

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 2655

Port of Kobe Date of First Survey 13th Aug Date of Last Survey 22nd Sept. 1919 No. of Visits 10
No. in on the Iron or Steel 5.5 HEIMEI MARU Port belonging to Mitsugahama
Reg. Book Built at Imoshima, Bingo By whom Osaka Iron Works Ltd. When built 1919
Owners The Taiyo Kisen Kabushiki Kaisha Owners' Address Kobe
Yard No. 962 Electric Light Installation fitted by The Osaka Iron Works Ltd. When fitted 1919

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Direct Current Compound Dynamo

Capacity of Dynamo 10 K.W., 100 Amperes at 100 Volts, whether continuous or alternating current D.C.
Where is Dynamo fixed Starboard side E.R. platform Whether single or double wire system is used Double Wire System
Position of Main Switch Board On the bulkhead of 5th coal bunker for main circuit breaker
Positions of auxiliary switch boards and numbers of switches on each One for Engine + Boiler Room, One for Crews Quarter, Two for Officer's Room, + one for signal light + One for Wireless Telegraphy Feeder
If fuses are fitted on main switch board to the cables of main circuit fitted and on each auxiliary switch board to the cables of auxiliary circuits fitted and at each position where a cable is branched or reduced in size branched and to each lamp circuit branched
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 fitted
Are the fuses of non-oxidisable metal yes and constructed to fuse at an excess of 30 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 111 + 2 arc lamps arranged in the following groups :-

A	Eng + Boiler Rm	27 lights each of	16 or 10	candle power requiring a total current of	14.0	Amperes
B	Officers "	38 lights each of	16 or 10	candle power requiring a total current of	20.0	Amperes
C	Crews Quarter	9 lights each of	10 or 16	candle power requiring a total current of	3.0	Amperes
D	Wireless Telegraphy	lights each of		candle power requiring a total current of	18.0	Amperes
E	Starlight + Chart	9 lights each of	16 or 8	candle power requiring a total current of	4.5	Amperes
2	Must head light with	2 lamps each of	32	candle power requiring a total current of	2.12	Amperes
2	Side light with	2 lamps each of	32	candle power requiring a total current of	2.12	Amperes
	Cargo lights of	1 - 6 clustered	16	candle power, whether incandescent or arc lights		

If arc lights, what protection is provided against fire, sparks, &c. Two arc lamps used + protection is glass globes covered with requiring total current 2-5 amps.
Where are the switches controlling the masthead and side lights placed at Bridge Deck

DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of lead wires, each 2x50/#18 S.W.G. diameter, 0.15 square inches total sectional area
Branch cables carrying 14 Amperes, comprised of do wires, each 11/#18 S.W.G. diameter, 0.02 square inches total sectional area
Branch cables carrying 234 Amperes, comprised of lead or armoured wires, each 19/#18 S.W.G. diameter, 0.035 square inches total sectional area
Leads to lamps carrying 53 Amperes, comprised of wire or lead covered wires, each 1/#18 S.W.G. diameter, 0.003 square inches total sectional area
Cargo light cables carrying 13.8 Amperes, comprised of " wires, each 11/#18 S.W.G. diameter, 1.02 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Officer's Room and Crews Quarter: Lead covered wire through wooden covers
Engine + Boiler Space + Cargo hatches: Armoured wire or through galvanized wrought iron pipes.
Joints in cables, how made, insulated, and protected Porcelain box or Cast Iron box are used.

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 yes
How are the cables led through the ship, and how protected By the use of armoured wire + protected through a galvanized wrought iron pipes.

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 galvanized wrought iron pipes

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat By the use of 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 By the use of armoured wire or galvanized W.I. pipes

How are cables carried through beams Covered with lead sheet through bulkheads, &c. By grand nuts with Indian rubber packing

How are cables carried through decks Through a Galvanized W.I. pipes with flanges which fixed to Decks

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

If so, how are they protected By the use of Armoured Wire or Wires Through galvanized W.I. pipes

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage Nothing

If so, how are the lamp fittings and cable terminals specially protected No

Where are the main switches and fuses for these lights fitted No

If in the spaces, how are they specially protected No

Are any switches or fuses fitted in bunkers No

Cargo light cables, whether portable or permanently fixed portable How fixed No

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel No

How are the returns from the lamps connected to the hull No

Are all the joints with the hull in accessible positions No

Is the installation supplied with a voltmeter No and with an amperemeter No 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.

Yasuo, Miyaji Electrical Engineers Date _____

COMPASSES.

Distance between dynamo or electric motors and standard compass

Distance between dynamo or electric motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	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

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.

GENERAL REMARKS.

The Installation has been fitted in accordance with the requirements of the Rules and worked satisfactorily on trials.

It is submitted that this vessel is eligible for

THE RECORD ELEC. LIGHT. 3/2/20.

John Sim

Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. JUN. 15 1920

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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