

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report *Jan 30 1926* When handed in at Local Office *Feb 2 1926* Port of *Trieste*

No. in Survey held at *Moufaloune* Date, First Survey *18/2/1925* Last Survey *13/1/1926*  
Reg. Book. (Number of Visits *two*)

*20767* on the *M. S. Giulia* Tons { Gross *5929*  
Net *3737*

Built at *Moufaloune* By whom built *Laut. Nav. Triest.* Yard No. *138* When built *1925*

Owners *Com. Soc. Triest. di Navigaz.* Port belonging to *Trieste*

Electric Light Installation fitted by *Lautier Navale Triestino* Contract No. When fitted *1926*

System of Distribution *Double pole* ✓

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 overload *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 and clearly marked *yes*, are they so spaced or shielded that they cannot be accidentally earthed,

or short circuited *yes* Are the lubricating arrangements of the generators as per Rule *yes*

Position of Generators *In Engine room platform. 2 generators port, one starb.*, 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 axis 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 Engine room port*

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, incombustible non-absorbent materials *yes*, is all insulation of high dielectric strength and of

permanently high insulation resistance *Slate*, if semi-insulating material is used, are all conducting parts connected to one pole

insulated from the slab with mica or micanite and the slab similarly insulated from its framework *both poles are insulated*, and is the

frame effectively earthed *yes* Are the following fittings as per Rule, viz.:— 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 *Each generator*

*has a two pole automatic circuit breaker with interlocked switches for*

*equalizer. Automatic switch to one pole and a link switch and fuse*

*on other pole for each circuit for power. Double pole link switches with fuses*

*to each pole for steering magnet, heating, and light. A double pole link*

*switch alternate for Rotary transformer as to charge the accumulators with*

*fuses to each pole. 12 ammeters 5 voltmeters 1 synchronising device for paralleling purposes.*

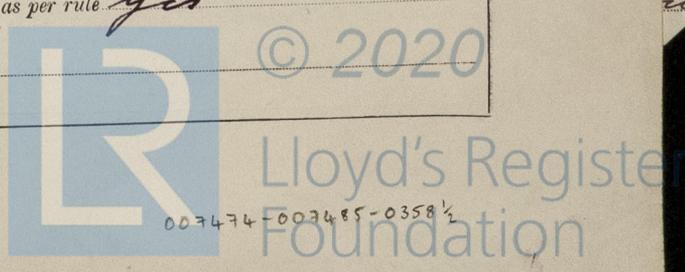
Instruments on main switchboard

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

*ohmmeter*

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

Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule *yes*



**Insulation of Cables, state type of cables, single or twin** *twins* are the cables insulated and protected as per Tables III or IV of the Rules *yes*

**Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load**

**Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.007 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** *none*

**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** *armoured or lead covered cables*

*supported by clips*

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

**Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements** *no lights fitted*

**Joints in Cables, state if any, and how made, insulated, and protected** *none*

**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 Positions, 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 *hard wood for lead covered cables*

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

*are their connections made as per Rule ✓.*

**Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule** *yes. Also 4 lamps at 220 V.*

**Emergency Supply, state position and method of control of the emergency supply and how the generator is driven** *Accumulator in a special room on the bridge deck*

**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*, are separate screens provided for the use of oil and electric side lights *yes*

are separate oil lanterns provided for the mast head lights and side lights *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 *only cables; protected by iron casing or tube.*

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** *none*, whether fixed or portable *✓*, are their fittings as per Rule *✓*.

**Are 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 axis 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 as per Rule** *yes*

**Lightning Conductors, where lightning conductors are required, are these fitted as per Rule** *✓*.

**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 *✓*

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	3	66	220	300	400	B&W Diesel 4C.S.A.	Diesel oil	
AUXILIARY								
EMERGENCY	Accumulator	110		40	-			
ROTARY TRANSFORMER	1	13	110	118	1400	18kw Electric Motor		

LIGHTING AND HEATING CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor Sq. mm.	COMPOSITION OF STRAND.		Total Maximum Current Ampères.	Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
12.13.14	MAIN GENERATOR	1	322	61	2.6	300	60	rubber	Armoured
	AUXILIARY GENERATOR								
22	EMERGENCY GENERATOR	1	10	7	1.3	32240	170	rubber	Armoured
10	ROTARY TRANSFORMER	1	38.7	19	1.6	83	35	rubber	Armoured
	AUXILIARY SWITCHBOARDS								
15	ENGINE ROOM	1	4.5	7	0.9	19	30	rubber	Armoured
	BOILER ROOM								
16	Officers Accom.	1	4.5	7	0.9	14	400	rubber	Arm. & lead cov.
17	Eng. Accom. & Saloon	1	4.5	7	0.9	22	300	rubber	Arm. & lead cov.
18	Crew & Steering box	1	4.5	7	0.9	23	150	rubber	Arm. & lead cov.
21	General Serv. plug. Dk	1	25	19	1.3	60	80	rubber	Armoured
11	220 V lamps in E.R.	1	1.5	1	1	7	30	rubber	Armoured
20	WIRELESS	1	6.4	7	1.1	14	170	rubber	Armoured
	SEARCHLIGHT								
16	MASTHEAD LIGHT	1	1.3	1	1	1	240	rubber	Armoured
16	SIDE LIGHTS	1	1.3	1	1	1	60	rubber	Armoured
16	COMPASS LIGHTS	1	1.3	1	1	0.3	25	rubber	lead covered
16	POOP LIGHTS	1	1.3	1	1	1	250	rubber	Armoured
19	CARGO LIGHTS	1	4.5	7	0.9	22	250	rubber	Armoured
	ARC LAMPS								
182	HEATERS 220 V.	1	97.549	37.19	1.85	1462.90	400	rubber	armoured

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor Sq. mm.	COMPOSITION OF STRAND.		Total Maximum Current Ampères.	Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
5	BALLAST PUMP	1	48.5	19	1.85	95	80	rubber	Armoured
5	MAIN BILGE LINE PUMPS	1	6.5	7	1.1	19	80	rubber	Armoured
	GENERAL SERVICE PUMP								
5	EMERGENCY BILGE PUMP	1	14.5	7	1.6	40	60	rubber	Armoured
	SANITARY PUMP								
4	CIRC. SEA WATER PUMPS	2	38.7	19	1.6	75	40	rubber	Armoured
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR								
4	FRESH WATER PUMP	1	1.95	1	1.6	8	20	rubber	Armoured
5	ENGINE TURNING GEAR	1	6.5	7	1.1	19	40	rubber	Armoured
	ENGINE REVERSING GEAR								
4	LUBRICATING OIL PUMPS	2	14.5	7	1.6	40	50	rubber	Armoured
5	OIL FUEL TRANSFER PUMP	1	26	19	1.3	59	40	rubber	Armoured
8	WINDLASS	1	193	37	2.6	208	480	rubber	Armoured
7	WINCHES, FORWARD Sw. B.	8	193x2	37	2.6	450	90	rubber	Armoured
6	WINCHES, AFT Sw. B.	9	193x2	37	2.6	450	90	rubber	Armoured
9	STEERING GEAR	1	25.8	19	1.3	60	250	rubber	Armoured
	WORKSHOP MOTOR								
	VENTILATING FANS								
3	Refrigerating Eng. S.B	4	130	37	2.1	150	25	rubber	Armoured
3	From Refrig. Eng. Sw. B	3	4.5	7	0.9	13	80	rubber	Armoured
7	From Aux. S.B. to Winches	8	48x38	19	1.85-1.6	92x63	400	rubber	Armoured
6	From Aux. S.B. to Winches	9	48x38	19	1.85-1.6	92x63	400	rubber	Armoured
4	To Aux. Sw. B. I for power	9	193	37	2.6	146	40	rubber	Armoured
5	To Aux. Sw. B. II for power	5	322	61	2.6	236	90	rubber	Armoured
4	Oil filter	1	4.5	7	0.9	6	30	rubber	Armoured
5	Sulphurous Oil Pump	1	6.45	7	1.1	19	40	rubber	Armoured

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.

Cantiere Navale Triestino

*[Signature]*

Electrical Engineers.

Date

COMPASSES.

Distance between electric ~~generators or~~ motors and standard compass 30 feet

Distance between electric generators or motors and steering compass 35 feet

The nearest cables to the compasses are as follows:—

A cable carrying 6 Ampères 8 feet from standard compass 8 feet from steering compass.

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

A cable carrying 0.3 Ampères in the feet from standard compass in the 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. no

The maximum deviation due to electric currents was found to be 1/2 degrees on 1/2 course in the case of the standard compass, and 1/2 degrees on 1/2 course in the case of the steering compass.

Cantiere Navale Triestino

*[Signature]*

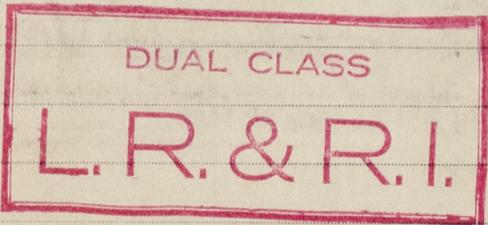
Builder's Signature.

Date

Is this installation a duplicate of a previous case. no If so, state name of vessel 1/2.

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

*This installation has been made in accordance with the Rule. The material and workmanship are good; the whole installation and generators have been tested under full working condition and found satisfactory.*



It is submitted that this vessel is eligible for THE RECORD. Elec. light.

*[Signature]*  
12/2/26

Total Capacity of Generators 198 Kilowatts

The amount of Fee ... .. £14383.-	{ When applied for, 1/21 1926 When received, 16-4-26             }
Travelling Expenses (if any) £ : :	

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

Committee's Minute TUES. 16 FEB 1926

Assigned *[Signature]*

Es. 12.5.8.—Transfer.  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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