carrying	32.5 Amperes, comprised of	7 wires, each	#18 S.W.G. diameter,	0.0125 square inches total sectional area
Branch cables carrying	5.5 Amperes, comprised of	7 wires, each	#20 S.W.G. diameter,	0.007 square inches total sectional area
Leads to lamps carrying	0.6 Amperes, comprised of	1 wires, each	#18 S.W.G. diameter,	0.0018 square inches total sectional area
Cargo light cables carrying	4.7 Amperes, comprised of	67 wires, each	#38 S.W.G. diameter,	0.00182 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Armoured rubber insulated lead covered wire, lead covered rubber insulated wire, or cotton braided rubber insulated wire are used.

Joints in cables, how made, insulated, and protected joints in cables are made on small marble plates in water proof junction boxes.

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 They led along deck or bulk head and fixed with brass band, if necessary on iron plates.



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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 Galvanized steel armoured lead covered wires are used.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Galvanized steel armoured lead covered wires are used.

What special protection has been provided for the cables near boiler casings Galvanized steel armoured lead covered wires are used.

What special protection has been provided for the cables in engine room Galvanized steel armoured lead covered wires are used.

How are cables carried through beams Through lead tubes. through bulkheads, &c. through lead glands.

How are cables carried through decks Through water tight glands.

Are any cables run through coal bunkers no. or cargo spaces no. or spaces which may be used for carrying cargo, stores, or baggage yes.

If so, how are they protected Galvanized steel armoured lead covered wires are used.

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage with iron cover or brass guard.

If so, how are the lamp fittings and cable terminals specially protected Micanite or porcelain insulator are used.

Where are the main switches and fuses for these lights fitted In distribution boxes outside of these spaces.

If in the spaces, how are they specially protected none.

Are any switches or fuses fitted in bunkers none.

Cargo light cables, whether portable or permanently fixed portable. How fixed By socket in cargo light boxes.

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 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 no.

Are any switches, fuses, or joints of cables fitted in the pump room or companion no.

How are the lamps specially protected in places liable to the accumulation of vapour or gas no.

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 1,000 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.

S. Tada Electrical Engineers Date 26/11/15

COMPASSES.

Distance between dynamo or electric motors and standard compass 88 feet from main dynamo.

Distance between dynamo or electric motors and steering compass 128 feet from main dynamo.

The nearest cables to the compasses are as follows:—

A cable carrying	<u>6</u> Amperes	<u>13</u> feet from standard compass	<u>110</u> feet from steering compass
A cable carrying	<u>22.5</u> Amperes	<u>86</u> feet from standard compass	<u>95</u> feet from steering compass
A cable carrying	<u>10.</u> Amperes	<u>37</u> feet from standard compass	<u>89</u> feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power no.

The maximum deviation due to electric currents, etc., was found to be no. degrees on no. course in the case of the standard compass and no. degrees on no. course in the case of the steering compass.

KAWASAKI DOCKYARD COMPANY, LTD.

J. Nakajima Secretary Builder's Signature. Date

GENERAL REMARKS.

The installation has been well fitted & worked satisfactorily on trial.

It is submitted that this vessel is eligible for THE RECORD Elec. light.

J.P.R.
Arthur L. Jones
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute FRI.-7.APR. 1915

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im. 9.12.—Transfer.

