

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 9-6-1928 When handed in at Local Office 19 Port of Kobe Received at London Office 11 1928

No. in Survey held at Lama Date, First Survey 9-3-28 Last Survey 9-6-1928
Reg. Book. (Number of Visits 16)

on the Steel Single Screw Motorship "TAKAMISAN MARU." Tons { Gross 1992
Net 1099
When built 1928

Built at Lama By whom built Mitsui Bussan Kaisha Yard No. 133 Port belonging to Tokyo

Owners Mitsui Bussan Kaisha Electric Light Installation fitted by Mitsui Bussan Kaisha Contract No. 133 When fitted 1928

System of Distribution Two wire, closed circuit.

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

Direct or Alternating Current, Lighting Direct Power Direct

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 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 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 Bottom engine room platform.

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 Port side forward end of engine room on a special platform raised about 4'-0" above bottom eng. room 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 No. (MARBLE SLABS), if semi-insulating material is used, are all conducting parts connected to one pole insulated from the slab with mica or micanite and the slab similarly insulated from its framework YES, and is the frame effectively earthed YES

Are the following fittings as per Rule, viz.:— 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 Each generator fitted with a double pole switch & double pole circuit breaker with overload & reverse current release. Circuit breakers suitably connected with equalizer leads as per Rule requirements.

Instruments on main switchboard 4 ammeters 2 voltmeters 4 pilot lamps. 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 2 earth lamps & switches.

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



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

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load *7 volts*.

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 *YES*.

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 *Brass clipped. Through galvanized tubing on decks*.

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 *YES*.

Joints in Cables, state if any, and how made, insulated, and protected *YES*.

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*.

Earthing Connections, state what earthing connections are fitted and their respective sectional areas *NONE*.

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 *YES*.

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 *No*.

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *YES*.

how are the cables led *YES*.

where are the controlling switches situated *YES*.

Searchlight Lamps, No. of *YES*, whether fixed or portable *YES*, are their fittings as per Rule *YES*.

Are Lamps, other than searchlight lamps, No. of *YES*, are their live parts insulated from the frame or case *YES*, are their fittings as per Rule *YES*.

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*, 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 *YES*, if not of this type, state distance of the combustible material horizontally or vertically above the motors *YES* and *YES*.

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 *YES*.

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 *YES*.

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

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No of	RATED AT				DRIVEN BY.	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	1166 (2) 33.	220	1300 (2) 150	400	Diesel Engines.	Diesel Oil	above 150° F.
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. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
1	MAIN GENERATOR...	2	2545	250	20	300	140	Rubber	LEAD & ARMOURED.
3	AUXILIARY GENERATOR	1	2545	250	20	150	80	"	" " "
	EMERGENCY GENERATOR	✓							
	ROTARY TRANSFORMER...	✓							
	AUXILIARY SWITCHBOARDS	✓							
	ENGINE ROOM	See 24.							
	BOILER ROOM	✓							
12	Settling tank heater.	1	0305	30	20	41	120	"	" " "
26	Navigation Light.	1	0071	7	20	3	320	"	" " "
24	General Lighting.	1	0071	7	20	3	260	"	" " "
20	WIRELESS	1	0305	30	20	24	750	"	" " "
	SEARCHLIGHT	✓							
	MASTHEAD LIGHT...	See 26							
	SIDE LIGHTS...	" "							
	COMPASS LIGHTS...	" "							
21	POOP LIGHTS	1	0071	7	20	7	90	"	" " "
23	CARGO LIGHTS AFT.	1	0153	15	20	10	360	"	" " "
		✓	0071	7	20	7	170	"	" " "
25	ARC LAMPS	✓	1120	110	20	75	260	"	" " "
22	HEATERS	1	1120	110	20	86	90	"	" " "

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
7	BALLAST PUMP	1	0305	30	20	26	30	Rubber	LEAD & ARMOURED.
8	MAIN BILGE LINE PUMPS	1	0305	30	20	28	120	"	" " "
	GENERAL SERVICE PUMP	✓							
	EMERGENCY BILGE PUMP	✓							
	SANITARY PUMP	See 8							
6	COMBINED LUB. OIL AND OIL FUEL TRANSFER PUMP	1	0611	60	20	54	70	"	" " "
	CIRC. FRESH WATER PUMPS	✓							
	AIR COMPRESSOR	✓							
10	FRESH WATER PUMP	1	0071	7	20	10	150	"	" " "
9	ENGINE TURNING GEAR	1	0071	7	20	10	70	"	" " "
	ENGINE REVERSING GEAR	✓							
	LUBRICATING OIL PUMPS	See 5/6							
5	CONDENSED LUB. OIL AND OIL FUEL TRANSFER PUMP	1	0611	60	20	54	120	"	" " "
19	WINDLASS	1	1527	150	20	132	800	"	" " "
18	WINCHES, FORWARD BRIDGE	2	1527	150	20	184	480	"	" " "
17	WINCHES, FORWARD BRIDGE	2	1527	150	20	184	300	"	" " "
16	WINCHES, AFT BRIDGE	2	1527	150	20	184	300	"	" " "
15	WINCHES, AFT BRIDGE	2	1527	150	20	184	100	"	" " "
13	STEERING GEAR	1	0305	30	20	32	180	"	" " "
	WORKSHOP MOTOR	1	0071	7	20	10	130	"	" " "
	VENTILATING FANS	✓							
11	Oil Separator	1	0611	60	20	64	70	"	" " "
14	Capstan.	1	0611	60	20	60	180	"	" " "

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.

D. T. Quinn

Electrical Engineers.

Date 7-6-1928.

COMPASSES.

Distance between electric generators or motors and ^{POOP} standard compass 20 feet

Distance between electric generators or motors and steering compass 10 feet

The nearest cables to the compasses are as follows:—

A cable carrying 32 Ampères ✓ feet from ^{POOP} standard compass 10 feet from ^{POOP} steering compass.

A cable carrying 89 Ampères 20 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 No

Has the effect 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.

J. P. Taylor

Builder's Signature.

Date 8-6-28

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 apparatus herein referred to, has been constructed & installed in accordance with the Rule requirements & approved plans. The materials used & the workmanship are both good & in my opinion, the vessel is entitled to the highest class awarded.

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

Elec. Light

J. P. Taylor 12/7/28

5c. 12. 13. Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)

Total Capacity of Generators 99 Kilowatts

The amount of Fee ... ^{YEN} 330 : = { When applied for, June 11th 1928.
 Travelling Expenses (if any) £ - : - : { When received, 12/7/28.
 Included in Hull expenses.

L. Kimber

Surveyor to Lloyd's Register of Shipping.

FRI 13 JUL 1928

Committee's Minute

Assigned

Elec Light



© 2021

Lloyd's Register Foundation