

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

27 JUL 1931

Received at London Office

Date of writing Report

19

When handed in at Local Office

8/2/31

19

Port of

Kobe

No. in Survey held at

Yama

Date, First Survey

14 May

Last Survey

29 June

1931

Reg. Book.

on the

Single Screw M.V. "SANSEI MARU"

(Number of Visits)

7

Tons

Gross 3234.31

Net 1820.48

Built at

Yama

By whom built

Hitachi Bussan Kaisha

Yard No. 185

When built

1931

Owners

Daikoku Kaisha Kab. Kaisha

Port belonging to

Daikoku

Electric Light Installation fitted by

Hitachi Bussan Kaisha

Contract No. 185

When fitted

1931

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 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

E. Room bottom 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 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

Engine Room bottom 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, 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 micaite 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

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 D.P. switch, three pole air circuit breaker with overload release and equalizer contact suitably constructed as per rule

Instruments on main switchboard

5

ammeters

2

volts

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

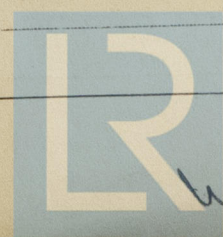
2 lamp switches

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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W1282-01331/2

Cables: Single, twin, concentric, or multicore *single twin* 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 KSC*

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 *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 *lean clip to cable guides & bulkheads. Some parts in galvanized pipes*

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 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 *none. Joint boxes only*

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 bushes*

Earthing Connections, state what earthing connections are fitted and to air resistive 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 *A 12 volt. 48 amp. lamp*

Secondary Battery fitted near main switch board.

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 where or 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*

Arc 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 axes of rotation fore and aft *yes, or vertical*

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 and fitted 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.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN ...	3	60 each	220	272	400	Diesel Engine	Heavy 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. Amps.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter. SW.G.				
	MAIN GENERATOR...	2	0.1527	150	20	273	160	Rubber	Alumined
	EQUALISER CONNECTIONS	1	0.1527	150	20	137	160	"	"
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
3	AUXILIARY SWITCHBOARDS	1	0.2036	200	20	166	120	"	"
1	ENGINE ROOM MOTOR (main)	2	0.1120	110	20	250	60	"	"
	Boiler Room	1	0.0153	15	20	36	150	"	"
	ACCOMMODATION								
3	F.O. Purifier Heater	1	0.0611	60	20	82	13	"	"
	L.O. Purifier Heater	1	0.0071	7	20	13.6	16	"	"
	L.O. Purifier Heater	1	0.0611	60	20	54.5	16	"	"
4	F.O. Purifier Heater	1	0.0305	30	20	41.0	60	"	"
14	Navigation Indicator	1	0.0018	1	18	1.0	300	"	"
13	Engine Room Light	1	0.0071	15	20	15	77	"	"
11	Cabin Light	1	0.0071	7	20	15	100	"	"
9	WIRELESS	1	0.0153	15	20	32	200	"	"
	SEARCHLIGHT								
	MASTHEAD LIGHT...	3 core	0.0018	1	18	0.25	200	"	"
	SIDE LIGHTS	"	"	1	18	"	30	"	"
	COMPASS LIGHTS	"	"	1	18	0.1	20	"	"
	POOP LIGHTS	3 core	"	1	18	0.25	400	"	"
12	CARGO LIGHTS	1	0.0153	15	20	15	400	"	"
10	HEATERS for Baths	1	0.0611	60	20	77.5	100	"	"

MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amps.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
1	BALLAST PUMP	1	0.0611	60	20	72	60	Rubber	Alumined
1	Bilge Sanitary Pump	1	0.0305	30	20	42	60	"	"
	GENERAL SERVICE PUMP								
	EMERGENCY BILGE PUMP								
	SANITARY PUMP								
1	CIRC. SEA WATER PUMPS	1	0.0611	60	20	80	30	"	"
	CIRC. FRESH WATER PUMPS								
2	AIR COMPRESSOR	1	0.0032	1	16	4.6	10	"	"
2	FRESH WATER PUMP	1	0.0071	7	20	13.5	24	"	"
2	ENGINE TURNING GEAR								
2	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS								
1	OIL FUEL TRANSFER PUMP	1	0.0611	60	20	60	30	"	"
8	WINDLASS	1	0.0527	150	20	152	360	"	"
7	WINCHES, FORWARD	2	0.2036	200	20	418	360	"	"
6	WINCHES, AFT	2	"	"	20	"	400	"	"
5	POOP DECK CRANE	1	0.1120	110	20	138	450	"	"
	(a) Main Generator	1	0.0814	80	20	104	55	"	"
	(b) Main Motor	1	0.0153	15	20	34	48	"	"
2	WORKSHOP MOTOR	1	0.0032	1	16	9.2	80	"	"
	VENTILATING FANS								
2	Low Pressure Ball Valve	1	0.0032	1	16	9.2	52	"	"
3	F.O. Purifier Pump	1	0.0032	1	16	2.5	20	"	"
3	F.O. Purifier	1	0.0032	1	16	6.0	12	"	"
3	L.O. Purifier Pump	1	0.0032	1	16	1.3	10	"	"
3	L.O. Purifier	1	0.0032	1	16	6.0	11	"	"
15	Siren	1	0.0305	30	20	2.5	500	"	"
16	Cooking Range Fan	1	0.0032	1	16	4.6	150	"	"
17	Winch (Tack)	1	0.0814	80	20	104	40	"	"

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.

Builder — see below.

Electrical Engineers.

Date

COMPASSES.

Distance between electric generators or motors and standard compass

50 ft. from Generator

Distance between electric generators or motors and steering compass

52 ft. 02" 1

The nearest cables to the compasses are as follows:—

A cable carrying 20 Amperes 8 feet from standard compass

5

feet from steering compass

for seven motor

A cable carrying 14 Amperes 16

feet from standard compass

15

feet from steering compass

for windlass motor

A cable carrying Amperes

feet from standard compass

2

feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power

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.

Builder's Signature

Date 6/7/31

Is this installation a duplicate of a previous case

yes

If so, state name of vessel

Santo halo

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

This installation has been fitted under special survey in accordance with the Rules & approved plans. The materials & workmanship are good, on completion the installation was tested under full working conditions & found to be efficient. It is my opinion, eligible to have the status "Electric Light"

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

Elec. Light.

B.H. 20/7/31

Total Capacity of Generators

180

Kilowatts.

The amount of Fee

£533-

Travelling Expenses (if any) £

Committee's Minute

FRI 131 JUL 1931

Assigned

Elec. Light

Im 128—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minutes.)



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