

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report **24/8/1926.** When handed in at Local Office **10** Port of **KOBE.**

No. in Survey held at **Kobe.** Date, First Survey **12th May '26** Last Survey **16th August 1926.**
 Reg. Book. (Number of Visits **Eighteen (18)**)

on the **Single Screw Motor-ship "CUBA MARU"** Tons { Gross **5950**
 Net

Built at **Kobe** By whom built **Kawasaki Dockyard Co., Ltd.** No. **485** When built **1926.**

Owners **Kawasaki Kisen Kaisha (Kawasaki Steamship Co., Ltd.)** Port belonging to **Kobe.**

Electric Light Installation fitted by **Kawasaki Dockyard Co., Ltd.** Contract No. **485** When fitted **1926.**

System of Distribution **TWO-CONDUCTOR INSULATED SYSTEM. D.C. CURRENT.**

Pressure of supply for Lighting **220** volts, Heating **220** volts, Power **220** volts.

Direct or Alternating Current, Lighting **and** Power **both D.C.**

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 overload **25% for two hours (tested)**, are they compound wound **Flat compound**
 are they over compounded 5 per cent. **--**, 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 and clearly marked **Yes.**, are they so spaced or shielded that they cannot be accidentally earthed, or short circuited **Yes.** Are the lubricating arrangements of the generators as per Rule **Yes.**

Position of Generators **In the lower part of engine room on starboard side.**
 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 axis 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 **in the engine room on starboard side about 8 feet above E.R. working platform.**
 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, incombustible 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 connected to one pole insulated from the slab with mica or micamite and the slab similarly insulated from its framework **--**, and is the frame effectivety earthed **Yes, as per Rules.** Are the following fittings as per Rule, viz.:— spacing or shielding of live parts **more than 12"**, accessibility of all parts **Yes**, absence of fuses on back of board **none**, proportion of omnibus bars **Yes**, individual fuses to voltmeter, pilot or earth lamp **Yes**, connections of switches **Yes**

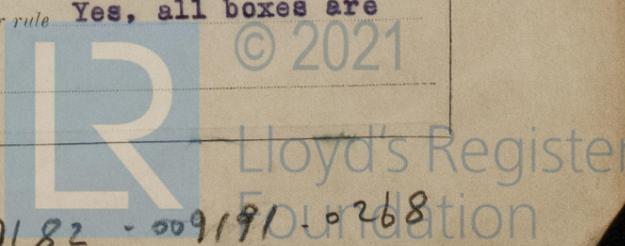
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches **Three-double-pole single-throw main knife switches, and triple-pole air break circuit breakers with equalizer arrangement on each dynamo on the main switchboard panel & seven double-pole single-throw knife switches on the feeder panel.**

Instruments on main switchboard **Three** ammeters **Two** 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 **by earth lamps.**

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

Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule **Yes, all boxes are made of cast iron, & all terminals are fixed on marble plates.**



Insulation of Cables, state type of cables, single or twin Single are the cables insulated and protected as per Tables III or IV of the Rules. **Table 111**

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load about 3%

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.007 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 Paper insulated cables are not used.

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 supported by metal clips and protected by lead covering and steel armour.

If cables are run in wood casings, are the casings and caps secured by screws Yes, are the cap screws of brass Yes, are the cables run in separate grooves Yes. **If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VI** Yes.

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements --

Joints in Cables, state if any, and how made, insulated, and protected Cables are run in continuous lengths between main and auxiliary switchboards and junction boxes.

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 Positions, 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 bushes.

Earthing Connections, state what earthing connections are fitted and their respective sectional areas Earthing connections are fitted to all Generators, Motors, Wireless motor-generator & its static Transformer. The sectional areas are all over twice the area of their respective conductors.

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule change-over switches are/ arranged.

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven Position is above upper deck in a separate compartment at aft end of Bridge space. Method of control is by change-over switch. The Generator is driven direct coupled by a paraffin oil Engine.

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, are separate screens provided for the use of oil and electric side lights Yes

are separate oil lanterns provided for the mast head lights and side lights 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 They are provided with substantial metal guards, and water-tight glass globes.

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 In galvanized iron pipes through deck etc.

where are the controlling switches situated on the main switchboard in Engine Room.

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 axis of rotation fore and aft yes, but some are of vertical type.

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 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	100	225	450	340	Diesel engine	Diesel oil	above 150° F.
AUXILIARY								
EMERGENCY	1	5	220	25	1150	Motor engine	Paraffin oil or Petrol	above 150° F. below 150° F.
ROTARY TRANSFORMER	--	--	--	--	--	--	9--	---

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.
				S.W.G.	Diameter.				
	MAIN GENERATOR	each 750	.763	20	1.158	450		Rubber	Armoured.
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR	15	.015	"	.159	25		"	"
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS	60	.061	"	.324	50		"	"
	ENGINE ROOM	7	.007	"	.108	20		"	"
	BOILER ROOM								
	WIRELESS	30	.03	20	.231	30		Rubber	Armoured.
	SEARCHLIGHT	1							
	MASTHEAD LIGHT	1	.0018	18	.048	27		"	"
	SIDE LIGHTS		"	"	"	"		"	"
	COMPASS LIGHTS		"	"	"	"		"	"
	POOP LIGHTS		"	"	"	"		"	"
	CARGO LIGHTS	234	.0066	38	.13	6		"	"
	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.
				S.W.G.	Diameter.				
	BALLAST PUMP	1	.112	20	.447	109		Rubber	Armoured
	MAIN BILGE LINE PUMPS	1	.061	"	.324	70		"	"
	GENERAL SERVICE PUMP	2	.003	"	.064	6.8		"	"
	EMERGENCY BILGE PUMP	1	.061	"	.324	70		"	"
	SANITARY PUMP	1	"	"	"	"		"	"
	CIRC. SEA WATER PUMPS								
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR	2	.500	"	.903	300		"	"
	FRESH WATER PUMP								
	ENGINE TURNING GEAR	1	.061	"	.324	80		"	"
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS	1	.007	"	.108	20		"	"
	OIL FUEL TRANSFER PUMP	1	.061	"	.324	70		"	"
	WINDLASS	1	.204	"	.604	210		"	"
	WINCHES, FORWARD	4	each .112	"	.447	110		"	"
	WINCHES, AFT	5						"	"
	STEERING GEAR	2	.112	"	"	"		"	"
	WORKSHOP MOTOR	1	.007	"	.108	20.5		"	"
	VENTILATING FANS	2	.003	"	.064	4.4		"	"
	Jacket Cooling Pump	1	.061	"	.324	70		"	"
	Piston	2	.03	"	.231	51		"	"
	Refrigerating Machine	1	"	"	"	.49		"	"
	Electric Crane in E.R.	1	.007	"	.108	20		"	"
	Sharpless Purifier	3	.003	"	.064	12.5		"	"

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. Tada Electrical Engineers. Date 4th / 9 / 26.
 KAWASAKI DOCKYARD COMPANY, LTD

COMPASSES. Dynamo to standard compass 160 ft.
 " " steering " 128 ft.
 Distance between electric generators or motors and standard compass Motor to standard " 60 ft.
 " " steering " 25 ft.
 Distance between electric generators or motors and steering compass
 The nearest cables to the compasses are as follows:—
 A cable carrying 2 Amperes 12 feet from standard compass 240 feet from steering compass.
 A cable carrying 8 Amperes 20 feet from standard compass 240 feet from steering compass.
 A cable carrying 1.5 Amperes 240 feet from standard compass 10 feet from steering compass.
 Have the compasses been adjusted with and without the electric installation at full power
 Has there been any of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted
 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.

Permeable to

not measured

Kawasaki Dockyard Co., Ltd.

Per. [Signature] Builder's Signature. Date 6th Sept. 1926.
Director.

Is this installation a duplicate of a previous case No. _____ If so, state name of vessel M.S. "FLORIDA MARU".

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

The Electric installation has been fitted in accordance with the Rules and approved plans (Kobe letters dated November 20th 1925 and March 8th and April 20th, 1926) and worked satisfactorily on trial.

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

[Signature]
 19/10/26

Total Capacity of Generators 305 Kilowatts

The amount of Fee ... YEN 595 : When applied for, 17th Aug. 1926
 Travelling Expenses (if any) £ See Hull Rpt. When received, _____

[Signature]
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Im. 924—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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