

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

25 AUG 1934

Date of writing Report 20/8 1934 When handed in at Local Office 21/8 1934 Port of TRIESTE

No. in Survey held at Monfalcone Date, First Survey Aug 8 Last Survey Aug 12 1934

Reg. Book, 78722 on the Twin Sc. M.D. "BONZO" (Number of Visits...)

Built at Monfalcone By whom built Cant. Rimitti dell'Adriatico Yard No. 241 Tons { Gross 8177 Net 4917 When built 1934

Owners Cant. Rimitti dell'Adriatico Port belonging to Trieste

Electric Light Installation fitted by Officine Elettromeccaniche di Monfalcone Contract No. When fitted 1934

## System of Distribution

Pressure of supply for Lighting 110 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 yes

are they over compounded 5 per cent. yes, 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 yes Are the lubricating arrangements of the generators as per Rule yes

## Position of Generators

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 the engine room

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 micaite 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 yes, 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 breakers with overload and return current trips, and single pole equalizer switches. For outgoing circuits, fuse on each pole and double pole switches.

Instruments on main switchboard 14 ammeters 6 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



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**Cables:** Single, twin, concentric, or multicore *single* 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 *12.8 Volts*

**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 *supported by clips and protected by heavy painted conduits & galvanised iron tubes.*

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 *in gas tight junction boxes*

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

**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 *yes*

are their connections made as per Rule *yes*

**Alternative Lighting,** are the groups of 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 *yes*

**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 storerooms 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 *yes*

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *yes, gas tight lamps*

how are the cables led *insulated wire, lead covered, braided and armoured*

where are the controlling switches situated *outside the space.*

**Searchlight Lamps, No. of** *1*, whether fixed or portable *portable*, are their fittings as per Rule *yes*

**Arc Lamps,** other than searchlight lamps, No. of *1*, are their live parts insulated from the frame or case *yes*, are their fittings as per Rule *yes*

**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 *yes*, if not of this type, state distance of the combustible material horizontally or vertically above the motors *yes* and *yes*

**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 *yes*

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

PARTICULARS OF GENERATING PLANT.									
DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.		
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN	2	90	220	409	270	FIAT 2 C. 2.9	Diesel oil		
Assistant	1	60	220	278	270	FIAT 2 C. 2.9	Diesel oil		
Emergency	1	6	110	55	550	Steam Engine			
ROTARY TRANSFORMER	2	12	110	109	1600				

LIGHTING AND HEATING CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. mm.	COMPOSITION OF STRAND.		Total Maximum Current. Amps.	Approximate Length. (Lead and Return.) Meters.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR	2	221	37	2.35	409	63	Rubber	Lead covered, braided and armoured
	EQUALISER CONNECTIONS	1	100.5	37	2.35	245	31		
	MAIN GENERATOR	1	242.5	61	2.25	275	40		
	EMERGENCY GENERATOR	1	21.5	19	1.8	55	40		
	ROTARY TRANSFORMER	1	59.73	19	2	109	18		
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	1	1.3	3	0.75	1.8	48		
	BOILER ROOM	1	4.3	3	0.75	1.8	30		
	Galley	1	51.1	19	1.85	95	20		
	WIRELESS	1	11.4	7	1.42	14	214		Lead covered, braided, armoured & galv. tubes
	SEARCHLIGHT	1	14.87	7	1.6	14	292		
	MASTHEAD LIGHT	1	1.3	3	0.75	0.36	165		
	SIDE LIGHTS	1	1.3	3	0.75	0.36	24		
	COMPASS LIGHTS	1	1.3	3	0.75	0.36	10		
	POOP LIGHTS	1	1.3	3	0.75	0.36	250		
	CARGO LIGHTS	1	1.3	3	0.75	3.	115		
	Arc Lamps								
	HEATERS	1	11.4	7	1.42	32	4		

MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. mm.	COMPOSITION OF STRAND.		Total Maximum Current. Amps.	Approximate Length. (Lead and Return.) Meters.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP	1	25.2	19	1.3	59	19	Rubber	Lead covered, braided and armoured
	MAIN BILGE LINE PUMPS	2	25.2	19	1.3	59	306		
	GENERAL SERVICE PUMP	1							
	EMERGENCY BILGE PUMP	1							
	SANITARY PUMP	1	11.4	7	1.42	32	15		
	CIRC. SEA WATER PUMPS	2	147.11	37	2.25	198	29		
	CIRC. FRESH WATER PUMPS	1	1.3	3	0.75	4	21		
	Refrigerating COMPRESSOR	1	11.4	7	1.42	34	6		
	FRESH WATER PUMP	1	1.3	3	0.75	6	39		
	ENGINE TURNING GEAR	2	11.4	7	1.42	30	33		
	ENGINE DRAINING GEAR	1							
	LUBRICATING OIL PUMPS	1							
	OIL FUEL TRANSFER PUMP	1	6.65	7	1.1	28	99		
	WINDLASS	1							
	Winches, Forward	1							
	Winches, Aft	1							
	STEERING GEAR	1							
	(a) MOTOR GENERATOR								
	(b) MAIN MOTOR	2	51.1	19	1.85	98	67		
	WORKSHOP MOTOR	4	4.45	7	0.9	16	20		
	VENTILATING FANS galley	1	4.45	7	0.9	3	22		
	Prime pump	1	1.3	3	0.75	8	7		
	Oil fuel separator	1	1.3	3	0.75	8	19		
	Oil pump	1	1.3	3	0.75	4	11		
	Lubr. oil separator	1	1.3	3	0.75	8	23		
	" " separator	1	1.3	3	0.75	8	20		



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.

*Officer E. Brown* Electrical Engineers.

Date *20. VIII. 1934*

#### COMPASSES.

Distance between electric generators or motors and standard compass *85 mt.*

Distance between electric generators or motors and steering compass *80 mt.*

The nearest cables to the compasses are as follows:—

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

A cable carrying ☒ Ampères ☒ feet from standard compass ☒ 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 ☒

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

The maximum deviation due to electric currents was found to be ☒ degrees on ☒ course in the case of the standard compass, and ☒ degrees on ☒ course in the case of the steering compass.

Builder's Signature.

Date

Is this installation a duplicate of a previous case ☒ If so, state name of vessel *...*

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

*The installation complies with the Rule requirements and the workmanship is good. The installation has been tested under working condition and found satisfactory.*  
*The insulation has been tested as per Section 16 with satisfactory results.*

Total Capacity of Generators *246* Kilowatts.

The amount of Fee *£ 20-* When applied for, *2/8 19 34*

Travelling Expenses (if any) *£ 18.10 34* When received, *18.10 34*

*W. Minnam*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned *See Mch. 7. 1934* *Th. 10. 5. 34*

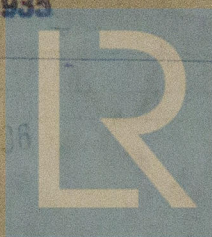
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