

Rpt. 13.

No. 9806

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

20 DEC 1932

Date of writing Report 5/12/32 When handed in at Local Office 15/12/32 Port of TRIESTE

No. in Survey held at TRIESTE Date, First Survey 30/1/31 Last Survey 30/11/32

Reg. Book. 60412 on the QUAD. S. T/S. CONTE DI SAVOIA

Built at TRIESTE By whom built CANT. RIUNITI DELL'ADRIATICO Yard No. 483 When built 1932

Owners ITALIA (FLOTTE RIUNITE - COMULICH) Port belonging to GENOVA.

Electric Light Installation fitted by CANT. RIUNITI DELL'ADRIATICO Contract No. — When fitted 1932

Is the Vessel fitted for carrying Petroleum in bulk NO

System of Distribution TWO WIRE SYSTEM. MAIN RINGS IN DECK II.

Pressure of supply for Lighting 220 volts, Heating 220 volts, Power 220 volts.

Direct or Alternating Current, Lighting DIRECT Power DIRECT

If alternating current system, state frequency of periods per second —

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off YES

Generators, do they comply with the requirements regarding rating YES, are they compound wound SHUNT

are they over compounded 5 per cent. —, if not compound wound state distance between each generator —

Where more than one generator is fitted are they arranged to run in parallel YES, is an adjustable regulating resistance fitted in

series with each shunt field YES

Are all terminals accessible, clearly marked, and furnished with sockets YES, are they so spaced or shielded that they cannot be accidentally earthed,

short circuited, or touched NO Are the lubricating arrangements of the generators as per Rule YES

Position of Generators IN AUXILIARY ENGINE ROOM.

is the ventilation in way of the generators satisfactory YES, are they clear of all inflammable material YES

if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators

— and —, are the generators protected from mechanical injury and damage from water, steam or oil YES

are their axes of rotation fore and aft YES

Earthing, are the bedplates and frames of the generating plant efficiently earthed YES, are the prime movers and

their respective generators in metallic contact YES

Main Switch Boards, where placed IN GENERATORS ENGINE SPACE

If the generators and main switchboard are not placed in the same compartment, is each generator provided with

a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard —

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes YES

are they protected from mechanical injury and damage from water, steam or oil YES, if situated near unprotected

woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards — and —

are they constructed wholly of durable, non-ignitable non-absorbent materials YES, is all insulation of high dielectric strength and of

permanently high insulation resistance YES, if semi-insulating material is used, are all conducting parts insulated from the slab

with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework YES

and is the frame effectively earthed YES. Are the fittings as per Rule regarding: — spacing or shielding of live parts

YES, accessibility of all parts YES, absence of fuses on back of board YES, proportion of omnibus

bars —, individual fuses to voltmeter, pilot or earth lamp YES, connections of switches YES

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches DOUBLE POLE CIRCUIT

BREAKER WITH OVERLOAD & RETURN CURRENT TRIP WITH INTERLOCKED EQUALIZER FOR MAIN CABLES, 12

DOUBLE POLE AUTOMATIC CIRCUIT BREAKER MAJOR SYSTEM, 10 AUTOMATIC CIRCUIT BREAKER FOR EACH

OTHER OUTGOING CIRCUIT, SLIDING CIRCUIT CHANGER FOR EACH MAIN CIRCUIT OF

TURBOGENERATOR.

Instruments on main switchboard 22 ammeters 13 voltmeters — synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

LAMPS

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules YES

Joint Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule YES

Cables: Single, twin, concentric, or multicore SING. & TWIN are the cables insulated and protected as per Tables IV or V of the Rules YES

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 3% LIGHT, 5% POWER

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets

YES

Paper Insulated Cables. If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound

YES

Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage

YES

Support and Protection of Cables, state how the cables are supported and protected AS PER SECTION 6 PARAG. 3.

OF THE RULES FOR ELECTRIC FITTINGS 1932-33 SATISFACTORY.

If cables are run in wood casings, are the casings and caps secured by screws YES, are the cap screws of brass YES, are the cables run in separate grooves YES. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII YES

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements YES

Joints in Cables, state if any, and how made, insulated, and protected JOINT BOXES

CONSTRUCTED AS PER RULES REQUIREMENTS.

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands

WATERTIGHT GLANDS

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed YES state the material of which the bushes are made LEAD

Earthing Connections, state what earthing connections are fitted and their respective sectional areas

—, are their connections made as per Rule YES

Alternative Lighting, are the groups of GYROSCOPIC lights in the propelling machinery space arranged as per Rule YES.

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven THE TWO EMERGENCY GROUP ARE FITTED ON DECK D. SWITCH BOARD CONNECTED TO THE MAIN SWITCHBOARD OR EMERGENCY GEN. WITH DOUBLE-THROW SWITCH 15 CIRCUIT FOR LIGHT & 29 FOR POWER (FIAT SOLID INJECTION MOTORS DRIVEN ELECTRICALLY)

Navigation Lamps, are these separately wired YES, controlled by separate switch and separate fuses YES, are the fuses double pole YES, are the switches and fuses grouped in a position accessible only to the officers on watch YES

has each navigation lamp an automatic indicator as per Rule YES

Secondary Batteries, are they constructed and fitted as per Rule YES

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight YES, are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected NONE

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected NONE

—, how are the cables led

where are the controlling switches situated —

Searchlight Lamps, No. of 4, whether fixed or portable FIXED, are their fittings as per Rule YES

Arc Lamps, other than searchlight lamps, No. of —, are their live parts insulated from the frame or case —, are their fittings as per Rule —

Motors, are their working parts readily accessible YES, are the coils self-contained and readily removable for replacement YES

are the brushes, brush holders, terminals and lubricating arrangements as per Rule YES, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material YES

are they protected from mechanical injury and damage from water, steam or oil YES, are their axes of rotation fore and aft YES

if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type —, if not of this type, state distance of the combustible material horizontally or vertically above the motors — and —

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule YES

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule YES

Ships carrying Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings —

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office —

2 additional Turbo generator sets each 350 KW fitted 1/24

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	4	250	220	3860	300/760	TURBINE	—	—
MAIN	2	250	220	3860	185	DIESEL ENGINE	HAVY OIL	—
EMERGENCY	2	100	110/220	910/455	1200	DIESEL ENGINE	HAVY OIL	—
ROTARY TRANSFORMER	2	300	110/220	2730	800	ELECTRIC MOTOR	(LIGHTING)	—
	2	2.5	24/220	103	1500	ELECTRIC MOTOR	(LOWER PRESSURE)	—

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.)	Insulated with	HOW PROTECTED.	
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.				
MAIN GENERATOR TO MAIN BUS-BOARD	4	670	127	2.60	—	4165	25.60	VULCANIZED RUBBER	LEAD COVERED & STEEL BRAIDED	
EMERGENCY GENERATOR	5	670	127	2.60	—	2975	141.00			
ROTARY TRANSFORMER	6	670	127	2.60	—	3570	116.00			
ROTARY TRANSFORMER	1	485	91	2.60	455	461	14			
ROTARY TRANSFORMER	3	670	127	2.60	1620	1785	16			
ROTARY TRANSFORMER	5	670	127	2.60	2975	2730	30			
ROTARY TRANSFORMER	6	670	127	2.60	—	3570	24.00			
BOILER ROOM & ENGINE ROOM	4	670	127	2.60	—	4165	20.80			
BOILER ROOM & ENGINE ROOM	1	670	127	2.60	310	675	58			
BOILER ROOM & ENGINE ROOM	1	670	127	2.60	517	595	43			
BOILER ROOM & ENGINE ROOM	1	670	127	2.60	430	595	17			
BOILER ROOM & ENGINE ROOM	1	670	127	2.60	372	595	20			
BOILER ROOM & ENGINE ROOM	1	670	127	2.60	440	595	121			
BOILER ROOM & ENGINE ROOM	1	670	127	2.60	494	595	25			
BOILER ROOM & ENGINE ROOM	1	670	127	2.60	429	595	33			
BOILER ROOM & ENGINE ROOM	1	670	127	2.60	390	595	28			
BOILER ROOM & ENGINE ROOM	1	670	127	2.60	465	595	33			
BOILER ROOM & ENGINE ROOM	1	670	127	2.60	409	595	48			
WIRELESS	2	6.45	7	1.10	74	31	220	VULCANIZED RUBBER	LEAD COVERED & STEEL BRAIDED	
SEARCHLIGHT	1	38.7	19	1.60	70	83	340			
MASTHEAD LIGHT	2	2.5	1	1.90	10	32	190			
SIDE LIGHTS	2	2.5	1	1.90	10	32	54			
COMPASS LIGHTS	1	1.5	1	1.4	0.5	10	40			
POOP LIGHTS	2	2.5	1	1.90	10	32	170			
CARGO LIGHTS	NONE									
ARC LAMPS	NONE									
HEATERS	1	77.5	37	1.60	126	130	52.00			

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.	
		No. Per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.				
BALLAST PUMP ...	2	1	387	91	2.35	376	384	100	VULCANIZED RUBBER	LEAD COVERED & STEEL BRAIDED	
MAIN BILGE LINE PUMPS	2	1	387	91	2.35	153	384	128			
GENERAL SERVICE PUMP	SEE SEPARATE SHEETS										
EMERGENCY BILGE PUMP	2	1	258/485	61/19	2.35/1.85	263/98	282/97	34/45			
SANITARY PUMP ...	2	1	322	61	2.60	301	332	40			
CIRC. SEA WATER PUMPS	4	1	129	37	2.10	173	184	100			
CIRC. FRESH WATER PUMPS...	2	1	194	37	2.60	226	240	30			
AIR COMPRESSOR ...	2	1	64.5	19	2.10	115	118	22			
FRESH WATER PUMP ...	2/2	1/2	258/485	19/7	1.30/1.60	78/30	68/92	80/30			
ENGINE TURNING GEAR...	6	1	25.8	19	1.30	48/12	68	40			
ENGINE REVERSING GEAR	NONE										
LUBRICATING OIL PUMPS	1	1	38.7	19	1.60	70	83	32	VULCANIZED RUBBER	LEAD COVERED & STEEL BRAIDED	
OIL FUEL TRANSFER PUMP...	2	1	129	37	2.10	184	184	70			
WINDLASS ...	SEE NEXT SHEET										
WINCHES, FORWARD	6	1	77.5	37	1.60	138	160	14			
WINCHES, AFT	NONE										
STEERING GEAR—											
(a) Motor Generator	1	1	332	61	2.60	318	332	135			
(b) MAIN MOTOR	1	1	258	61	2.35	284	288	16			
WORKSHOP MOTOR	7	2	14.5	7	1.60	46	42.6	40			
VENTILATING FANS	10	1	387	91	2.35	376	384	176			
OIL FUEL PUMP	2	2	2	1	1.90	10	24	16			
E.V. FEED PUMP.	4	1	1.5	1	1.7	7	10	6			
FEED WATER TRANS.P.	2	2	4.5	7	0.90	22	24	50			
AIR COMPRESSOR	1	1	97	37	1.85	150	152	80			
FRESH WATER TRANS.P.	4	1	2	1	1.9	12	13	8			
RISE/JECTOR	2	1	322	61	2.60	330	332	80			

All Conductors are of annealed copper conforming to British Standard Specification No. 7.

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description of the

CANTIERE SAN MARCO

ing Mayuno Monteg...

Electrical Engineers.

Date 14-XII-1932

COMPASSES.

Distance between electric generators or motors and standard compass 93 METER

Distance between electric generators or motors and steering compass 90 "

The nearest cables to the compasses are as follows:—

A cable carrying 32 Ampères 18 M. feet from standard compass 10 MET. feet from steering compass.

A cable carrying 2 Ampères 18 M. feet from standard compass 10 M. 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 Non 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
CANTIERE SAN MARCO

ing Mayuno Monteg...

Builder's Signature.

Date

Is this installation a duplicate of a previous case No If so, state name of vessel —

General Remarks (State quality of workmanship, opinions as to class, &c.)

This electric light, power, and heating installations were in accordance with the Society Rules.

The material and the workmanship are good. The whole installation was examined under full working condition and the insulation, resistance, motors, and switchgear, tested and found in order.

Spare gear examined as per attached list and found in order and complete.

The lower pressure installation of 25 Volts has been carried out under special survey, all cables are insulated with vulcanized rubber and protected with steel braided and lead covered, the installation has been tested and found in order.

Total Capacity of Generators 5100 Kilowatts.

The amount of Fee ...

15.170

When applied for, 26/11/32

Travelling Expenses (if any) £

When received, 15/12/32

Committee's Minute

Assigned

6 Dec. 1932

Surgeon to Lloyd's Register Shipping.