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REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2140

Port of Kobe Date of First Survey 30 June 17 Date of Last Survey 10 Nov 17 No. of Visits 12
 No. in on the ~~Iron or Steel~~ S. S. S. Alps Maru Port belonging to Amagasaki Osaka
 Reg. Book Built at Osaka By whom The Osaka Iron Works Ltd. When built 1917
 Owners Messrs The Osaka Shosen Kaisha Owners' Address Osaka
 Yard No. 878 Electric Light Installation fitted by The Osaka Iron Works Ltd. When fitted 1917

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two Direct coupled, Compound wound dynamos
Two High speed, Single Condensing Vertical engines
 Capacity of Dynamo 100 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Afterside of Eng. Rm. bottom platform Whether single or double wire system is used Double wire
 Position of Main Switch Board In Engine Room 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 One with 10 switches in Eng. Rm.; One with 9 switches in ladderway to mail room. One with 6 switches in Crew's quarters. One with 7 switches & branched switch board with 5 switches in pastry. One with 8 switches in chart 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 cessel 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-oxidisable metal yes and constructed to fuse at an excess of 20 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 arranged in the following groups:—
 A Machy. Space, 55 lights each of 16 candle power requiring a total current of 29 Amperes
 B Cargo space, 42 lights each of 16 candle power requiring a total current of 22 Amperes
 C Crew's quarters 35 lights each of 16 candle power requiring a total current of 18 Amperes
 D Cabin 56 lights each of 16 candle power requiring a total current of 30 Amperes
 E Signal Resⁿ 15 lights each of 32 + 16 candle power requiring a total current of 7.5 Amperes
 Mast head light with 2 lamps each of 32 candle power requiring a total current of 2.12 Amperes
 Side light with 2 lamps each of 32 candle power requiring a total current of 2.12 Amperes
44 Cargo lights of 200 candle power, whether incandescent or arc lights Incandescent
and two arc lamps of 1200 c.p.
 If arc lights, what protection is provided against fire, sparks, &c. Double globe with iron bar guards
 Where are the switches controlling the masthead and side lights placed In chart room.

DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of 100 wires, each 20 S.W.G. diameter, 0.1018 square inches total sectional area
 Branch cables carrying 4 Amperes, comprised of 7 wires, each 22 S.W.G. diameter, 0.0043 square inches total sectional area
 Branch cables carrying 3 Amperes, comprised of 1 wires, each 16 S.W.G. diameter, 0.00327 square inches total sectional area
 Leads to lamps carrying 1.06 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, 0.001081 square inches total sectional area
 Cargo light cables carrying 6.6 Amperes, comprised of 300 wires, each 38 S.W.G. diameter, 0.0084 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered armoured wire or lead covered wire protected by galvanized iron pipe through engine & boiler rooms. Cargo space & galley: lead covered wire in wooden cover for cabins.

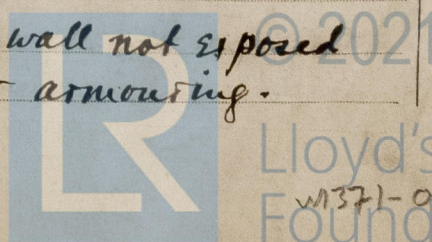
Joints in cables, how made, insulated, and protected

Porcelain or cast iron box fixed on masonry base.

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 under the deck or along wall not exposed to weather & protected by iron cover or wooden cover or armoring.



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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 iron pipes*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat? *Armoured lead covered wire*

What special protection has been provided for the cables near boiler casings? *do or gal. pipe*

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

How are cables carried through beams? *Lead sheet* through bulkheads, &c. *Watertight screw glands*

How are cables carried through decks? *Galvanized iron pipe flanged to deck*

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 lead covered wire or iron pipes or wood covers.*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage? *none in bunker. In cargo sp.*

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

Where are the main switches and fuses for these lights fitted? *In accessible positions.*

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? *Fixed by plug.*

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 *✓*, and with an amperemeter *✓*, fixed

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 _____ 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.

J. J. Hiruta Electrical Engineers Date _____

COMPASSES.

Distance between dynamo or electric motors and standard compass *150 feet*

Distance between dynamo or electric motors and steering compass *145 feet*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>7.5</i>	<i>8</i>	<i>12</i>	

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.

OSATA IRON WORKS, LTD.

G. J. J. J. Chief Engineer. O J W Builder's Signature. Date _____

GENERAL REMARKS.

The installation has been fitted in accordance with the requirements of the Rules & worked satisfactorily on trial

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

J. J. J. J. 7/2/18

Arthur L. Jones Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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