

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2226

Port of Kobe. Date of First Survey Feb 1918 Date of Last Survey Feb 19th No. of Visits 3.
 No. in on the Iron or Steel S.S. Genzan Maru Port belonging to Habu.
 Reg. Book Built at Imoskima. By whom The Osaka Iron Works. When built 1918.
 Owners Yamamoto Kisen Kabushiki Kaisha Owners' Address _____
 Card No. 932. Electric Light Installation fitted by The Osaka Iron Works When fitted 1918

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Compound wound six pole continuous current open type
Vertical single cylinder engine directly coupled to the dynamo

Capacity of Dynamo 10 K.V. 100 Amperes at 100 Volts, whether continuous or alternating current D.C.
 Where is Dynamo fixed at starboard side on platform of E.R. Whether single or double wire system is used double wire system.
 Position of Main Switch Board on the bulkhead of starboard coal bunker having switches to groups for main circuit breakers of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each one for engine room, one for crew's quarters, two for officer's room and one for signal light.

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 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:—

Group	Description	Candle Power	Current (Amperes)
A	Engine room 26 lights each of 16	416	14
B	Officer's room 39 lights each of 16 and 10	639	21
C	Crew's quarters 11 lights each of 16	176	6
D	_____ lights each of _____	_____	_____
E	Starboard light 2 lights each of 16 and 32	640	1.19
	Mast head light with 3 lamps each of 32	96	2.12
	Side light with 3 lamps each of 32	96	2.12

Cargo lights of 24 clustered 16 candle power, whether incandescent or arc lights both are used.

If arc lights, what protection is provided against fire, sparks, &c. 2 arc lamps used and protection is made complete they requiring a total current 21.12 amperes.
 Where are the switches controlling the masthead and side lights placed at bridge deck.

DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of Covered lead wires, each 40/18 S.W.G. diameter, 0.15 square inches total sectional area
 Branch cables carrying 14 Amperes, comprised of ditto wires, each 7/16 S.W.G. diameter, 0.026 square inches total sectional area
 Branch cables carrying 21 Amperes, comprised of armoured wires, each 7/16 S.W.G. diameter, 0.026 square inches total sectional area
 Leads to lamps carrying 63 Amperes, comprised of Covered wires, each 1/18 S.W.G. diameter, 0.003 square inches total sectional area
 Cargo light cables carrying _____ Amperes, comprised of ditto wires, each 1/18 S.W.G. diameter, 0.003 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Officer's room and crew's quarters lead covers were through wooden covers.
engine room and boiler space and cargo hatches armoured wires or through galvanized w.s. 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 no.
 How are the cables led through the ship, and how protected no.

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 w. pipe

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *by the use of armoured wires*

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

What special protection has been provided for the cables in engine room *by the use of armoured wire or galvanized w. pipe as covers*

How are cables carried through beams *lead sheet is covered* through bulkheads, &c. *by gland nut with india rubber packing complete*

How are cables carried through decks *through a galvanized w. pipe with flange 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? *no*

If so, how are they protected *by the use of armoured wire or wired through galvanized w. 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 *yes*, and with an amperemeter *yes*, fixed *at 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 _____ 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.

E. Toyoshima Electrical Engineers

Date _____

COMPASSES.

Distance between dynamo or electric motors and standard compass *above 90°*

Distance between dynamo or electric motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying <i>43</i> Amperes <i>750</i> 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.

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.

JWD 12/6/18

R. B. Batcher
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *14 JUN 1918*

50,118.—Transfer.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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