

No. 3051

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Port of Kobe. Date of First Survey Oct 11<sup>th</sup> Date of Last Survey Nov 8<sup>th</sup> No. of Visits 5  
No. in Reg. Book on the Iron or Steel Single Screw Steamer SEIKAI MARU Port belonging to Osaka  
Built at Bingo yard. By whom Osaka Iron Works When built 1920  
Owners Osaka Shosen Kabushiki Kaisha Owners' Address Kawaguchicho. Osaka.  
Yard No. 981 Electric Light Installation fitted by O. I. W. Bingo yard When fitted 1920

### DESCRIPTION OF DYNAMO, ENGINE, ETC.

One compound wound, 10 K.W. dynamo, coupled direct to the single cylinder automatic cut-off, vertical enclosed, non-condensing engine. 6" x 4", 550 R.P.M.

Capacity of Dynamo 100 Amperes at 100 Volts, whether continuous or alternating current D.C.

Where is Dynamo fixed Starboard side E.R. Whether single or double wire system is used

Position of Main Switch Board " " 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 1 in the E.R. 1 for Officers rooms. 1 for deck lights. 1 for navigation lights. 1 for wireless telegraphy. 1 for fans.

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 cessel 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 50 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 154 arranged in the following groups :—

A	Engine room	36 lights each of	16	candle power requiring a total current of	7.87	Amperes
B	Officers rooms	65 lights each of	16	candle power requiring a total current of	14.04	Amperes
C	MORSE SIGNAL + FANS	lights each of		candle power requiring a total current of	7.8	Amperes
D	Wireless telegraph	lights each of		candle power requiring a total current of	15.	Amperes
E		lights each of		candle power requiring a total current of		Amperes
2	Main head lights with	1 lamp each of	32.	candle power requiring a total current of	2.12.	Amperes
2	Side lights with	1 lamp each of	32.	candle power requiring a total current of	2.12.	Amperes
1	STERN "	" "	" "	" " " "	" "	" "
	Cargo lights of	10 clusters of 4 - 16	24	candle power, whether incandescent or are lights	Incandescent.	
		4 - 260 W NITROGEN.				

If arc lights, what protection is provided against fire, sparks, &c. ✓

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

## DESCRIPTION OF CABLES.

Main cable carrying	100	Amperes, comprised of	57	wires, each	20	S. W. G. diameter,	.05802	square inches total sectional area
Branch cables carrying	7.87	Amperes, comprised of	11	wires, each	20	S. W. G. diameter,	.0111	square inches total sectional area
Branch cables carrying	14.04	Amperes, comprised of	9	wires, each	18	S. W. G. diameter,	.0162	square inches total sectional area
Leads to lamps carrying	0.216	Amperes, comprised of	1	wires, each	18	S. W. G. diameter,	.00181	square inches total sectional area
Cargo light cables carrying	16.64	Amperes, comprised of	2 - 11	wires, each	20	S. W. G. diameter,	.0222	square inches total sectional area

### DESCRIPTION OF INSULATION, PROTECTION, ETC.

Conductors are doubly insulated with India-rubber, vulcanized rubber & tape. Cables are protected against mechanical injury, & chemical action by steel armouring or lead covering according to the rule requirements.

Joints in cables, how made, insulated, and protected. Mechanical joints, protected with water tight cast-iron boxes & insulated by porcelain or slate bases.

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 Cables are led through W1 piping in the bunkers, & protected in other parts of the ship, by their own armour or lead covering



DESCRIPTION

What special protection has been provided for the cables near galleys or oil lamp or other sources of heat *As above*  
 What special protection has been provided for the cables near boiler casings *As above*  
 What special protection has been provided for the cables in engine room *Led through iron piping where necessary*  
 How are cables carried through beams *Pierced, + lead covered* through bulkheads, &c. *WT glands*  
 How are cables carried through decks *Through G. I. piping*  
 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 armoured wire covering + led through piping*  
 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 *✓*  
 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 main switchboard*

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.

*S. H. H. H.*

Electrical Engineers

Date *1<sup>st</sup> Nov 1920.*

COMPASSES.

Distance between dynamo or electric motors and standard compass *79' 3"*

Distance between dynamo or electric motors and steering compass *118'*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>648</i>	<i>4-0"</i>		

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.

*N. Sasaki*

Builder's Signature.

Date *1<sup>st</sup> Nov 1920.*

GENERAL REMARKS.

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

*J. G. Fry*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 4 MAR. 1921

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.