

13.

No. FE-6496

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office
KOBÉ

Writing Report 30th June, 1959 When handed in at Local Office 19 Port of Nagoya
Survey held at Nagoya, Japan Date, First Survey 31-3-1959 Last Survey 12-6-1959
(No. of Visits 9) Gross 13,689.52
Tons Net 8,297.83
When built 1959

on the S.S. "NIKKO MARU"
at Nagoya By whom built Nagoya Shipbuilding Co., Ltd. Yard No. 146
Nissan Kisen Co., Ltd. Port belonging to Tokyo
When fitted 1959

Installation fitted by Nagoya Shipbuilding Co., Ltd. When fitted 1959

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

System of Distribution 3 phase 3 wire Voltage of Lighting 110V

110V Power 440V D.C. or A.C., Lighting A.C. Power A.C. If A.C. state frequency 60 cycle

Are turbine emergency governors fitted Yes

3 phase A.C. generator with A.V.R. and level compounded under working conditions

Generators, ~~models~~ Is the compound winding connected to the negative or positive pole

the generators arranged to run in parallel Yes Have certificates of test for machines

Position of Generators Port side in engine room floor

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

Switchboards, where are main switchboards placed Forward in engine room floor

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

Material and oil Yes, what insulation is used for the panels Synthetic resin, if of synthetic insulating

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

A triple pole linked air circuit breaker with over current and

each generator and arrangement of equaliser switches

reverse power protection and a triple pole linked iso. knife switch

and the switch and fuse gear (or circuit breakers) for each outgoing circuit No fuse breaker with over current protection

60A frame x 12 60A frame x 8

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

ammeters 7 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

Preference Tripping, state if provided

Manuf earth lamps are the fuses an Approved Type Yes

switches, Circuit Breakers and Fuses, are they as per Rule Yes

make of fuses Utsunimiya Cellolite are all fuses labelled Yes

overload do they operate 150% 20 sec. Cables, are they insulated and protected as per Rule Yes

Secretary's le 15% state maximum fall of pressure between bus bars and any point

otherwise than as per Rule are they of an Approved Type Yes

under maximum load 4 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

Yes, 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 VLC galleys RLC

and fixed metal clips where exposed to risk of mechanical injury, protected by sheet iron plating.

In engine room under floor fitted in conduits.

Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes

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 Ships store only.

under full work have refrigeration fan motors been constructed under survey

are the motors accessible for maintenance at all times

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Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. Yes Emergency Supply, state position of wheel house, chart room, radio room, saloon, mess room, bath room, W.C., engine room, all cabin room, pa

Navigation Lamps, are they separately wired. Yes controlled by separate double pole switches and fuses. Yes Are the switches and fuses a position accessible only to the officers on watch. Yes is an automatic indicator fitted. Yes Is an alternative supply provided. Yes

Secondary Batteries, are they constructed, fitted and adequately ventilated as per Rule. Yes, state battery capacity in ampere hours. 24V 200 AH x 2 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. Saloon, saloon partry, Off's mess room, Captain & C/eng. day 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 -, whether fixed or portable -, are they of the carbon arc or of the filament type. -

Heating and Cooking, is the general construction as per Rule. Yes, are the frames effectually earthed. Yes, are heaters in accommodation of the convection type. - 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

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. -

Ships carrying Oil having a Flash Point of less than 150° F. 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 make. Tokyo Keiki Seizosho location of transmitter and receiver. Starboard side FR. No. 143 - 144

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

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	MAKER.	KVA RATED AT				PRIME MOVER.	
			KVA per Generator	Volts.	Amps.	Revs. per Min.	TYPE.	MAKER.
MAIN	2	Fuji Denki Seizo K.K.	130	445	169	600	Diesel	Yanmar Diesel Engine Co.,
EMERGENCY ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	No. of	KVA	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return) in M.	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.				
MAIN GENERATOR	2	130	2	0.1	169	128 x 2	39	V
Exciter	2	3 KW	1	0.0145	27.3	65	39	V
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
GENERATOR								

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.).

DESCRIPTION.	No.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return) in M.	INSULATION.	PROTECTIVE COVERING.
Shore connection box	1	0.2	100	200	96	V
Power section box P-1	1	0.1	62.7	128	15	V
" P-2	1	0.0145	17.6	38	69	V
" P-3	1	0.0225	24.1	51	60	V
" P-4	1	0.04	46.5	70	81	V
" P-5	1	"	57	"	111	V
" Ref. Machine	1	0.0225	28.2	51	123	V
" thermotank & galley eq.	1	0.0145	18	38	81	V
Sub. switch board	1	0.1	95.7	128	282	V
"	1	"	"	"	"	V

Remarks:- V: Varnished cambric insulated.

R: Rubber insulated

LC: Lead alloy sheathed & steel wire braided

DISTRIBUTION CABLES (to Section-Boards and Distribution-Fuse-Boards, etc.).

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) in M.	INSULATION.	PROTECTIVE COVERING.
			In the Circuit.	Rule.			
Power section box lighting -1	1	0.04	45	70	108	V	LC
" -2	1	"	44	"	90	V	"
Cargo lighting -1	1	"	29.3	"	110	V	"
" -2	1	"	"	"	132	V	"
Lighting distribution box A	1	0.0225	26.5	51	41	V	"
" B	1	0.0145	20.4	38	47	V	"
" C	1	0.01	11.9	29	21	V	"
" D	1	"	4.7	"	250	V	"
" E	1	0.0145	19.4	38	12	V	"
" F	1	"	27.4	"	12	V	"
" J	1	0.0225	35.2	51	60	V	"
" K	1	"	32.4	"	24	V	"
cargo lighting -1	1	"	15	"	84	V	"
" -2	1	"	15	"	156	V	"
distribution box heater -1	1	0.04	52.3	70	21	V	"
" -2	1	"	41.6	"	110	V	"
" -3	1	"	43.6	"	132	V	"
nautical instrument	1	0.0225	27.8	51	48	V	"
instrument	1	0.0145	12.6	38	42	V	"
radio switch box	1	0.0225	20	51	54	V	"
pro switch box	1	"	4.5	23	51	R	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) in M.	INSULATION.	PROTECTIVE COVERING.
			In the Circuit.	Rule.			
Steering gear	1	25	1	0.04	32	70	190
Reserve steering gear	1	5	1	0.01	7.5	29	162
Ref. machine	2	7.5	1	"	11	"	36
Ref. cool. water pump	1	2	1	0.003	3.5	7	66
Thermotank fan	3	4/2	1	0.007	6	12	58
Galley vent. fan	1	1.5	1	0.003	2.5	7	84
Range blower	2	0.5	1	"	1	"	108
Boiler making machine	1	0.5	1	"	1	"	105
Rel valve cool. water pump	2	3	1	0.003	4.5	7	40
Oil booster pump	2	7.5	1	0.01	11	29	48
Eng. cool. water pump	1	4	1	0.007	6	12	40
Oil transfer pump	1	2	1	0.003	3.5	7	15
Oil purifier	2	2	1	"	"	"	40
Oil clarifier	2	3	1	"	4.5	"	33
Oil purifier	1	2	1	"	3.5	"	45
Oil centrifuge service pump	2	2	1	"	"	"	42
Sanitary pump	1	4	1	0.007	6	12	27
Fresh water pump	2	4	1	"	"	"	18
Ch. gas econo. circ. water P.	2	4	1	"	"	"	12
Oil burning pump	1	2	1	0.003	3.5	7	45
Eng. room vent. fan	2	7.5	1	0.01	11	29	145
Hoisting crane	1	5	1	0.007	7.5	12	15
Travelling crane	1	2	1	0.003	3.5	7	15
Traversing crane	1	1.5	1	"	2.5	"	15
Universal machine	1	3	1	"	4.5	"	21
Main eng. turning gear	1	10	1	0.01	12.7	29	90

NOTE.—Use Rpt. 13 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.

K. Yoshida

Electrical Contractors.

Date

COMPASSES.

Have the compasses been adjusted under working conditions..... Yes

Masao Ishikawa
NAGOYA SHIPBUILDING Co., LTD

Builder's Signature.

Date

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..... 27-11-58

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

The materials and workmanship are good.

The generators and motors etc. have been examined under full load working conditions to Rule, requirements and found satisfactory.

*4x RMS
268.59.*

CSA

5m. 6.50 - Transfer. (MADE AND PRINTED IN ENGLAND)
(The Surveyors are requested not to write on or below the space for Committee Minutes.)

Total Capacity of Generators..... 260 KVA
2 x 130 KVA Generators: £36,900.- Yka. 10/3/59.

The amount of Fee ... £122,940.-

When applied for,

19

When received,

19

Travelling Expenses (if any) £

M. Ishiwatari
Surveyor to Lloyd's Register of Shipping.
Y. Kojima. & M. Ishiwatari.

Committee's Minute FRIDAY 11 SEP 1959

Assigned

See Rpt. 1.



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