

TITLE OF THE PAPER

(14 pt bold, in two lines maximum)

(two lines of space)

Name and surname of the author

Address of the author

(12 pt bold)

(two lines of space)

Summary: (11 pt. italics, in both columns). This paper provides a brief overview of the low-voltage (LV) and high-voltage (HV) test methods, with a comparative presentation of the test results on individual earthing devices.

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Keywords: (10 pt italics, in both columns).

(two lines of space)

1. INTRODUCTION (12 pt bold, capital letters)

(one line of space, text 10 pt)

During the construction of energy and industrial plants, special attention is paid to the performance of the grounding system, which is the basis for reliable, safe and functional operation of the entire plant, both in normal operation and in case of switching operations and failures.

In order to establish the condition and determine the parameters of the grounding system, tests are carried out.

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2. EARTHING SYSTEM TESTING METHODS (12 pt bold, capital letters)

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2.1 Low-voltage testing of the grounding system (11 pt, bold)

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Low-voltage tests of the grounding system are carried out according to the recommendations of the "Regulation on technical norms for power plants with a nominal voltage above 1000 V" (Official Gazette No. 53/91, SL No. 4/74 and No. 13/78).

The purpose of the LV test of the earthing device is to determine the following quantities:

- Grounding system impedance
- Distribution (recording) of potential outside the facility, i.e. potential along spatial directions
- Touch voltage.

The principle of the method is based on Ohm's law. By applying the AC voltage of the mains frequency, a certain current is passed through the earthing device, whereby the voltage loss that the current causes on the earthing device is measured.

In order for the measurement to be carried out correctly, the following conditions must be met:

- The AC voltage source must be strong enough (to reduce the influence of stray currents), the recommended value of the measuring current is 100 A.
- The auxiliary current probe (auxiliary earther) must be as far away from the earther as possible.

3. MEASUREMENT RESULTS

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3.1 Grounding switch HE DUBROVNIK

The grounding device of the high-voltage plant HPP Dubrovnik forms a single unit consisting of three groups of grounding devices:

- Earthing of switchgear 220 kV and 110 kV
- Engine room grounding

- Grounding of 220, 110 and 35 kV transmission line poles.

4. CONCLUSION

The mentioned groups of earthing devices form a single whole created by connecting the mentioned earthing devices to each other. The switchgear and machine room grounding devices are connected to each other by means of two Cu ropes with a section of 95 mm² and a grid of concrete iron in the floor of the cable tunnel. The engine room grounding devices and the building in front of the engine room are connected to each other by one Cu rope with a section of 95 mm², cable shelves and a grid of reinforcement in the concrete at the beginning of the access tunnel.

A summary of the results is given in the following tables, and a graphical representation of the results is given in Figure 1.

5. LITERATURE

List of literature according to the order of appearance in the text:

- (1) Author's initials, article title, journal,

- (2) Internet, link to the source.

OTHER INSTRUCTIONS:

- Use A4 paper format
- Margins: left, right 2.54 cm
- Distance between columns: 1.27 cm
- Spacing between lines: single (1 x)
- Text (normal): 10 points.
- Tables and figures must be described in Croatian (except in the English text)
- Do not insert headers and footers
- Number the pages in the lower right corner.

It is recommended to write a paper in the range of 4 to 6 pages.