

FOR LONDON

Rpt. 13.

No. FE835

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

14 FEB 1958

Date of writing Report 19 When handed in at Local Office 19 Port of Nagasaki (Shimonoseki)

No. in Survey held at Nagasaki, Japan Date, First Survey 15th Oct. 1957 Last Survey 7th Jan. 58

Reg. Book. (No. of Visits 48) 9,202

on the M.V. "KOBU MARU" Tons Gross 5,345 Net 5,345

Built at Nagasaki, Japan By whom built Mitsubishi Zosen K.K. Yard No. 1498 When built 1958-1

Owners Daido Kaiun K.K. Port belonging to Kobe

Installation fitted by Mitsubishi Zosen K.K., Nagasaki Works When fitted 1958-1

Is vessel equipped for carrying Petroleum in bulk No Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. Yes Sub.Sig. No Radar Yes

Plans, have they been submitted and approved Yes System of Distribution 3 Wire 3 Phase Voltage of Lighting 110

Heating 110 Power 440 D.C. or A.C., Lighting A.C. Power A.C. If A.C. state frequency 60 cycles

Windlass D.C. 440V. Mooring Winch D.C. 220V. Yes

Prime Movers, has the governing been found as per Rule when full load is thrown on and off Are turbine emergency governors fitted

with a trip switch Generators, are they compound wound and level compounded under working conditions

Are the generators arranged to run in parallel Yes Is the compound winding connected to the negative or positive pole

Have machines 100 kw. and over been inspected by the Surveyors during manufacture and testing Yes Have certificates of test for machines

under 100 kw. been supplied and the results found as per Rule Yes Position of Generators Port Fw'd., Port Aft Inboard

and Port Aft Outboard on platform level in machinery space

is the ventilation in way of generators satisfactory Yes are they clear of inflammable material and protected from mechanical injury and

damage from water, steam and oil Yes Switchboards, where are main switchboards placed at centre of fw'd. end

on platform level in machinery space

are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water,

steam and oil Yes what insulation is used for the panels phenolic resin bonded board & bar of synthetic insulating

material is it an Approved Type Yes if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as

per Rule Is the construction as per Rule, including locking of screws and nuts Yes Description of Main Switchgear

for each generator and arrangement of equaliser switches Triple pole linked air circuit breaker with

instantaneous overcurrent trip in each phase, overcurrent relay in each phase, performance

overcurrent relay for hold fan circuit, reverse power relay and triple pole linked isolating

switch fitted ventral insulated from earth Triple pole linked air circuit breaker

and the switch and fuse gear (or circuit breakers) for each outgoing circuit Breakers of De-ion type made by Mitsubishi

with an over current trip on each insulated pole. Electric Mfg. Co., Ltd., Tokyo.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 6

ammeters 3 voltmeters 1 synchronising devices. For compound machines in parallel are the ammeters and reverse current

protection devices connected on the pole opposite to the equaliser connection Earth Testing, state means provided 2 sets for

power and lighting circuits Preference Tripping, state if provided and tested

Switches, Circuit Breakers and Fuses, are they as per Rule Yes are the fuses an Approved Type Yes

Fuji Electric Mfg. Co., Ltd. and

make of fuses Utsunomiya Mfg. Co., are all fuses labelled Yes If circuit breakers are provided for the generators, at what

overload do they operate 150% (480A) 19 sec. power and at what current do the reverse current protective-

devices operate 25 KW. Cables, are they insulated and protected as per Rule Yes

if otherwise than as per Rule are they of an Approved Type state maximum fall of pressure between bus bars and any point

under maximum load 6.2 volts. Are all ~~paper insulated and~~ varnished cambric insulated cables sealed at the ends Yes

Are all the cable runs in accessible positions not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical

damage are any cables laid under machines or floorplates Yes if so, are they adequately protected Yes State

type of cables (if in conduit this should also be stated) in machinery spaces in conduit below RLC & RHRC RLC & RHRC

and laundries RLC & RHRC platform Cables of metal braided secured

by metal clips on coated steel hangers or galvanized perforated steel plates. Cables in

cargo spaces protected by steel plating.

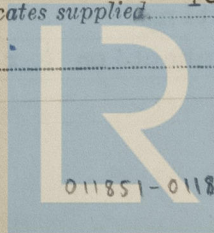
Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes Are all cables passing through decks and watertight

bulkheads provided with deck tubes or watertight glands Yes where unarmoured cables pass through beams, etc., are the holes

effectively bushed Yes Refrigerated chambers, are the cables and fittings as per Rule Yes

Have refrigeration fan motors been constructed under survey Yes and test certificates supplied Yes

Are the motors accessible for maintenance at all times Yes



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Navigation Lamps, are they separately wired.....Yes controlled by separate double pole switches and fuses.....Yes Are the switches and fuses in

Secondary Batteries, are they constructed, fitted and adequately ventilated as per Rule....., state battery capacity in

Secondary Batteries, are they constructed, fitted and adequately ventilated as per Rule.....Yes....., state battery capacity in
ampere hours. 24V.200A.H & 24V.80A.H Where required to do so does it comply with 1948 International Convention.....Yes.....

Lighting is fluorescent lighting fitted Yes..... If so, state nominal lamp voltage A.C. 110v and compartments where lamps are fitted.....

Dining Saloon and Smoking Room

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof..... **Yes**

Searchlights, No. of One, whether fixed or portable portable, are they of the carbon arc or of the filament type Filament type

Heating and Cooking, is the general construction as per Rule..... **Yes**....., are the frames effectually earthed..... **Yes**....., are heaters in the accommodation of the convection type..... **Yes**..... Motors, are all motors constructed and installed as per Rule and placed in well-ventilated

compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil	Yes
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Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment. Yes Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing -

Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule. Yes

Lightning Conductors, where required are they fitted as per Rule.....

Have all the special requirements of the Rules for such ships been complied with....., are all fuses of an Approved Cartridge Type....., make of fuse..... Are the fittings for pump

rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships..... Are all cables lead covered as per Rule.....

E.S.D., if fitted state maker Tokyo Keiki Seisakusho Location of transmitter and receiver E.S. Compartment of No. 3 Double Bottom Tank, Frame Nos. 119 to 120

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and suitably stored in dry situations.....Yes.....

Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory..... Yes

DESCRIPTION OF GENERATOR.	No. of	MAKER.	KVA KVA per Generator.	RATED AT			PRIME MOVER.	
				Volts. A.C.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN ...	3	Mitsubishi Electric Mfg. Co., Ltd.	250	450	321	450	SPST-25B "Daihatsu"	Daihatsu Kogyo K.K.
EMERGENCY ...								
ROTARY								
TRANSFORMER								

DESCRIPTION.	No. of	XX KVA	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead pins return (est).	INSULA- TION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. XX XX				
MAIN GENERATOR	3	250	2	37/.083	321	400	No. 1 2x10 2x16 No. 3x17	VLG
" " EQUALISER								
EMERGENCY GENERATOR	-							
ROTARY TRANSFORMER : MOTOR	-							
" " GENERATOR	-							

DESCRIPTION.									
Power:- (From main switchboard) 450V									
Engine Room Auxiliaries (starb'd)	P-12	1(3C)	19/064	81	91	21	VLC		
" (port & aft)	P-13	1(3C)	7/064	43.3	91	25.8	"		
" (3rd Dk)	P-14	1(3C)	19/064		91	17.7	"		
Engine Room Ventilating Fan	P-15	1(3C)	7/052	27.9	38	17	"		
Cargo Winch (Fw'd)	P-16	2(3C)	37/072	277	166	43	"		
" (Aft)	P-17	2(3C)	37/072	263	166	53.8	"		
Hold Fan	P-18	1(3C)	19/064	81.7	91	18.5	"		
Ref. Machine	P-19	1(3)	37/083	172	200	15.2	"		
Thermotank Fan	P-20	1(3)	7/052	31	38	38	"		
Radio	P-21	1(3)	7/036	9.5	19	32.5	"		
Gyro-Compass	P-22	1(3C)	7/036	1.6	12	25.5	RIC		
Trans for lighting	P-25	1(3C)	19/064	77	91	9	VLC		
Shore Power Connection Box	P-26	1(3C)	37/083	200	200	39	"		

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area of No. and Dia. of Strands Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Lighting:- (From main-switch board) 113V							
Navigation light & navigation bridge light L-1	1(3C)	7/.064	33.6	51	32	VLC	
Living quarter light L-2	1(3C)	19/.083	117.5	128	12	"	
Cargo light L-3	1(3C)	19/.064	77	91	16	"	
Engine room light L-4	1(3C)	19/.064	80	91	11	"	
I.C. Panel C-1 L-5	1(3C)	7/.044	6	29	32	"	
Cooking apparatus L-6	1(3C)	37/.072	92	166	27.5	"	
Radio L-7	1(3C)	7/.052	24	38	30.5	"	

ALL IMPORTANT MOTORS TO BE ENUMERATED.			No.	B.H.P.								
*	Jacket & Piston Cool ^W Pump	2	42	1(30)	19/.044	50	58	86.6	18.7	VLC		
*	Cooling S.W. Pump	2	55	1(30)	19/.052	66	70	6.7	5.1	VLC		
	Lub. Oil Pump	2	15	1(30)	7/.044	21	29			VLC		
	L.O. Shifting Pump	1	4	1(30)	3/.036	5.4	7	14.5		RHRC		
	O.F. Service Pump	1	4	1(30)	3/.036	5.4	7	13.5		RHRC		
	O.F. Transfer Pump	1	15	1(30)	7/.044	20.4	29	15		VLC		
	L.O. Purifire	1	2	1(30)	3/.036	2.7	7	13.5		RHRC		
	O.F. Purifire	3	2	1(30)	1/.064	2.8	7			RHRC		
	O.F. Clarifire	2	2	1(30)	1/.064	2.8	7			RHRC		
	Purifire Pump	2	3	1(30)	1/.064	3.8	7			RHRC		
	Purifire Pump	1	1.5	1(30)	1/.064	2.1	7	18.9		RHRC		
	Bilge Pump	1	5.5	1(30)	7/.036	8.1	12	9		RHRC		
*	Bilge & Ballast Pump	1	45/45	1(30)	19/.064	55/91	91	32.2		VLC		
*	Fire & G.S. Pump	1	50	1(30)	19/.052	59	70	29.7		VLC		
	Forced Circulation Pump	2	5	1(30)	3/.036	6.0	7	29/28		RHRC		
	Eng. Room Vent. Fan	2	5	1(30)	3/.036	6.6	7	48/55.5		RHRC		
*	Steering Gear	2	20	1(30)	7/.044	28.5	29	97/93		VLC		
	Aux. Blower	1	30	1(30)	7/.052	35	38	30		VLC		
	Turbo Charger L.O. Pump	2	2	1(30)	3/.036	2.9	7	38/37		RHRC		
o	Windlass DC 440V	1	80	1	19/.064	158	(91) 246			VLC		
o	Mooring Winch DC 220V	1	53	2	19/.083	208	128 (238)			VLC		
o	5 Ton Cargo Winch	4	53	2	19/.083	208	128 ✓			VLC		
o	3 Tons Cargo Winch	14	30	2	19/.064	120	91 ✓			VLC		
o	M-G Motor for 5 Ton Winch	2	85KW	1(30)	19/.083	139	128 ✓			VLC		
o	M-G Motor for 3 Ton Winch	7	45KW	1(30)	19/.052	43	70			VLC		
o	Exciter Motor for M-G Room	4	20	1(30)	7/.044	24.5	29			VLC		
	Ref. Compressor	3	30/15	1(30)	7/.064		70			VLC		
	Ref. Cooling Pump	2	5	1(30)	3/.036	6.2	7	23/24.3		RHRC		
	Gold Air Circulating Fan	4	4/2	1(30)	3/.036		7			RHRC		

Note: 1. V/LC - Varnished Cambric Insulated Lead Alloy Sheathed & Steel Wire Braided Cable									
R/RCC - Vulcanized Rubber Insulated Polychloroprene Sheathed & Steel Wire Braided Cable									
2. * - Connected to main switch board directly									
3. o - Intermittently loaded									

NOTE.—Use Rpt. 43 Continuation Sheet if the above space is insufficient.

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.

All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.

The foregoing is a correct description.

Electrical Contractors. Date

COMPASSES.

Have the compasses been adjusted under working conditions.

Yes

Builder's Signature. Date

NAGASAKI WORKS
MITSUBISHI SHIPBUILDING & ENGINEERING CO., LTD.

Have the foregoing descriptions and schedules been verified and found correct. Yes

Is this installation a duplicate of a previous case. Yes If so, state name of vessel "KOSEI MARU", "KOHOH MARU"

Plans. Are approved plans forwarded herewith. No If not, state date of approval 22nd June, 1957

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith. Yes

General Remarks. (State quality of workmanship and materials, opinions as to class, etc.)

The Electrical Equipment and Installation of this ship have been made under special survey in accordance with the requirements of the Rules, the approved plans and the Secretary's letters.

All tests and trials as required by the Rules have been completed with satisfactory results.

Total Capacity of Generators. 750 K.V.A
Kilowatts.

The amount of Fee ... £1207,450 :
250KVA Generator x 3
Construction Fees £71,550
deducted. (Rendered 26/9/57)

Travelling Expenses (if any) £

When applied for,
FEB - 5. 1958
LOCALLY
When received,
19

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUESDAY 25 MAR 1958

Assigned

See Rpt. 1.



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