

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No.

3. Name of KOBE. Date of First Survey 17<sup>th</sup> May Date of Last Survey 14<sup>th</sup> July No. of Visits 6.  
 on the Iron or Steel S.S. KAMIJI MARU. Port belonging to TOBA, JAPAN.  
 Built at TOBA. By whom TOBA Ship Yard When built July 1919  
 Owners' Address Kobe  
 Electric Light Installation fitted by Toba Ship Yard When fitted July 1919

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Direct current open type compound generator which is directly coupled with high speed engine.  
 Type of Dynamo 7 k. w. 64 Amperes at 110 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed on the starboard in the engine room Whether single or double wire system is used double wire system  
 Position of Main Switch Board by the side of dynamo having switches to groups 4 circuits of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each we have no auxiliary switches.

Where are fuses fitted on main switch board to the cables of main circuit one set and on each auxiliary switch board to the cables of auxiliary circuits five sets and at each position where a cable is branched or reduced in size no and to each lamp circuit fuse wire  
 How is wiring 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-oxidisable metal yes and constructed to fuse at an excess of 150 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 there 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

Number of lights provided for electric lighting arranged in the following groups:—

Description	Quantity	Power/Current	Notes
Wangsten lamp	6 lights each of 16	13 Amperes	candle power requiring a total current of
Wangsten lamp	13 lights each of 10	3 Amperes	candle power requiring a total current of
Carbon lamp	38 lights each of 16	15 Amperes	candle power requiring a total current of
Carbon lamp	1 lights each of 32	.8 Amperes	candle power requiring a total current of
Carbon lamp	3 lights each of 5	.5 Amperes	candle power requiring a total current of
Mast head light	4 lamps each of 2 Nitra 300 watt	7 Amperes	candle power requiring a total current of
Side light	2 lamps each of 2 Carbon 32	1.6 Amperes	candle power requiring a total current of
Cargo lights	6 Cargo lights of 16	incandescent	candle power, whether incandescent or arc lights

Are there lights, what protection is provided against fire, sparks, &c. no arc lamp.

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

## DESCRIPTION OF CABLES.

Current	Wires	Diameter	Total Sectional Area
66 Amperes	60 wires, each 36 mil S.W.G.	.06 square inches	total sectional area
21 Amperes	19 wires, each 36 mil S.W.G.	.019 square inches	total sectional area
7.5 Amperes	20 wires, each 36 mil S.W.G.	.007 square inches	total sectional area
33 Amperes	30 wires, each 36 mil S.W.G.	.033 square inches	total sectional area
2 Amperes	NO wires, each 48 mil S.W.G.	.0018 square inches	total sectional area
3.5 Amperes	16 wires, each 65 mil S.W.G.	.003 square inches	total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

To perfect the insulation of all the cables, they are lead covered and perfectly protected, inserting to the steel tubes.

How are joints in cables, how made, insulated, and protected Joints in branches are made in properly constructed water tight junction box.

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 joint.  
 How are the cables led through the ship, and how protected The cable, led through the ship, are enclosed in steel tubes protected from any danger.



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 Lead covered wires or cables which are protected by tubes are used in such places.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat By lead covered fitting

What special protection has been provided for the cables near boiler casings By lead covered fitting

What special protection has been provided for the cables in engine room By lead covered fitting

How are cables carried through beams By lead tube through bulkheads, &c. by pipe.

How are cables carried through decks By water tight 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 By lead covered fitting.

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 No single wire system

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

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.

R. Inoue Electrical Engineers Date July 1919

COMPASSES.

Distance between dynamo or electric motors and standard compass over 60 feet

Distance between dynamo or electric motors and steering compass over 60 feet

The nearest cables to the compasses are as follows:—

A cable carrying	<u>.4</u>	Amperes	<u>7</u>	feet from standard compass	feet from steering compass
A cable carrying	<u>.45</u>	Amperes		feet from standard compass	<u>3</u> 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 no degrees on course in the case of the standard compass and no degrees on course in the case of the steering compass.

THE TEIKOKU STEAMSHIP CO., LTD

Builder's Signature. Date 18<sup>th</sup> Aug. 1919.

GENERAL REMARKS.

The Installation has been fitted in accordance with the Rules & Regulations, and worked satisfactorily on trial.

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

Alexander Watt.  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI SEP. 26. 1919

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im. 11. 12—Transfer.



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