

Rpt. 13.

No. FE-3026**REPORT ON ELECTRICAL EQUIPMENT.**

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

**14 OCT 1955**Date of writing Report July 19 1955 When handed in at Local Office SEP. 26 1955 19 March, 14, 1955 Port of KobeNo. in Survey held at Kobe, Japan Date, First Survey March, 14, 1955 Last Survey July 15, 1955  
Reg. Book. (No. of Visits 16)on the M.S. "Hikawa Maru"Tons { Gross 8092.32T  
Net 5600.79TBuilt at Kobe, Japan By whom built Kawasaki Dockyard Co., Ltd. Yard No. 940 When built July 1955Owners Kawasaki Kisen Co., Ltd. & Nippon Kaiun Co. Ltd. Port belonging to Kobe, JapanInstallation fitted by Kawasaki Dockyard Co., Ltd. When fitted July 1955Is 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 YesPlans, have they been submitted and approved Yes System of Distribution Three phase, three wire Voltage of Lighting 110VHeating 110V Power 440V D. C. or A. C., Lighting A.C. Power A.C. If A. C. state frequency 60Prime Movers, has the governing been found as per Rule when full load is thrown on and off Yes Are turbine emergency governors fittedwith a trip switch --- Generators, are they compound wound ---, and level compounded under working conditions ---if not compound wound state distance between generators --- and from switchboard --- Are the generators arranged to runin parallel Yes, are shunt field regulators provided AVR Is the compound winding connected to the negative or positive pole--- Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing Yes Have certificates oftest for machines under 100 kw. been supplied Yes and the results found as per Rule YesPosition of Generators Port side in engine roomis the ventilation in way of generators satisfactory Yes are they clear of inflammable material and protected from mechanical injury anddamage from water, steam and oil Yes Switchboards, where are main switchboards placed Port side in engine room

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 Synthetic resin bonded board, if of synthetic insulatingmaterial is it an Approved Type Yes, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom asper Rule --- Is the construction as per Rule, including locking of screws and nuts Yes Description of Main Switchgeareach generator and arrangement of equaliser switches A triple pole linked air circuit breaker with over current.

reverse power and under voltage trip relays

and the switch and fuse gear (or circuit breakers) for each outgoing circuit A triple pole linked air circuit breakerAre compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 6ammeters 7 voltmeters 1 synchronising devices. For compound machines in parallel are the ammeters and reversed currentprotection devices connected on the pole opposite to the equaliser connection --- Earth Testing, state means provided Three

earth lamps with metal filament

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yesmake of fuses Kawasaki "SK" type, are all fuses labelled Yes If circuit breakers are provided for the generators, at whatoverload do they operate 115 % 20 sec and at what current do the reversed ~~current~~ protective devices operate - 15 % - 24 KWJoint Boxes, Section Boards and Distribution Boards, is the construction as per Rule YesCables, 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 6.92V for power 2.42V for wireless the ends of all cables having a sectionalarea of 0.01 square inch and above provided with soldering sockets Yes Are all paper insulated and varnished cambic insulatedcables 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 Yes, are any cables laid under machines or floorplates Yes, if so, are theyadequately protected Yes Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduitor of the "HR" type --- State how the cables are supported or protected Clipped to solid or perforated steeltray, structural steel work or woodworkAre all lead sheaths, armoring and conduits effectually bonded and earthed Yes Are all cables passing through decks and watertightbulkheads provided with deck tubes or watertight glands Yes, where unarmoured cables pass through beams, etc., are the holeseffectively bushed Yes Refrigerated chambers, are the cables and fittings as per Rule Yes

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

DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT				PRIME MOVER.	
			K.V.A. <del>K.W.</del> per Generator.	Volts.	Amperes.	Rev. per Min.	TYPE.	MAKER.
MAIN ...	2	Kawasaki Dockyard Co.	200	450	256	600	Diesel	Daihatsu Kogyo Co., Ltd.
EMERGENCY ROTARY TRANSFORMER								

DESCRIPTION.	K. V. A. <del>KILOVOLTS AMPERES</del>	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or Sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ... ..	200	2	0.1	256	282		VC	L A
" " EQUALISER ... ..								
EMERGENCY GENERATOR ... ..								
ROTARY TRANSFORMER: MOTOR ... ..								
" " GENERATOR ... ..								

[illegible]

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet)	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
L - 1 Engine room lighting (upper) S.B.	1	0.01	30	32	10	VC	LC
L - 2 do. (Lower) S.B.	1	0.01	32	32	10	"	"
L - 3 Accom lighting (up deck) S.B.	1	0.0225	50	56	36	"	LA
L - 4 do. (Boat deck) S.B.	1	0.007	18	21	40	"	LC
L - 5 Cargo lighting (Fore) S.B.	1	0.0225	43	56	22	"	LA
L - 6 do. (Fore Projector) S.B.	1	0.0145	40	42	22	"	LC
L - 7 Nav. light indicator	1	0.003	1.2	10	43	R	"
L - 8 Day light signal lamp	1	0.0045	5	15	55	"	LA
L - 9 Suez search light connection box	1	0.0225	27	80	55	VC	LC
L - 10 Spare lighting voltage relay	1	0.003	1	10	20	R	"
C - 1 Internal comm. dist. box	1	0.0145	38	42	50	VC	"
GP - 1 Auto-pilot power unit & hydraulic	1	0.0145	7	15	80	R	"
WS - 1 Wireless switchboard	1	0.0145	20	42	42	VC	"

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
Fresh water cooling pump	2	60	1	0.04	75	77	26	VC	L C
Sea water cooling pump	1	35	1	0.0225	46	56	30	"	"
Lubricating oil pump	2	20/10	1	0.01	26	32	20	"	"
Oil burning pump	1	2	1	0.003	3.5	10	32	R	"
Exhaust draft fan	1	15	1	0.007	20	21	35	VC	"
Lubricating oil service pump	1	3	1	0.003	4.5	10	20	R	"
Fuel oil service pump	1	3	1	0.003	4.5	10	20	"	"
Fuel oil & Lubricating oil purifier	2	2	1	0.003	2.6	10	20	"	"
Colloidal filter	2	2	1	0.003	3.5	10	20	"	"
Fuel valve cooling pump	1	2	1	0.003	3.5	10	12	"	"
Lubricating oil pump for supercharger	2	3	1	0.003	4.5	10	30	"	"
Boiler water circulating pump	2	5	1	0.003	7.5	10	28	"	"
Fuel oil booster pump	2	2	1	0.003	3.5	10	10	"	"
Engine room ventilating fan	2	6.5	1	0.0045	9	15	31	"	"
Steering gear	1	15	1	0.01	20	32	85	VC	"
Lifting machine	1	5	1	0.0045	11	15	22	R	"
Turning motor	1	15	1	0.007	20	21	15	VC	"



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.

*Saburo Yamana* Electrical Contractors. Date 20 July 1955.  
Managing Director of Kawasaki Dockyard Co., Ltd.

#### COMPASSES.

Have the compasses been adjusted under working conditions Yes

*Saburo Yamana* Builder's Signature. Date 20th July 1955  
Managing Director of Kawasaki Dockyard Co., Ltd.

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

Is this installation a duplicate of a previous case No If so, state name of vessel - - -

Plans. Are approved plans forwarded herewith No If not, state date of approval Dec. 20, 1954

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

General Remarks. (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

The Electrical installation of this vessel has been constructed under Special Survey in accordance with the Rules, approved plans and Secretary's letters.

The materials and workmanship are sound and good.

The Generators, motors etc., have been examined under full working condition to the Rules requirement and found satisfactory.

Total Capacity of Generators 400 K.V.A. ~~400000~~

The amount of Fee ... £204,000 When applied for, AUG - 3 1955

Travelling Expenses (if any) £ See Rpt. 19 When received,

Committee's Minute TUESDAY 10 JAN 1955

Assigned See Rpt. 4 G.

*S. E. Janson* Surveyor to Lloyd's Register of Shipping.



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