

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 25 AUG 1934

Date of writing Report 2/8 1934 When handed in at Local Office 2/8 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. Rimanti dell'Adriatico Yard No. 241 Tons { Gross 8177 Net 4917 When built 1931

Owners Cant. Rimanti dell'Adriatico Port belonging to Trieste

Electric Light Installation fitted by Officine Elettromeccaniche di Monfalcone Contract No. When fitted 1931

System of Distribution *two wires*

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 *Engine room platform*

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 *yes*, 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 *yes*

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 *yes* and *yes*

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*

yes, accessibility of all parts *yes*, absence of fuses on back of board *yes*, proportion of omnibus bars *yes*

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.

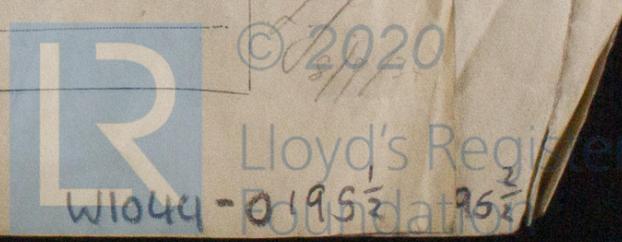
For outgoing circuits, fuse on each pole and double pole switches.

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*



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 conductors & galvanized 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

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule yes, are their connections made 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 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 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.

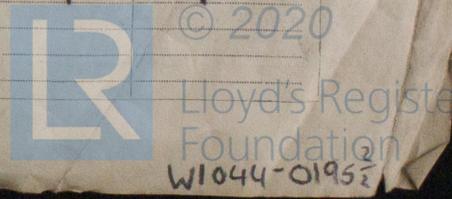
DESCRIPTION OF GENERATOR.	No of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	90	220	409	270	FIAT 2 C. 2.9	Diesel oil	
Assistant	1	60	220	270	270	FIAT 2 C. 2.9		
Emergency	1	6	110	55	550	Steam Engine		
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) feet. mts.	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	205	31		
	ASSISTANT 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		
	Accommodation								
	No. 1	1	128	37	2.1	179	40		
	" 2	1	196	37	2.6	242	44		
	" 3	1	38.2	19	1.6	38	26		
	" 4	1	21.5	19	1.2	52	25		
	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) feet. mts.	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	35.2	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	2.35	193	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 DEWASING GEAR	1							
	LUBRICATING OIL PUMPS	1							
	OIL FUEL TRANSFER PUMP	1	6.65	7	1.1	28	99		
	WIRELESS								
	Winches, Forward								
	Winches, Aft								
	STEERING GEAR								
	(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		
	" " pump	1	1.3	3	0.75	4	11		
	Lubr. oil " "	1	1.3	3	0.75	4	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.

Officine Elettronica e Radio Telegrafica 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.

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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, &c.)

*The installation complies with the Rules 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 ... *£ 200* When applied for, *2/8 19 34*

Travelling Expenses (if any) *£ 18.10.34* When received, *18.10.34*

W. Minicom
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned *See Mch. 7.8.34*
Tr. 10.5.34

FRI. 19 OCT 1934

FRI. 28 JUN 1935

FRI. 2 AUG 1935

TUE. 4 FEB 1936

WED. 15 APR 1936



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Im 238.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)