

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report 23rd Apr. 1929 When handed in at Local Office 23rd Apr. 1929 Port of NAGASAKI.

No. in Survey held at NAGASAKI. Date, First Survey 7th Feby. Last Survey 29th March 1929.
Reg. Book. (Number of Visits.....10.....)

92456 on the Steel Twin Screw Steamer "U R A I M A R U". Tons { Gross 6376.92
Net 3758.45

Built at Nagasaki. By whom built Mitsubishi Zosen Kaisha Yard No. 452 When built 1929-3mo.

Owners Osaka Shosen Kabushiki Kaisha. Port belonging to Osaka. Japan.

Electric Light Installation fitted by Mitsubishi Zosen Kaisha, Ltd., Contract No. When fitted 1929.

System of Distribution Two - wire system.

Pressure of supply for Lighting 110 volts, Heating 110 volts, Power 110 volts.

Direct or Alternating Current, Lighting direct current / Power direct current /

If alternating current system, state frequency of periods per second /

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off Yes /

Generators, do they comply with the requirements regarding rating Yes /, are they compound wound Yes /

are they over compounded 5 per cent. Yes /, if not compound wound state distance between each generator /

Where more than one generator is fitted are they arranged to run in parallel Yes /, is an adjustable regulating resistance fitted in

series with each shunt field Yes

Are all terminals accessible, clearly marked, and furnished with sockets Yes /, are they so spaced or shielded that they cannot be accidentally earthed,

short circuited, or touched Yes / Are the lubricating arrangements of the generators as per Rule Yes /

Position of Generators Main engine room - Starboard side, 2nd Deck. /

is the ventilation in way of the generators satisfactory Yes /, are they clear of all inflammable material Yes /

if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators

/ and /, are the generators protected from mechanical injury and damage from water, steam or oil Yes /

are their axes of rotation fore and aft Yes /

Earthing, are the bedplates and frames of the generating plant efficiently earthed Yes / are the prime movers and

their respective generators in metallic contact Yes /

Main Switch Boards, where placed Main engine room - 2nd Deck, Starboard side aft.

If the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard /

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes Yes /

are they protected from mechanical injury and damage from water, steam or oil Yes /, if situated near unprotected

woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards / and /

are they constructed wholly of durable, non-ignitable non-absorbent materials Yes /, is all insulation of high dielectric strength and of

permanently high insulation resistance Yes /, if semi-insulating material is used, are all conducting parts insulated from the slab

with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework Yes /

and is the frame effectively earthed Yes / Are the fittings as per Rule regarding :- spacing or shielding of live parts

Yes /, accessibility of all parts Yes /, absence of fuses on back of board Yes /, proportion of omnibus

bars Yes /, individual fuses to voltmeter, pilot or earth lamp Yes /, connections of switches Yes /

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches For each of 25 K.W.

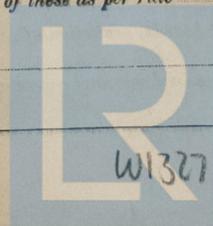
dynamo, a double pole circuit breaker and a single pole equalizer switch interlocked with circuit breaker as per rule and a double pole knife switch: for each out going circuit, an enclosed fuse on each pole and a double pole knife switch.

Instruments on main switchboard 3 ammeters 2 voltmeters / synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system Lamp. /

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules Yes /

Joint Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule Yes /



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Foundation

W1327-0007 3

Steel Twin Screw Steamer "URAI MARU".

Lighting & Heating Conductors.

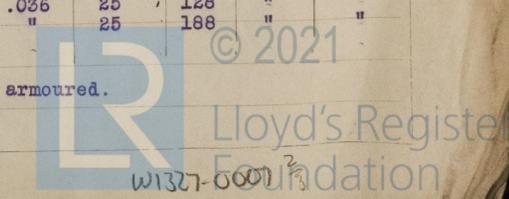
Ref. No.	Description.	No. of Cond.	Effective Area of each Cond. Sq. Ins.	Composition of Strand		Total Maximum Current Amperes	Approximate Length (L & R)	Insulated with.	How protected.
				No.	Dia.				
1.	Generator.	1	.00701	7	.036		36.39	Rubber	L.C.A.
2	Equalizer for generator.	2	.40551	61	.092	227	72.78.44.	"	"
17.	No.1 Submain board.	2	.03438	19	.048	48.8	208	"	"
18	No.1 Distribution board.	2	.00701	7	.036	16.2	20	"	L.C.
19	No.2 " " "	2	.00322	1	.064	15.2	2	"	"
20	No.3 " " "	2	"	1	"	7.8	2	"	"
21	No.4 " " "	2	"	1	"	9.6	148	"	"
22	No.2 Submain board.	2	.03438	19	.048	49.6	208	"	L.C.A.
23	No.5 Distribution board.	2	.00701	7	.036	24.5	20	"	L.C.
24	No.6 " " "	2	.00322	1	.064	9.2	2	"	"
25	No.7 " " "	2	.00701	7	.036	15.9	148	"	"
26	No.3 Submain board.	2	.06112	19	.064	56.5	296	"	L.C.A.
27	No.8 Distribution board.	2	.00322	1	"	13	2	"	L.C.
28	No.9 " " "	2	"	1	"	11.9	264	"	"
29	Socket for kinematograph.	2	"	1	"	10	16	"	"
30	No.10 Distribution board.	2	.00701	7	.036	22.2	276	"	"
31	No.11 " " "	2	.00322	1	.064	9.4	120	"	"
32	No.4 Submain board.	2	.03438	19	.048	47	132	"	L.C.A.
33	No.12 Distribution board.	2	.00322	1	.064	12.2	286	"	L.C.
34	No.13 " " "	2	"	1	"	12.9	2	"	"
35	No.14 " " "	2	"	1	"	9.8	474	"	"
36	No.15 " " "	2	"	1	"	12.1	340	"	"
37	No.5 Submain board.	2	.03438	19	.048	46.4	208	"	L.C.A.
38	No.16 Distribution board.	2	.00322	1	.064	9.2	2	"	L.C.
39	Electric heater.	2	"	1	"	10.4	360	"	"
40	No.17 Distribution board.	2	.00701	7	.036	26.8	2	"	"
41	No.6 Submain board.	2	.03438	19	.048	51.3	50	"	L.C.A.
42	No.18 Distribution board.	2	.00701	7	.036	18.1	160	"	L.C.
43	No.19 " " "	2	"	7	"	17.2	2	"	"
44	No.20 " " "	2	"	7	"	16	2	"	"
45	No.7 Submain board.	2	"	7	"	15.6	396	"	L.C.A.
46	Fore mast cargo lamp.	2	.00181	1	.048	6	35	"	Braided.
47.48	" " " (flex.cord)	2	.00475	168	.006	3	70	"	L.C.A.
49	Cargo lamp for No.1 hatch.	2	.00181	1	.048	4.8	41	"	Braided.
50.51	" " " (flex.cord)	2	.00475	168	.006	2.4	85	"	Braided.
52	Cargo lamp for No.2 hatch.	2	.00181	1	.048	4.8	1	"	L.C.A.
53.54	" " " (flex.cord)	2	.00475	168	.006	2.4	85	"	Braided.
55	No.8 Submain board.	2	.00701	7	.036	15.6	236	"	L.C.A.
56	Main mast cargo lamp.	2	.00181	1	.048	6	30	"	"
57.58	" " " (flex.cord)	2	.00475	168	.006	3	70	"	Braided.
59	Cargo lamp for No.3 hatch.	2	.00322	1	.064	4.8	84	"	L.C.
60.61	" " " (flex.cord)	2	.00475	168	.006	2.4	85	"	Braided.
62	Cargo lamp for No.4 hatch.	2	.00322	1	.064	4.8	2	"	L.C.
63.64	" " " (flex.cord)	2	.00475	168	.006	2.4	85	"	Braided.
65	Navigation lamp.	2	.00701	7	.036	3.2	420	"	L.C.A.
66	Fore mast lamp.	2	.00181	1	.048	0.6	325	"	"
67	Starboard side lamp.	2	"	1	"	0.6	65	"	"
68	Port side lamp.	2	"	1	"	0.6	35	"	"
69	Main mast lamp.	2	"	1	"	0.6	359	"	"
70	Stern lamp.	2	"	1	"	0.6	371	"	"
71	No.9 Submain board.	2	.06112	19	.064	62.6	120	"	"
72	No.21 Distribution board.	2	.00701	7	.036	16.8	96	"	L.C.
73.	No.22 " " "	2	.00322	1	.064	12	112	"	"
74	No.23 " " "	2	"	1	"	9.2	126	"	"
75	No.24 " " "	2	"	1	"	10.8	196	"	"
76	No.25 " " "	2	"	1	"	13.8	2	"	"

Motor Conductors.

3	Ordnance fan motor.	1	.00701	7	.036	17.7	546	Rubber	L.C.A.
4	" " "	1	"	7	"	"	298	"	"
5	" " "	1	"	7	"	"	366	"	"
6	Icecream freezer motor.	1	"	7	"	9	240	"	"
7	Wireless telegraph.	1	"	7	"	20	412	"	"
8	Motor for I K.V.A. Generator.	1	"	7	"	17	132	"	"
9	I K.V.A. Generator.	1	"	7	"	10	"	"	"
10	Motor for 1/2 K.V.A. Generator.	1	"	7	"	19	"	"	"
11	1/2 K.V.A. Generator.	1	"	7	"	2.5	"	"	"
12	Lub. oil purifier motor.	1 set (15)	"	7	"	18	118	"	"
13	Secondary battery.	1	"	7	"	19	6	"	"
14	Turbine turning motor.	1	.01267	7	.048	31	114	"	"
15	Turbine heater	1	.00701	7	.036	25	128	"	"
16	" " "	1	"	7	"	25	188	"	"

L.C.A. - Lead covered & armoured.
L.C. - Lead covered.

Cables: Single and Multicores, are the cables insulated and protected as per Tables IV or V of the Rules **Yes**
Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load **3 volts for Lighting. 7 volts for Power.**
Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets **Yes.**
Paper Insulated Cables, If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound /
Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage **Yes**
Support and Protection of Cables, state how the cables are supported and protected **Clamped to perforated galvanized steel plate by metal clips and protected by steel armouring where necessary.**
 If cables are run in wood casings, are the casings and caps secured by screws / , are the cap screws of brass / , are the cables run in separate grooves / . If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII **Yes**
Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements **Yes**
Joints in Cables, state if any, and how made, insulated, and protected **Junction boxes, insulated by mica and protected by steel cover.**
Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands **Yes**
Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed **Yes** state the material of which the bushes are made **Lead.**
Earthing Connections, state what earthing connections are fitted and their respective sectional areas **There is no earthing connection except for wireless telegraph and radio telephone, the sectional area for wireless telegraph 0.00715 and for radio telephone 0.00181** , are their connections made as per Rule **Yes**
Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule **Yes**
Emergency Supply, state position and method of control of the emergency supply and how the generator is driven /
Navigation Lamps, are these separately wired **Yes** , controlled by separate switch and separate fuses **Yes** , are the fuses double pole **Yes** , are the switches and fuses grouped in a position accessible only to the officers on watch **Yes**
 has each navigation lamp an automatic indicator as per Rule **Yes**
Secondary Batteries, are they constructed and fitted as per Rule **Yes**
Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight **Yes**
 are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected **Protected by strong metal guards.**
 are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected /
 , how are the cables led /
 where are the controlling switches situated /
Searchlight Lamps, No. of / , whether fixed or portable / , are their fittings as per Rule /
Arc Lamps, other than searchlight lamps, No. of / , are their live parts insulated from the frame or case / , are their fittings as per Rule /
Motors, are their working parts readily accessible **Yes** , are the coils self-contained and readily removable for replacement **Yes** , are the brushes, brush holders, terminals and lubricating arrangements as per Rule **Yes** , are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material **Yes**
 are they protected from mechanical injury and damage from water, steam or oil **Yes** are their axes of rotation fore and aft **Yes**
 if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type / , if not of this type, state distance of the combustible material horizontally or vertically above the motors / and /
Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule **Yes**
Lightning Conductors, where lightning conductors are required, are these fitted as per Rule /
Ships carrying Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings /
 If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office /



PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	3	25	110	227	600	Compound steam eng.		
AUXILIARY								
EMERGENCY								
ROTARY TRANSFORMER								

LIGHTING AND HEATING CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR... ..								
	EQUALISER CONNECTIONS								
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER... ..								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM								
	BOILER ROOM								
	ACCOMMODATION								
	WIRELESS								
	SEARCHLIGHT								
	MASTHEAD LIGHT... ..								
	SIDE LIGHTS								
	COMPASS LIGHTS								
	POOP LIGHTS								
	CARGO LIGHTS								
	ARC LAMPS								
	HEATERS								

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP								
	MAIN BILGE LINE PUMPS								
	GENERAL SERVICE PUMP								
	EMERGENCY BILGE PUMP								
	SANITARY PUMP								
	CIRC. SEA WATER PUMPS								
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR								
	FRESH WATER PUMP								
	ENGINE TURNING GEAR								
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS								
	OIL FUEL TRANSFER PUMP								
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR—								
	(a) MOTOR GENERATOR... ..								
	(b) MAIN MOTOR								
	WORKSHOP MOTOR								
	VENTILATING FANS								



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All Conductors are of annealed copper conforming to British Standard Specification No. 7.

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

S. Kawai

Electrical Engineers.

Date APR 26 1929

COMPASSES.

Distance between electric generators or motors and standard compass 72 feet (W.T. Motor generator)

Distance between electric generators or motors and steering compass " "

The nearest cables to the compasses are as follows:—

A cable carrying 0.22 Ampères 1 feet from standard compass 1 feet from steering compass.

A cable carrying / Ampères / feet from standard compass / feet from steering compass.

A cable carrying Ampères 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.

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted Yes

The maximum deviation due to electric currents was found to be Nil degrees on All course in the case of the standard compass, and Nil degrees on All course in the case of the steering compass.

NAGASAKI WORKS, MITSUBISHI ZOSEN KAISHA, LTD.

S. Kawai

Builder's Signature.

Date APR 26 1929

GENERAL MANAGER.

Is this installation a duplicate of a previous case No If so, state name of vessel /

General Remarks (State quality of workmanship, opinions as to class, &c.)

The materials and workmanship are good and the installation has been fitted in accordance with the Rules, tested under full working conditions and found satisfactory.

Plans sent under separate cover of:- Electric wiring diagram.

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

YRM

31.5.29

Total Capacity of Generators 75 Kilowatts.

The amount of Fee ... £ 328:65 : 17. 4. 29

Travelling Expenses (if any) £ : : 10/5/29

George Anderson & K. Kishigami Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned Elec Light

Im. 2. 28.—Transfer. (The Surveys are requested not to write on or below the space for Committee's Minute.)



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