

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 28 MAY 1926

Date of writing Report May 14 1926 When handed in at Local Office May 14 1926 Port of Trieste

No. in Survey held at Trieste Date, First Survey Nov 5<sup>th</sup> 1925 Last Survey May 5 1926

Reg. Book. 6165 on the MOTOR VESSEL "CELLINA" (Number of Visits 15) Tons { Gross 7061 Net 4460

Built at Trieste By whom built Stabilimento Tecnico Yard No. 746 When built 1926

Owners Navigazione Libera Italiana Port belonging to Venice

Electric Light Installation fitted by Stabilimento Tecnico Italiano Contract No. ✓ When fitted 1926

System of Distribution Two wire ✓

Pressure of supply for Lighting 110 ✓ volts, Heating ✓ volts, Power 220 ✓ volts.

Direct or Alternating Current, Lighting Direct ✓ Power Direct ✓

alternating current-system, state frequency of periods per second ✓

Is 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 Two on port side engine room - one on starboard side

Is the ventilation in way of the generators satisfactory Yes., are they clear of all inflammable material Yes.

Are they 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.

What is their axis of rotation fore and aft Yes.

Are the bed-plates and frames of the generating plant efficiently earthed Yes. are the prime movers and

in respective generators in metallic contact Yes.

Main Switch Boards, where placed Port side engine room - transversely in ship.

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

an earth connection on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard ✓

Are the 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

work 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 Marble, 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

by mica or micaite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework Yes.

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

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 Generator double

pole circuit breakers, with maximum and minimum current trips and with equalizing

switches electrically arranged as per Rule. Outgoing circuit breakers double switches with quick

release.

Instruments on main switchboard 4 ammeters 3 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 to earth.

Are the switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules Yes.

Main Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule Yes.



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Lloyd's Register

1038-0154(1/2)

removed from vessel in 241 & 342

**Cables:** Single, twin, concentric, or multicore *single Ydonta* are the cables insulated and protected as per Tables IV or V of the Rules. *Ylo.*

**Fall of Pressure,** state maximum between bus bars and any point of the installation under maximum load *4.5 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 *Ylo.*

**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 avoid the risk of mechanical damage *Ylo.*

**Support and Protection of Cables,** state how the cables are supported and protected *Supported by iron clips and protected by sheet iron where necessary.*

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 VIII *Ylo.*

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

**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 *Ylo.*

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

**Earthing Connections,** state what earthing connections are fitted and their respective sectional areas *switchboard frame is made of iron and is in metallic contact with the ship's structure.*

are their connections made as per Rule

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

**Emergency Supply,** state position and method of control of the emergency supply and how the generator is driven *None*

**Navigation Lamps,** are these separately wired *Ylo.* controlled by separate switch and separate fuses *Ylo.* are the fuses double pole *Ylo.*

are the switches and fuses grouped in a position accessible only to the officers on watch *Ylo.*

has each navigation lamp an automatic indicator as per Rule *Ylo.*

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

**Fittings,** are all fittings on weather decks, in stokeholds and engine rooms and where exposed to drip or condensed moisture, watertight *Ylo.*

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 *in twin decks, lamps protected by iron cages.*

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

how are the cables led

where are the controlling switches situated

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

**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 *Ylo.* are the coils self-contained and readily removable for replacement *Ylo.*

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

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

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 *Ylo.*

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

**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

DESCRIPTION OF GENERATOR.	No. of	RATED AT				Revs. per Min.	DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.				Fuel Used.	Flash Point of Fuel.
MAIN	3	66	220	300	470	4-cylinder Diesel engine	Diesel oil	Above 150°	
AUXILIARY	2	60	220	277				FIAT ENGINES	
EMERGENCY	1	15							
	3	100	220	455	550	4-cyl. Allen oil engine	2 fitted 341		
ROTARY TRANSFORMER	1	13	220-110	118	1400		1 fitted 342		

Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amps.	Approximate Length. (Lead and Return.) METRES.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR	1	321	61	2.6	300	30	Rubber	Lead-steel wire
	EQUALISER CONNECTIONS	1	127	37	2.1		4.2	do	do
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	1	4.5	7	0.9	16	5	do	do
	BOILER ROOM								
	ACCOMMODATION	1	10	7	1.3	26	112	do	do
	do	1	10	7	1.3	23	92	do	do
	Plug for oil pump.	1	25	19	1.3	50	56	do	do
	WIRELESS	1	6.7	7	1.1	15	104	do	do
	SEARCHLIGHT								
	MASTHEAD LIGHT								
	SIDE LIGHTS	1	2.5	1	1.8	1.1	18	do	do
	COMPASS LIGHTS	1	1.9	1	1.6	0.16	10	do	do
	POOP LIGHTS	1	2.5	1	1.8	1.1	72	do	do
	CARGO LIGHTS								
	ARC LAMPS								
	HEATERS								

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amps.	Approximate Length. (Lead and Return.) METRES.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP	1	4.9	1.9	1.6	98	27	Rubber	Lead-steel wire
	MAIN BILGE LINE PUMPS	1	4.2	7	0.9	19 1/2	32	do	do
	GENERAL SERVICE PUMP	1	14	7	1.6	39	34	do	do
	EMERGENCY BILGE PUMP								
	SANITARY PUMP								
	CIRC. SEA WATER PUMPS	2	38	19	1.6	75	28	do	do
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR								
	FRESH WATER PUMP	1	2 1/2	1	1.8	7.9	32	do	do
	ENGINE TURNING GEAR	1	10	7	1.3	37	40	do	do
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS	2	14	7	1.5	39	34	do	do
	OIL FUEL TRANSFER PUMP	1	25	19	1.3	59	80	do	do
	WINDLASS	1	127	37	2.1	185	186	do	do
	WINCHES, FORWARD	1	159	37	2.35	209	160	do	do
	WINCHES, AFT	1	65	19	2.35	105	88	do	do
	STEERING GEAR								
	(a) MOTOR GENERATOR	1	65	19	2.1	113	192	do	do
	(b) MAIN MOTOR								
	WORKSHOP MOTOR	1	3.45	7	0.9	13	30	do	do
	VENTILATING FANS								

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.

*Eng. Marino Montecchi* X Electrical Engineers. Date 18-5-1926

COMPASSES.

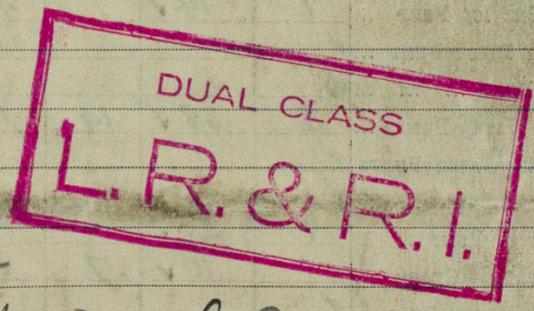
**WIRELESS TRANSFORMER**  
 Distance between electric ~~generators or motors~~ and standard compass 13 meters  
**WIRELESS TRANSFORMER**  
 Distance between electric ~~generators or motors~~ and steering compass 10 meters  
 The nearest cables to the compasses are as follows:—  
 A cable carrying 8.5 Amperes 5 feet from standard compass 2 feet from steering compass.  
 A cable carrying  Amperes  feet from standard compass  feet from steering compass.  
 A cable carrying  Amperes  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 No  
 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.

*responsibility* Builder's Signature. Date 18-5-1926

Is this installation a duplicate of a previous case Yes. If so, state name of vessel "Fella"

General Remarks (State quality of workmanship, opinions as to class, etc. The electric installation)  
of this vessel has been fitted on board in accordance with the requirements of the Rules. The generators and motors were tested in the shops before being fitted on board and on completion, the whole installation was tested under full working conditions, with satisfactory results.

wireless fitted.



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

435 kw 318  
 Total Capacity of Generators 198 Kilowatts. *JWD 29/5/26*

The amount of Fee ... £4406.- When applied for, May 25 1926  
 Travelling Expenses (if any)  : When received, 5.7.26  
*V. Lockrey*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 1 JUN 1926  
 Assigned Elec. light

Im. 126.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)