

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report 13-4-1927 When handed in at Local Office 13/4/1927 Port of Kobe

No. in Survey held at Harima. Date, First Survey 14/1/27. Last Survey 6/4/1927
Reg. Book. (Number of Visits 12.)

on the Single Screw Motorship "CHOAN MARU" Tons { Gross 2607
Net 1899.

Built at Harima. By whom built Kobe Steel Works Harima Yard No. 123 When built 1927.

Owners Osaka Shosen Kaisha. Port belonging to Osaka.

Electric Light Installation fitted by Kobe Steel Works Harima Dockyard Contract No. 153 When fitted 1927.

See also BREMEN Certificate dated 10/8/26 N^o 319.322.323.

System of Distribution TWO CONDUCTOR INSULATED SYSTEM.

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....., 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.....

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.....

Position of Generators ENGINE ROOM BOTTOM PLATFORM. 2 STARB^d + 1 PORT 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 ENGINE ROOM STARB^d SIDE. MIDDLE 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 YES.

Switchboards, ^{is} ⁵ 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. (MARBLE), 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 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 DOUBLE POLE

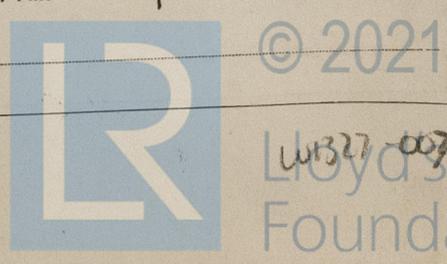
CIRCUIT BREAKER WITH INTERLOCKED EQUALISER SWITCH + DOUBLE POLE KNIFE SWITCH FOR EACH GENERATOR.

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 1 EARTH LAMP WITH CHANGE SWITCH TO POSITIVE or NEGATIVE POLES.

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.



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Insulation of Cables, state type of cables, single or twin BOTH 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 5 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 SHEET IRON WITH CLAMPS. ARMoured CABLE. WOOD CASINGS.

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 EFFICIENT JUNCTION BOX.

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 YES.

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 ENGINE ROOM. 220 V. 4KW GENERATOR DRIVEN BY HOT BULB ENGINE FOR LIGHTING ONLY.

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 ARMoured CABLE &

STEEL PLATE PROTECTION.

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 1, whether fixed or portable FIXED. MONKEY BRIDGE are their fittings as per Rule YES.

Arc Lamps, other than searchlight lamps, No. of 1, 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 LARGER SIZE YES. SMALLER " SOME NOT

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.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	3	80	225	356	360	MAN type DIESEL ENGINE	DIESEL OIL	ABOVE 150° F
AUXILIARY								
EMERGENCY	1	4	225	17.8	450	HOT BULB TYPE	"	"
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	4	.190	7	35 No 12	356	85 (mean)	Rubber	Lead covered & armoured.
	AUXILIARY GENERATOR	2	.0891	7	SWG No 10	17.8	44	do	do
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	2	.0071	7	SWG No 20	9.5	10	do	do
	BOILER ROOM								
	PASSAGEWAYS	2	.0071	7	SWG No 20	14.3	100	do	do
	OFFICERS	do	do	do	do	26.3	do	do	do
	CARGO	do	.0126	do	SWG No 18	9	100	do	do
	WIRELESS	2	.0071	7	SWG No 20	9	150	do	do
	SEARCHLIGHT	2	.0035	1	SWG No 16	4.55	40	do	do
	MASTHEAD LIGHT	3	do	do	do	1.273	160 mean	do	do
	SIDE LIGHTS	3	do	do	do	do	32	do	do
	COMPASS LIGHTS								
	POOP LIGHTS	2	do	do	do	1.5	300	do	do
	CARGO LIGHTS	do	.0126	7	SWG No 18	18	20	do	do
	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	1	.1184	19	BS No 4	70	30	Rubber	Lead covered & armoured
	MAIN BILGE LINE PUMPS	1	.0126	7	SWG No 18	31.2	40	do	do
	GENERAL SERVICE PUMP	1	.1148	27	" 16	135	30	do	do
	EMERGENCY BILGE PUMP								
	SANITARY PUMP	1	.0126	7	SWG No 18	33	45	do	do
	CIRC. SEA WATER PUMPS								
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR	1	.3942	61	BS No 11	538	200	do	do
	FRESH WATER PUMP	1	.007	7	SWG No 20	13.4	24	do	do
	ENGINE TURNING GEAR								
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS	2	.007	7	" 20	16	104 (mean)	do	do
	OIL FUEL TRANSFER PUMP	1	do	do	do	do	220	do	do
	WINDLASS	1	.02442	19	" 18	125	200	do	do
	WINCHES, FORWARD	4	.0969	19	" 14	105	15 mean	do	do
	WINCHES, AFT	4	do	do	do	do	57	do	do
	STEERING GEAR	1	.0225	7	" 16	38	300	do	do
	WORKSHOP MOTOR								
	VENTILATING FANS								
	PISTON COOLING WATER PUMP	2	.0126	7	SWG No 18	26	104 mean	do	do
	JACKET	2	.0244	19	" 18	47.5	116	do	do
	TURBO-BLOWER	2	.25 x 7	61	BS No 13	423	14	do	do
	REFRIGERATING COMP.	1	.0613	19	" 14	40	132	do	do
	" SPARE ENGINE PUMP	1	.0315	7	SWG No 23	4.8	140	do	do
	CAPSTAN	1	.0969	19	" 14	80	225	do	do

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.

Skeena Electrical Engineers. Date _____

COMPASSES.

Distance between electric generators or motors and standard compass ABOUT 116 ft

Distance between electric generators or motors and steering compass " 142 "

The nearest cables to the compasses are as follows :—

A cable carrying 6.2 Ampères 26 feet from standard compass 20 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

The maximum deviation due to electric currents was found to be degrees on _____ course in the case of the standard

compass, and degrees on Kobe Steel Works, course in the case of the steering compass.

Harima Ship Yard,

Manager. A. Mikami Builder's Signature. Date _____

Is this installation a duplicate of a previous case _____ If so, state name of vessel _____

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

This installation has been estimated & installed under special survey and in accordance with the Rules, tried under working conditions & found satisfactory.

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

Total Capacity of Generators 240. Kilowatts

The amount of Fee ... 7 5/8 — { When applied for, 14/4/1927

Travelling Expenses (if any) £ : : { When received, 2/6/1927

See Hull Report.

J. McWilliam
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 24 MAY 1927

Assigned Elec light

50,1243.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)