

Rpt. 13.

No. 2282

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

2 - NOV 1954

Date of writing Report 20 - 10 - 19 54 When handed in at Local Office 19 Port of CADIZ

No. in Survey held at CADIZ Date, First Survey 18-12-53 Last Survey 23-12-54

Reg. Book. (No. of Visits 18)

on the S.S. "ALMIRANTE LOBO" Tons Gross 4183,34 Net 2246,71

Built at CADIZ By whom built Astilleros de Cadiz, SA Yard No. 40 When built 1954

Owners Marina de Guerra Española Port belonging to --

Installation fitted by Astilleros de Cadiz, S.A. When fitted 1954

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. - Radar Yes

Plans, have they been submitted and approved Yes System of Distribution 2 wire circuit Voltage of Lighting 110

Heating - 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 - Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule Yes Position of Generators Starboard side of engine room on main starting platform.

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 Aft of generators on main starting 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 Steel, enamel coated, 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 Double pole circuit breaker with overload and reverse current trips and single pole equaliser.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit 2 pole switch and 2 pole fuses.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 12

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 Yes Earth Testing, state means provided Earth lamps.

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 Solid type

make of fuses Gardy, are all fuses labelled Yes If circuit breakers are provided for the generators, at what overload do they operate 50%, 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 Yes, state maximum fall of pressure between bus bars and any point under maximum load 5.37 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 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 and armour braided, galleys Lead covered and armour braided

and laundries - State how the cables are supported or protected On metal plates with hard wood supports secured by closely spaced screwed clips.

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 - Dom. 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 **Batteries and fittings on bridge deck.**

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**, state battery capacity in ampere hours **24** 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 **8**, 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. **-**

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. **Marconi** location of transmitter and receiver. **C/Dam. Fr. 43/44 Chart Room**

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.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN	2	C.N. de M.E., S.A.Reinosa	50	110	455	550	Steam	S.E.C.N. Sestao
	1	C.N. de M.E., S.A.Cordoba	20	110	182	800	Diesel	S.E.C.N. Sestao
EMERGENCY ROTARY TRANSFORMER								

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 or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	2	50	1	500	455 ✓	461	10/12	Rubber	Lead covered
" EQUALISER				240				"	Steel Armoured
Harbour " DIESEL	1	20	1	150	182 ✓	204	23	"	"
" EQUALISER				70				"	"
EMERGENCY GENERATOR									
ROTARY TRANSFORMER: MOTOR									
" GENERATOR									

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

DESCRIPTION.	No. of	Kw.	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 feet).	INSULATION.	PROTECTIVE COVERING.
Box D1 Engine Room	1	10		28.9 ✓	36	24	Rubber	Lead covered
D2 Boiler Room	1	10		13.6 ✓	36	80	"	Armour braided
S1 Main Deck	1	35		59.5 ✓	78	42	"	"
S2 " "	1	35		63.8 ✓	78	34	"	"
S3 " "	1	25		37.3 ✓	63	19	"	"
S4 " "	1	25		8.2 ✓	63	25	"	"
S5 Workshop	1	25		58.0 ✓	63	78	"	"
S6 After Hold Fans	1	25		44 ✓	63	35	"	"
S7 Forward Hold Fans	1	35		61 ✓	78	81	"	"

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 or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Wireless	1	25.8	36 ✓	64	64	Rubber	Lead covered & armour braided
Radar	1	6.45	10 ✓	31	80	"	"
Navigation	1	2.5	3.6 ✓	13	90	"	"
Gyro Compass	1	2.9	10 ✓	15	66	"	"
Box S1 - D1	1	4	9.59 ✓	21	70	"	"
S1 - D2	1	4	15.09 ✓	21	32	"	"
S1 - D3	1	4	16.73 ✓	21	14	"	"
S2 - D1	1	16	18.09 ✓	21	129	"	"
S2 - D2	1	6	11.74 ✓	29	76	"	"
S2 - D3	1	4	14.66 ✓	21	32	"	"
S2 - D4	1	4	20.88 ✓	21	14	"	"
S3 - D1	1	16	16.56 ✓	48	102	"	"
S3 - D2	1	16	20.36 ✓	48	54	"	"
S4 - D1	1	6	16.95 ✓	29	35	"	"
S4 - D2	1	2.5	4.18 ✓	13	62	"	"
S4 - D2	1	2.5	4.04 ✓	13	28	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	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 feet).	INSULATION.	PROTECTIVE COVERING.
Forced draught fans	2	15	1	70	117 ✓	124 62/87	Rubber	Lead covered and armour braided
Boiler circulating pump	2	7.5	1	35	61 ✓	78 58/81	"	"
Hot water pump	1	1.1	1	2.5	10 ✓	13 40	"	"
Air compressor	1	2.0	1	9.35	13 ✓	37 32	"	"

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.

ASTILLEROS DE CADIZ, S. A. Electrical Contractors. Date 26 OCT. 1954

COMPASSES.

Have the compasses been adjusted under working conditions. ASTILLEROS DE CADIZ, S. A. Builder's Signature. Date 26 OCT. 1954

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

Is this installation a duplicate of a previous case. modified. If so, state name of vessel. S.S. "ANCUD"

Plans. Are approved plans forwarded herewith. Yes. If not, state date of approval. -

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 has been fitted under Special Survey in accordance with the approved and "as fitted" plans and the Secretary's Letters.

The materials and the workmanship are good.

On completion, the equipment was tried under full working conditions and tested in accordance with the Rule requirements and found satisfactory.

This installation in my opinion is suitable for a Classed Vessel.

*Noted JS
1/12/54*

Total Capacity of Generators 120 ✓ Kilowatts.

The amount of Fee ... Ptas. 12.100 : When applied for, Instalments. 10

Travelling Expenses (if any) £ : : When received, 10

W. M. Russell
Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRIDAY 3 DEC 1954

Assigned See Rpt 4.8.

30.1251—Transfer. (MADE AND PRINTED IN ENGLAND.) (The Surveys are requested not to write on or below the space for Committee's Minute.)