

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 4538

Port of Kobe Date of First Survey 5-7-24 Date of Last Survey 24-7-24 No. of Visits 5
 No. in on the ~~Iron or~~ Steel SS. KOJUN MARU Port belonging to Kobe
 Reg. Book Built at Osaka By whom Osaka Iron Works When built 1924
 Owners Kiokuni Shoji K.K. Owners' Address Osaka
 Yard No. 1058 Electric Light Installation fitted by Osaka Iron Works When fitted 1924

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Single cylinder, vertical, open type, steam engine direct coupled to continuous current compound wound dynamo.
 Capacity of Dynamo 100 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Starb. side of E.R., bottom platform } Whether single or double wire system is used double
 Position of Main Switch Board Bulkhead of Store 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 5 switches for outgoing circuits on main switch board.

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 97 arranged in the following groups:—

Machinery	32 lights each of	16	candle power requiring a total current of	6.4	Amperes
Aft. Cabin	14 lights each of	16	candle power requiring a total current of	2.8	Amperes
Fore "	23 lights each of	16	candle power requiring a total current of	6.0	Amperes
Crew Space	11 lights each of	16 & 10	candle power requiring a total current of	2.2	Amperes
Navigation	7 lights each of	16 & 10	candle power requiring a total current of	1.5	Amperes
2 Mast head light with	1 lamp each of	32	candle power requiring a total current of	2.0	Amperes
2 Side light with	1 lamp each of	32	candle power requiring a total current of	2.0	Amperes

cluster of Cargo lights each with 4 lamps candle power, whether incandescent or arc lights incandescent
 are lights, what protection is provided against fire, sparks, &c. ✓

There are the switches controlling the masthead and side lights placed In chart room

DESCRIPTION OF CABLES.

Main cable carrying	100 Amperes, comprised of	80 wires, each	19 S.W.G. diameter,	0.102 square inches total sectional area
Branch cables carrying	6.4 Amperes, comprised of	7 wires, each	21 S.W.G. diameter,	0.0056 square inches total sectional area
Branch cables carrying	✓ Amperes, comprised of	✓ wires, each	✓ S.W.G. diameter,	✓ square inches total sectional area
Leads to lamps carrying	1.6 Amperes, comprised of	1 wires, each	18 S.W.G. diameter,	0.0018 square inches total sectional area
Cargo light cables carrying	6.7 Amperes, comprised of	7 wires, each	19 S.W.G. diameter,	0.0088 square inches total sectional area

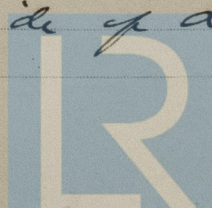
DESCRIPTION OF INSULATION, PROTECTION, ETC.

In accommodation insulated with rubber, lead covered.
 In machinery spaces & cargo spaces armoured wire through galvanised iron pipes.
 Joints in cables, how made, insulated, and protected Porcelain junction box on canvas 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 clipped to under side of deck, & suitably protected



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 *galvanised iron 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 *armoured wire.*

What special protection has been provided for the cables in engine room *armoured wire through G.I. pipe.*

How are cables carried through beams *lead bushes* through bulkheads, &c. *gland with rubber packing.*

How are cables carried through decks *flange galvanised iron pipe.*

Are any cables run through coal bunkers *No* or cargo spaces *Yes* or spaces which may be used for carrying cargo, stores, or baggage *Yes*

If so, how are they protected *armoured wire through galvanised iron pipes.*

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 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.

K. Nagase.

Electrical Engineers

Date

COMPASSES.

Distance between dynamo ~~or electric motors~~ and standard compass

70 ft.

Distance between dynamo ~~or electric motors~~ and steering compass

100 ft.

The nearest cables to the compasses are as follows:—

A cable carrying	<i>.53</i>	Ampères	<i>8</i>	feet from standard compass	<i>12</i>	feet from steering compass
A cable carrying	<i>.40</i>	Ampères	<i>9</i>	feet from standard compass	<i>85</i>	feet from steering compass
A cable carrying	<i>.20</i>	Ampères	<i>10</i>	feet from standard compass	<i>11</i>	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.

K. Nagase

Builder's Signature.

Date

GENERAL REMARKS.

This installation has been fitted in accordance with the requirements of the Rules. The materials and workmanship are good, and the installation was found satisfactory when tried under full working conditions. This vessel is eligible in my opinion for the notation "Elec. Light".

Fee £150

Paid 9/10/24

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

L. Young

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 3 OCT 1924



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