

Rpt. 13.

No. 2804

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

31 MAR 1959

Date of writing Report 21-2-1959 When handed in at Local Office 25-3-1959 Port of CADIZ

No. in Survey held at CADIZ Date, First Survey 10-7-58 Last Survey 13-2-1959
Reg. Book. (No. of Visits 29)

on the M.V. "BONIFAZ" Tons Gross 12942 Net 7400

Built at CADIZ By whom built Astilleros de Cadiz, SA Yard No. 47 When built 1959

Owners NAVIERA CASTILLA Port belonging to CADIZ

Installation fitted by Astilleros de Cadiz, S.A. When fitted 1959

Is vessel equipped for carrying Petroleum in bulk Yes Is vessel equipped with D.F. E.S.D. Yes Gy.C. Yes Sub.Sig. Radar Yes

Plans, have they been submitted and approved Yes System of Distribution Two wire 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 Yes Have certificates of test for machines

under 100 kw. been supplied and the results found as per Rule Yes Position of Generators Engine Room Lower Platform

Level. 2 Diesel and 1 steam Engine Port side one Diesel 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 Forward end of Engine

Room on raised platform

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 metal panels, 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 Automatic two pole circuit breakers with equaliser

fitted with overload and reverse current protection.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit Automatic circuit breakers on all circuits.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 4

ammeters 4 voltmeters None 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 Earth

lamps Preference Tripping, state if provided Yes, and tested Yes

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

make of fuses HAZERMEYER are all fuses labelled Yes If circuit breakers are provided for the generators, at what

overload do they operate 110% and at what current do the reverse current protective-

devices operate 15% 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 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

damage 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 Lead covered armour braided Lead covered

and laundries - State how the cables are supported or protected Cables clipped to perforated

steel trays or in conduit piping where protection necessary i.e. under floor plates and

on fore and aft gangways.

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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Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. Yes Emergency Supply, state position NONE

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 for radio only state battery capacity in ampere hours. 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 110 and compartments where lamps are fitted. In accommodation spaces

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. Fixed, are they of the carbon arc or of the filament type. Filament

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. None 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. Yes, are all fuses of an Approved Cartridge Type. Yes, make of fuse. HAZERMAYER Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships. Yes Are all cables lead covered as per Rule. Yes

E.S.D., if fitted state maker RADIO MARITIMA HISPANOLA location of transmitter and receiver. E.R. Cofferdam

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				PRIME MOVER.	
			Kw. per Generator	Volts	Amperes	Rev. per Min.	TYPE.	MAKER.
MAIN	3	Construcciones Electricas de Sabadell, S.A.	125	110	1136	350	Diesel	Empresa Nacional "ELCANO" Manises
EMERGENCY ROTARY TRANSFORMER	1	Alentorn Maquinaria Electrica - Barcelona	75	110	681	500	Compound Steam Recip.	Sociedad Española de Construcción Naval - Sestao

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 in Sq. mm.	In the Circuit.	Per Pole.			
MAIN GENERATOR	3	125	6	70	1136	✓ 1272	20	Vanished Lead covered	Cambric armour braided
EQUALISER	1	75	3	95	681	✓ 771	24	"	"
STEAM DYNAMO	1	75	3	95	681	✓ 771	24	"	"
EQUALISER	1	75	3	95	681	✓ 771	24	"	"
EMERGENCY GENERATOR									
ROTARY TRANSFORMER: MOTOR									
GENERATOR									

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

DESCRIPTION.		No.	Kw.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
				No. in Parallel per Pole.	Sectional Area in Sq. mm.	In the Circuit.	Per Pole.			
Distribution Box	"A"	1	185	1	185	147	✓ 235	108	Rubber	Lead covered armour braided
	"B"	1	70	1	70	68	✓ 125	34	"	"
	"C"	1	70	1	70	70	✓ 125	44	"	"
	"D"	1	70	1	70	78	✓ 125	14	"	"
	"E"	1	120	1	120	93	✓ 175	25	"	"
	"CJ-1"	1	35	1	35	39	✓ 78	105	"	"
	"CJ-2"	1	35	1	35	52	✓ 78	95	"	"
	"CJ-3"	1	16	1	16	20	✓ 49	92	"	"
	"CJ-4"	1	120	1	120	198	✓ 292	86	V.C.	"
	"CJ-5"	1	95	1	95	219	✓ 257	45	"	"
	"CJ-6"	1	95	1	95	198	✓ 257	42	"	"
	"CJ-7"	1	35	1	35	52	✓ 78	44	Rubber	"
	"CJ-8"	1	6	1	6	20	✓ 29	35	"	"
	"CJ-9"	1	50	1	50	72	✓ 99	50	"	"
	"CJ-10"	1	50	1	50	75	✓ 169	52	V.C.	"

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area in Sq. mm.	In the Circuit.	Per Pole.			
DISTRIBUTION Box "CJ2"	1	35	52	48	33	RUBBER	LEAD COVERED ARMOUR
"CLN" (NAVIGATION LAMPS)	1	16	14	49	119	"	BRAIDED
SUEZ CANAL LAMP	1	35	24	48	224	"	"
RADIO	1	95	45	150	110	"	"
SHORE CONNECTION (PORT)	1	120	242	292	24	VC	"
SHORE CONNECTION (STARBOARD)	1	120	242	292	33	VC	"

[illegible]

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

DESCRIPTION.	CONDUCTORS.			MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return dist.).	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or Minimum Diameter, mm.	In the Circuit.	Rule.	Meters.			
Distribution Box "CJ-11"	1	50	139	169	19	V.C.	Lead covered armoured braided	
"CJ-12"	1	120	248	292	32	"	"	
"CJ-13"	1	25	93	108	14	"	"	
"CJ-14"	1	25	68	108	28	"	"	
"CJ-15"	1	120	248	292	12	"	"	
"CJ-16"	1	25	42	63	33	Rubber	"	
"CJ-17"	1	50	130	169	39	V.C.	"	
"CJ-18"	1	35	104	134	41	"	"	
"CJ-19"	1	4	14	22.5	30	Rubber	"	
"A1"	1	25	39	63	41	"	"	
"A2"	1	10	11	38	36	"	"	
"A3"	1	16	21	49	30	"	"	
"A4"	1	16	30	49	3	"	"	
"A5"	1	16	21	49	3	"	"	
"A6"	1	25	23	63	50	"	"	
"B1"	1	4	10	22.5	11	"	"	
"B2"	1	6	17	29	7	"	"	
"B3"	1	6	19	29	7	"	"	
"B4"	1	10	21	38	35	"	"	
"C1"	1	16	27	49	10	"	"	
"C2"	1	16	28	49	10	"	"	
"C3"	1	6	14	29	22	"	"	
"D1"	1	35	40	78	31	"	"	
"D2"	1	35	38	78	31	"	"	
"E1"	1	70	58	125	94	"	"	
"E2"	1	35	34	78	12	"	"	
"CJ-20"	1	25	91	108	8	V.C.	"	

MOTION CABLES.

ALL IMPORTANT MOTORS TO BE REPLACED		No.	B.H.P.							Lead covered armour braided
Condenser circ. pump	1	35	1	120	266	✓ 292	42	V.C.		
Steering gear	2	28	1	120	215	✓ 292	71	"		"
Boiler circulating pumps	2	5	1	25	42	✓ 63	7	Rubber		"
Compressor circ. pump	2	1	1	6	9	✓ 29	60	"		"
Fuel transf. & daily service	2	3	1	10	26	✓ 38	10	"		"
Daily service	1	4	1	25	34	✓ 63	11	"		"
Purifiers	4	3	1	10	26	✓ 38	12	"		"
Purifiers	2	8.5	1	50	69	✓ 99	25	"		"
Sanitary pumps	3	5	1	25	42	✓ 63	10	"		"
Sanitary pump	1	0.75	1	2.5	8	✓ 15.5	15	"		"
Fuel valve cooling pumps	2	1.5	1	4	14	✓ 22.5	20	"		"
Boiler fuel pumps	4	3	1	10	26	✓ 38	12	"		"
Boiler air blowers	2	8	1	50	65	✓ 99	28	"		"
Turning gear	1	12	1	50	95	✓ 169	40	V.C.		"
E.R. vent fans	4	6	1	35	50	✓ 78	30	Rubber		"
Boiler Room vent fans	2	2.5	1	10	22	✓ 38	30	"		"
Boat winches	5	3	1	25	26	✓ 63	25	"		"
Brine circ. pumps	2	1.5	1	4	14	✓ 22.5	8	"		"
Starting air compressors	2	60	2	95	455	✓ 514	35	V.C.		"
Air conditioning circ. pump	1	12.5	1	35	99	✓ 134	46	"		"
Air conditioning compressors	2	20	1	70	155	✓ 212	10	"		"
Air conditioning compressors	1	20	1	150	155	✓ 346	15	"		"
Refrig. compressors	2	6	1	35	50	✓ 78	8	Rubber		"
Air conditioning fans	2	4	1	16	34	✓ 49	15	"		"
Air conditioning fans	1	4	1	25	34	✓ 63	17	"		"
Bath room vent fans	2	0.75	1	4	8	✓ 22.5	15	"		"
Galley vent fans	2	0.8	1	6	9	✓ 29	30	"		"
Galley vent fans	1	1.1	1	6	10	✓ 29	30	"		"
Galley vent fans	1	0.75	1	2.5	8	✓ 15.5	16	"		"
Lathe	1	3	1	6	26	✓ 29	10	"		"
PLANING MACHINE	1	1	1	25	10	✓ 15.5	14	"		"
PUMPS FOR CIRCULATING AUXILIARIES	3	3.5	1	16	29	✓ 49	20	"		"
STANDBY M.E. SUPERCHARGER	1	55	2	95	432	✓ 514	30	V.C.		"
WELDING PLANT	1	7	1	50	56	✓ 99	10	RUBBER		"

NOTE.—Use Rpt. 13 Continuation Sheet if the above space is insufficient.

0021 $3/3$

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.

ASTILLEROS DE CADIZ, S. A.

Electrical Contractors.

Date 25/IV/59

Director

COMPASSES.

Have the compasses been adjusted under working conditions. Yes

ASTILLEROS DE CADIZ, S. A.

Builder's Signature.

Date 25/IV/59

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 31-12-57

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

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

The electrical installation has been installed under special survey in accordance with the Rules, approved plans and Secretary's Letters.

The quality of materials and workmanship is good.

On completion the installation was tested under full working conditions with satisfactory results.

In my opinion this vessel's electrical equipment is eligible for classification with this Society.

Total Capacity of Generators. 450 Kilowatts.

The amount of Fee ... £ 22560pts When applied for, 25-3-1959

Travelling Expenses (if any) £ 810pts

When received, 19

Surveyor to Lloyd's Register of Shipping.

FRIDAY 17 APR 1959

FRIDAY 1 APR 1959

Committee's Minute.

Assigned

See Rpt. 1.