

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 10.10.1953 When handed in at Local Office 10.10.1953 Port of TRIESTE

No. in Survey held at TRIESTE Date, First Survey See Rpt. 4n. Last Survey 1st Oct. 1953
Reg. Book. (No. of Visits 511)

40257 S on the Single Screw Motor Vessel "NAIKO" Tons Gross 511 Net 230

Built at TRIESTE By whom built CANTIERI RIUNITI DELL'ADRIATICO Yard No. 1784 When built 1953-10

Owners Republic of Indonesia Port belonging to Djakarta

Installation fitted by Cantieri Riuniti dell'Adriatico When fitted 1953

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

Plans, have they been submitted and approved Yes System of Distribution Two wire insulated Voltage of Lighting 110

Heating 110 Power 110 D.C. or A.C., Lighting D.C. Power D.C. If A.C. state frequency -

Prime Movers, has the governing been found as per Rule when full load is thrown on and off yes Are turbine emergency governors fitted with a trip switch - Generators, are they compound wound yes, and level compounded under working conditions yes

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

Have machines 100 kw. and over been inspected by the Surveyors during manufacture and testing none Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule yes Position of Generators

bottom platform main engine room, one port and one starboard side

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 bottom platform main engine room port side forward

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 dead front type, if of synthetic insulating material is it an Approved Type - 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 three pole linked circuit breaker with overload current releases and reverse current release. Third pole used for equaliser

and the switch and fuse gear (or circuit breakers) for each outgoing circuit double pole switch with fuse on each pole.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 2

ammeters 3 voltmeters - synchronising devices. For compound machines in parallel are the ammeters and reverse current protection devices connected on the pole opposite to the equaliser connection yes Earth Testing, state means provided 1 voltmeter with two lamps and push button switch

Preference Tripping, state if provided no, and tested -

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

make of fuses F.E.R. Milan, are all fuses labelled yes If circuit breakers are provided for the generators, at what overload do they operate 40%, and at what current do the reverse current protective devices operate 10% 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 2.5 volts, Are all paper insulated and varnished cambric insulated cables sealed at the ends -

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 none, if so, are they adequately protected - State type of cables (if in conduit this should also be stated) in machinery spaces lead covered and -do- galleys steel braided and laundries steel braided armoured State how the cables are supported or protected cables clipped as per Rules and through conduit as required.

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 - and test certificates supplied -

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 in casement, boat deck aft (10 KW Diesel engine generator)

Navigation Lamps, are they separately wired yes controlled by separate double pole switches and fuses yes Are the switches and fuses in 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 (W.T. only) state battery capacity in ampere hours 80 Amps./24 Volts Where required to do so does it comply with 1948 International Convention -

Lighting, is fluorescent lighting fitted - If so, state nominal lamp voltage - and compartments where lamps are fitted -

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 1 whether fixed or portable fixed are they of the carbon arc or of the filament type filament

Heating and Cooking, is the general construction as per Rule - are the frames effectually earthed - are heaters in the 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 none

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 maker Kelvin-Hughes location of transmitter and receiver between floors 57-58

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.	RATED AT				TYPE.	PRIME MOVER.
			Kw. per Generator.	Volts.	Amps.	Revs. per Min.		
MAIN	2	Cantieri Riuniti dell'Adriatico	20	110	182	1100	H.O.	Klockner Humboldt Deutz A.G.
EMERGENCY ROTARY TRANSFORMER	1	-do-	10	110	91	1100	H.O.	-do-

GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet)	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area of Cable (sq. mm.)	In the Circuit.	Rule.			
MAIN GENERATOR	2	20	1	160	182	214	6/30	V.I.R.	Lead & steel
" EQUALISER	1	10	1	80	91	135	6/30	do	braided
EMERGENCY GENERATOR	1	10	1	50	91	99	5	do	do

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

DESCRIPTION.	No. of	Kw.	No. in Parallel per Pole.	Sectional Area of Cable (sq. mm.)	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet)	INSULATION.	PROTECTIVE COVERING.
Emergency switchboard connection	1	63	1	91	116	35	V.I.R.	Lead & steel	braided
EP Eng. power section board	1	100	1	126.5	158	15	do	do	do
MPS Deck	1	50	1	62	97	55	do	do	do
V. Ventilation section board	1	32	1	37/68	72	55	do	do	do
DLS Deck lighting	1	50	1	86	97	60	do	do	do
NL Navigation lighting sect. Bd. from M.S.B.	1	4	1	2.5	21	85	do	do	do
" " " from E.S.B.	1	4	1	2.5	21	80	do	do	do
WT Wireless	1	6.3	1	18	30	60	do	do	do
EML Emergency deck lighting	1	6.3	1	11	30	80	do	do	do

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

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet)	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area of Cable (sq. mm.)	In the Circuit.	Rule.			
EL1 Engine room lights	1	2.5	6.5	11	5	V.I.R.	Lead & steel
EL2 " " "	1	2.5	7	11	35	do	braided
DL1 Deck	1	10	19	37	55	do	do
DL2 " " "	1	6.3	14	30	55	do	do
DL3 " " "	1	10	23	37	5	do	do
EDL " " "	1	16	30	48	30	do	do
MPI " power	1	10	17	37	50	do	do
MP2 " "	1	10	18	37	45	do	do
RM " "	1	6.3	10	30	35	do	do

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	No. in Parallel per Pole.	Sectional Area of Cable (sq. mm.)	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet)	INSULATION.	PROTECTIVE COVERING.
Steering gear	1	5	1	20	40.5	57	35	V.I.R.	Lead & steel
Capstan	1	8	1	25	68	62	40	do	braided
O.F. transfer pump	1	2	1	6.3	19	30	22	do	do
Eng. bilge	1	9	1	32	72	72	35	do	do
F.W. cooling	1	4.5	1	16	38	48	20	do	do
S.W. dom.	1	1	1	2.5	10	11	20	do	do
F.W. "	1	1	1	2.5	10	11	22	do	do
Engine room fan	1	0.5	1	1.2	6	6	20	do	do
Hold exhaust fan	4	0.5	1	2.5	7	11	30	do	do
heater for Oil Fuel	KW	4.8	1	20	44	57	12	do	do

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.

CANTIERI RIUNITI DELL'ADRIATICO

Electrical Contractors.

Date

COMPASSES.

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

CANTIERI RIUNITI DELL'ADRIATICO

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... yes If so, state name of vessel "NAIRA"-"NUKAHA"-"NURAGE"

Plans. Are approved plans forwarded herewith... no If not, state date of approval 22.12.1952

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 fitted under Special Survey in accordance with or equivalent to Rule requirements and approved plans.

The workmanship and materials are good.

On completion the installation was tried under full working conditions and the insulation resistance tested, all with satisfactory results.

In my opinion the installation is eligible for full classification.

Noted 28 4/11/53

Total Capacity of Generators... 50 v Kilowatts.

The amount of Fee ... £ 72 : 17 : 0

car fund 3, 13, 0

Travelling Expenses (if any) £ 3, 13, 0

No rendered from London 12.10.53

When received, 19

J.F. Wilson. Surveyor to Lloyd's Register of Shipping.

TUESDAY 24 NOV 1953

Committee's Minute

Assigned See Ref. 4b



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2m.8 50.—Transfer. (MADR AND PRINTED IN ENGLAND) (The Surveyors are requested not to write on or below the space for Committee's Minute.)

22.10.53