

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 20 JAN 1932

Date of writing Report 14-12-31 19 When handed in at Local Office 13-1-32 19 Port of Kobe

No. in Survey held at Tama Date, First Survey 18-11-31 Last Survey 12-12-31 19  
Reg. Book. (Number of Visits 7)

on the M.V. NACHISAN MARU

Tons { Gross  
Net

Built at Tama By whom built Intsui Bunan Kaisha Yard No. 183 When built 1931

Owners Intsui Bunan Kaisha Port belonging to Kobe

Electric Light Installation fitted by Intsui Bunan Kaisha Contract No. 183 When fitted 1931

System of Distribution Direct current two wire distribution system

Pressure of supply for Lighting 220 volts, Heating 220 volts, Power 220 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 One port side and two starboard side, in engine room

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 none and none, 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 Port side, fore bulkhead, in engine room

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 none and none, 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 miculate or other non-hygroscopic insulating material, and the slab similarly insulated from its framework ✓

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

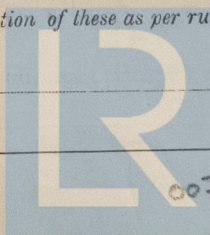
In generator, D.P. switch and D.P. circuit breaker with overload and reverse current trip, mechanically interlocked with equalizing contacts. In outgoing switches, D.P. switch-fuses

Instruments on main switchboard 5 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 an earth lamp with a change over contact for positive &amp; negative busbars is fitted on generator panel

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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If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office.....

MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. am. sec.	Approxim. to Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP ... ..	1	0814	80	SWG 20	88 ✓	40	mltn	armoured
	MAIN BILGE LINE PUMPS ...	1	0305	20	" 30	42 ✓	32	"	"
	GENERAL SERVICE PUMP	1	0153	15	" 20	32 ✓	100	"	"
	EMERGENCY BILGE PUMP ...								
	SANITARY PUMP ... ..								
	CIRC. SEA WATER PUMPS ...								
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR ... ..								
	FRESH WATER PUMP ...	1	0032	1	SWG 16	46 ✓	96	"	"
	ENGINE TURNING GEAR ...	1	0071	7	" 20	13.5 ✓	120	"	"
	ENGINE REVERSING GEAR ...								
	LUBRICATING OIL PUMPS	2	1527	150	" 20	140 ✓	72	"	"
	OIL FUEL TRANSFER PUMP	1	0153	15	" 20	22 ✓	105	"	"
	WINDLASS ... ..	1	1527	150	" 20	165 ✓	470	"	"
	WINCHES, FORWARD ...	4	3563	350	" 20	526 ✓	350	paper	"
	WINCHES, AFT ...	5	3563	350	" 20	554 ✓	400	"	"
	STEERING GEAR	1	0611	60	" 20	52	540	mltn	"
	(a) MOTOR GENERATOR	1	0305	30	" 20	37 ✓	18	"	"
	(b) MAIN MOTOR	1	"	"	"	" ✓	"	"	"
	WORKSHOP MOTOR ... ..	1	0032	1	" 16	9.2 ✓	56	"	"
	VENTILATING FANS								
	Winches Machinery	2	2036	200	" 20	296 ✓	130	paper	"



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.

*E. Maeda.* Electrical Engineers. Date \_\_\_\_\_

#### COMPASSES.

Distance between electric generators or motors and standard compass *fifty four feet from which motor*

Distance between electric generators or motors and steering compass *fifty four feet from which motor*

The nearest cables to the compasses are as follows:—

A cable carrying *455* Amperes *20* feet from standard compass *12* 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 *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 \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the standard compass, and \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the steering compass.

*A. Ukai*

Builder's Signature. Date \_\_\_\_\_

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 electrical installation of this vessel has been fitted under Special Survey in accordance with the Rules and approved plans; the materials and workmanship are good. On completion the installation was tested under full working conditions and found to be efficient and reliable, in my opinion, for the use of Electric Light*

*Elect. Light*

*22/1 3/10/32*

Total Capacity of Generators ~~270~~ *230* Kilowatts.

The amount of Fee ... £ *367.50* : When applied for, *18/3/32*

Travelling Expenses (if any) £ : : When received, *18/3/32*

*A. J. Morrison*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 5 FEB 1932*

Assigned

*Elect. Light*