

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2285

Port of Rohe Date of First Survey 24 April Date of Last Survey 10 June 1918 No. of Visits 7
 No. in on the Iron or Steel S.S. "Raisho Maru" Port belonging to Mitsubishi
 Reg. Book Built at Osaka By whom The Osaka Iron Works Ltd When built 1918
 Owners Mitsui Bussan Kaisha Owners' Address Rohe
 Yard No. 900 Electric Light Installation fitted by The Osaka Iron Works Ltd When fitted 1918

DESCRIPTION OF DYNAMO, ENGINE, ETC.

High Speed, non condensing, single vertical enclosed self lubricating engine
 Multipolar, compound wound direct driven dynamo.

Capacity of Dynamo 15 H.P. 150 Amperes at 100 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Eng. room, bottom platform Whether single or double wire system is used Double

Position of Main Switch Board Close to dynamo on bld. 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 in mess room, one in Steward's room.

one in chart room, one in carpenter's room & one in Engine 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 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 185 + 2 arc lamps arranged in the following groups:—

A Eng. room 59 lights each of 16 candle power requiring a total current of 12 Amperes

B Officer's rooms 55 lights each of 16 candle power requiring a total current of 17 Amperes

C Navigation 5 lights each of 16 + 32 candle power requiring a total current of 5 Amperes

D Fore cargo, 1 arc lamp 30 lights each of 1000 + 16 candle power requiring a total current of 21 Amperes

E Aft cargo, 1 arc lamp 36 lights each of 1000, 16 + 32 candle power requiring a total current of 25 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

Cargo lights of 13 - 5 clusters 16 candle power, whether incandescent or arc lights Incandescent

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 at bridge deck.

DESCRIPTION OF CABLES.

Main cable carrying 150 Amperes, comprised of lead wires, each 100/18# S.W.G. diameter, .0181 square inches total sectional area

Branch cables carrying 7.5 Amperes, comprised of armoured wires, each 11/18# S.W.G. diameter, .0199 square inches total sectional area

Branch cables carrying 10 Amperes, comprised of armoured wires, each 15/18# S.W.G. diameter, .027 square inches total sectional area

Leads to lamps carrying 51.2 Amperes, comprised of lead wires, each 16# S.W.G. diameter, .00322 square inches total sectional area

Cargo light cables carrying 25 Amperes, comprised of armoured wires, each 15/18# S.W.G. diameter, .0271 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

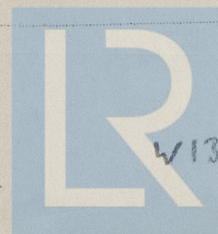
Officer's room lead covered wire through wooden covers Engine & Boiler space and cargo holds
 armoured wire or through galvanized W.I. pipe

Joints in cables, how made, insulated, and protected porcelain hot or cast iron for.

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 Through pipes, armoured or lead covered in wood casings.



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *No*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *By galvanized W. I. pipes.*

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

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

What special protection has been provided for the cables in engine room *Armoured wire or galv. W. I. pipes.*

How are cables carried through beams *Covered with lead sheet* through bulkheads, &c. *By gland nuts with india rubber packing Complete*

How are cables carried through decks *through galv. W. I. pipes with flanges fixed 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 *✓*

If so, how are they protected *By the use of armoured wire or galvanized W. I. pipes as covers.*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *No*

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 *No*

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *✓*

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 the 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 *500* 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 *About 120'*

Distance between dynamo or electric motors and steering compass *About 120'*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>0.2</i>		<i>about 15</i>	<i>about 8'</i>
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 _____ 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 THE RECORD. ELEC. LIGHT

10-10-18

A. 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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