

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1759

Port of Mohe Date of First Survey Jan 12 Date of Last Survey Feb 18 No. of Visits 6
 No. in Reg. Book New on the Iron or Steel Rosaku Maru S/S Port belonging to Nishinomiya
 Built at Osaka By whom The Osaka Iron Works When built 1916
 Owners Hirotsugu Shoji Kabushiki Kaisha Owners' Address Nishinomiya Japan
 Yard No. 867 Electric Light Installation fitted by The Osaka Iron Works When fitted 1916

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Compound wound six pole continuous current open type dynamo.
 Vertical single cylinder engine directly coupled to the dynamo.
 Capacity of Dynamo 60 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed on starboard side in engine room Whether single or double wire system is used double wire system
 Position of Main Switch Board on starboard side in engine room having switches to groups of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each one in crew space in fore-castle with 3 switches, one in chart room on upper bridge with 4 switches, one in saloon pantry on bridge deck with 5 switches, one in mess room on bridge deck 4 switches one in engine room with 6 switches and one on inside of poop front bulkhead with 3 switches.
 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 about 30 per cent over the normal current
 Are all fuses fitted in easily accessible positions Yes, easily accessible 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 No.
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases Yes.
 Total number of lights provided for signal, living quarters etc arranged in the following groups :-
 A 59 lights each of 16 candle power requiring a total current of 33.00 Amperes
 B 5 lights each of 10 candle power requiring a total current of 1.75 Amperes
 C 2 lights each of 6 candle power requiring a total current of 1.42 Amperes
 D 1 lights each of 32 candle power requiring a total current of 1.12 Amperes
 E lights each of candle power requiring a total current of Amperes
2 Mast head light with 2 lamps each of 32 candle power requiring a total current of 2.24 Amperes
2 Side light with 2 lamps each of 32 candle power requiring a total current of 2.24 Amperes
4 Cargo lights of 5 lamps each, each lamp of 16 candle power, whether incandescent or arc lights Incandescent
 If arc lights, what protection is provided against fire, sparks, &c.

Where are the switches controlling the masthead and side lights placed In chart room on upper bridge deck.

DESCRIPTION OF CABLES.

Main cable carrying 52 Amperes, comprised of 80 wires, each 20 S.W.G. diameter, 0.08144 square inches total sectional area
 Branch cables carrying 23 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, 0.022519 square inches total sectional area
 Branch cables carrying 7.67 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, 0.007126 square inches total sectional area
 Leads to lamps carrying Amperes, comprised of wires, each S.W.G. diameter, square inches total sectional area
 Cargo light cables carrying 11.2 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, 0.012662 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Insulated by using lead cables.
 Joints in cables, how made, insulated, and protected
Cable are jointed in joint box made of porcelain and protected by wooden boxes where necessary.
 Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances No. 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 No.
 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 By brass band fixed on wooden board and protected by wooden box or iron pipe where necessary and elsewhere by using lead cables.



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 By iron pipe.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat By wooden box or iron pipe.

What special protection has been provided for the cables near boiler casings By iron pipe or galvanized armoured wire.

What special protection has been provided for the cables in engine room By iron pipe or galvanized armoured wire.

How are cables carried through beams Hole bushed with lead sheet through bulkheads, &c. Through water tight metal flanges.

How are cables carried through decks Through brass or iron sockets.

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 By galvanized iron pipe or by wooden box.

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 On Starboard side bunker wall in engine room.

If in the spaces, how are they specially protected By higher insulating material which is called "marble."

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 _____, and with an amperemeter _____, fixed 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 _____

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.

G. Ylunda Electrical Engineers Date 23rd Feb. 1916

COMPASSES.

Distance between dynamo or electric motors and standard compass 110 ft

Distance between dynamo or electric motors and steering compass 0 ft

The nearest cables to the compasses are as follows:—

A cable carrying <u>2.5</u> Amperes	<u>10</u> feet from standard compass	_____ feet from steering compass
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 Yes.

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.

Osaka Iron Works, Ltd. 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 BROOD. Elec. light.

Arthur L Jones Surveyor to Lloyd's Register of British and Foreign Shipping. 25/4/16

Committee's Minute WED. 26 APR. 1916

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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