

Rpt. 13.

No. 13643

## REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report.....19.....

When handed in at Local Office.....18.3.47.....

Received at London Office.....29 MAR 1947.....

No. in Survey held at Monfalcone

Reg. Book.

Date, First Survey 6.6.46Last Survey 28.2.47(Number of Visits 10)on the M/s Antonio ZottiBuilt at MonfalconeBy whom built Cant. Riv. dell'AdriaticYard No. 1329Tons { Gross 6200  
Net 3621Owners "Italia" S.A. di Navigaz.Port belonging to Genoa

When built

Electrical Installation fitted by CRDA Officine ElettromeccanicheContract No. 1329When fitted 1946Is vessel fitted for carrying Petroleum in bulk yesIs vessel equipped with D.F. no E.S.D. no Gy.C. no Sub.Sig. noHave plans been submitted and approved yesSystem of Distribution Two wiresVoltage of supply for Lighting 110Heating..... Power 110 Direct or Alternating Current, Lighting direct Power direct

If Alternating Current state frequency..... Prime Movers,

has the governing been tested and found efficient when the whole load is suddenly thrown on and off..... Are turbine emergency governors fitted with a

trip switch as per Rule..... Generators, are they compound wound no, are they level compounded under working conditions..... Equilibrium  
Polesif not compound wound state distance between generators 10' and from switchboard 15' Where more than one generator is fitted are theyarranged to run in parallel no, are shunt field regulators provided yes Is the compound winding connected to the negative or positive poleHave machines over 100 kw. been inspected by the Surveyors during manufacture and testing none Have certificates oftest for machines under 100 kw. been supplied yes and the results found as per rule yes Are the lubricating arrangements and the constructionof the generators as per rule yes Position of Generators in ER Port side platformis the ventilation in way of generators satisfactory yes are they clear of inflammable material yes, if situated

near unprotected combustible material state distance from same horizontally..... and vertically..... are the generators protected from mechanical

injury and damage from water, steam and oil yes, are the bedplates and frames earthed yes and the prime movers and generators in metalliccontact yes Switchboards, where are main switchboards placed near Generatorsare they in accessible positions, free from inflammable gases and acid fumes yes, are they protected from mechanical injury and damage from water, steamand oil yes, if situated near unprotected combustible material state distance from same horizontally..... and vertically....., what insulationmaterial is used for the panels porcelain and Mica on steel, if of synthetic insulating material is it an Approved Type....., if ofsemi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule..... Is the frame effectually earthed yesIs the construction as per Rule yes, including accessibility of parts yes, absence of fuses on the back of the board double  
face, individual fusesto pilot and earth lamps, voltmeters, etc. yes locking of screws and nuts yes, labelling of apparatus and fuses yes, fuses on the "dead"side of switches yes Description of Main Switchgear for each generator and arrangement of equaliser switches Double pole circuitbreaker with instantaneous and time overload deviceand for each outgoing circuit Double pole, double throw, link switches with fuse to each pole for circuitsbelow 100 A and with overload circuit breaker to the circuits above 100 AAre compartments containing switchboards composed of fire-resisting material or lined as per Rule ER Instruments on main switchboard 3ammeters 4 voltmeters..... synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to theequaliser connection yes Earth Testing, state means provided Voltmeters-meggers



Switches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an approved type Disced, are all fuses labelled as per Rule yes, are the reversed current protection devices connected on the pole opposite to the equaliser connection yes, have they been tested under working conditions yes. Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule yes. Cables, are they insulated and protected as per the appropriate Tables of the Rules 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 3 V, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets yes. Are paper insulated and varnished cambric insulated cables sealed at the exposed ends none with insulating compound yes or waterproof insulating tape 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 cables laid under machines or floorplates yes, if so, are they adequately protected yes. Are cables in machinery spaces, galleys, laundries, etc., lead covered yes or run in conduit also. State how the cables are supported and protected Lead covered & steel braided in ER and accommodation. Lead covered & steel braided in tubes on deck and bridge space.

Are all lead sheaths, armouring and conduits effectually bonded and earthed yes. Refrigerated chambers, are the cables and fittings as per Rule 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 and with what material Lead bushes. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule yes. Emergency Supply, state position none and method of control yes.

Navigation Lamps, are they separately wired yes controlled by separate double pole switches yes 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. Secondary Batteries, are they constructed and fitted as per Rule yes, are they adequately ventilated yes. Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof yes. Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present yes, if so, how are they protected Gas tight lamps & Gas tight tubes and where are the controlling switches fitted outside the space, are all fittings suitably ventilated yes, are all fittings and accessories constructed and installed as per Rule yes. Searchlight Lamps, No. of 1, whether fixed or portable fixed, are their fittings as per Rule yes. 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 yes and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil yes, if situated near unprotected combustible material state minimum distance from same horizontally yes and vertically 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 services been supplied and the results found as per Rule yes. Control Gear and Resistances, are they constructed and fitted as per Rule yes. Lightning Conductors, where required are they fitted as per Rule yes. Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with yes, are all fuses of the cartridge type yes are they of an approved type yes. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type yes. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule yes, are they suitably stored in dry situations yes. Insulation Tests, has the insulation resistance of all circuits and apparatus been megger tested and found satisfactory yes.

#### PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	2	20 x 2	110	182	400	1 Steam Eng. 1 Diesel Eng.	Diesel oil	
EMERGENCY ...	—	—	—	—	—			
ROTARY TRANSFORMER	—	—	—	—	—			

#### GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area of Conductor Sq. inch or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR 1 & 2 ...	20	1	147	182	203	90	rubber	Lead cov. & steel braided
" " EQUALISER ...	—	—	—	—	—	—	—	—
EMERGENCY GENERATOR ...	—	—	—	—	—	—	—	—
ROTARY TRANSFORMER: MOTOR ...	—	—	—	—	—	—	—	—
" " GENERATOR ...	—	—	—	—	—	—	—	—

#### MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS ...									
Work Shop SB	No 5		1	38	68.3	83	100	rubber	Lead covered steel braided
ER Power SB	No 6	x	1	116	164	220	90	"	" " " "
Deck distrib. Board	No 7	x	1	147	190	278	30	"	" " " "
ER distrib. Board	No 10		1	38	46	83	120	"	" " " "
Substation Forw	No 11		1	8	4	35	740	"	" " " "
" Centre	No 12		1	38	43	83	450	"	" " " "
" Aft	No 13		1	48	46	95	210	"	" " " "
Second Battery	No 16		1	445	7	24	30	"	" " " "

#### LIGHTING AND HEATING, ETC., CABLES.

WIRELESS SB No. 8	1	42	30	87	410	"	" " " "
NAVIGATION LIGHTS S.B. 15	1	445	27	24	410	"	" " " "
LIGHTING AND HEATING Searchlight No. 4	1	60	60	115	900	"	" " " "
Substation aft No. 14	1	21.5	26	58	220	"	" " " "
Shore connection	1	147	182	197	120	"	" " " "
Terminal Circuits	1	1.5	(for all circuits)			"	Lead covered

#### MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Eng Turning	1	8.5	1	38	78	83	130	rubber Lead covered steel braided
Oil Fuel Feed Pumps	2	5	1	11	34	48	110	" " " "
Oil Purifiers	3	5	1	11	32	48	80	" " " "
Work Shop	3	3	1	445	13	24	220	" " " "



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

Officina Elettromeccaniche

*[Signature]*

Electrical Engineers.

Date *March 11/1947*

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass *300'*

Minimum distance between electric generators or motors and steering compass *300'*

The nearest cables to the compasses are as follows:—

A cable carrying *3* Ampères *10* feet from standard compass *14* feet from steering compass.

A cable carrying *one lamp* *in the* feet from standard compass *one lamp* feet from steering compass.

A cable carrying Ampères feet from standard compass feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power *yes*

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted *yes*

The maximum deviation due to electric currents was found to be *none* degrees on course in the case of the standard compass, and degrees on course in the case of the steering compass.

CANTIERI RIUNITI DELL'ADRIATICO

Officina Elettromeccaniche

*[Signature]*

Builder's Signature.

Date *March 11/1947*

Is this installation a duplicate of a previous case *no* If so, state name of vessel

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

*equipment has been fitted on board under special survey in accordance with the approved plans. The material and workmanship are good. The whole installation has been examined in working condition. Insulating condition tested and found in order.*

Total Capacity of Generators *40* Kilowatts.

The amount of Fee ...	£	:	:	When applied for,
				.....19.....
Travelling Expenses (if any)	£	:	:	When received,
				.....19.....

*[Signature]*  
Surveyor to Lloyd's Register of Shipping

MAR 11 JUL 1947

Committee's Minute

Assigned *See F.E. mch. rpt.*