



ФАКУЛТЕТ
ТЕХНИЧКИХ НАУКА



ИНСТИТУТ ЗА
ЕНЕРГЕТИКУ,
ЕЛЕКТРОНИКУ И
ТЕЛЕКОМУНИКАЦИЈЕ

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Veljko Milković
Novi Sad

Our number: _____
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RESEARCH REPORT

On request of Mr. Veljko Milković from Novi Sad, voltage, current and power provided by single-phase generator of alternating voltage (unmarked) have been measured, in the work mode for which it has been designed.

During the first measurement, the generator was run by the lever that could be moved in a vertical plane. The generator was fixed (immobilized) and the force was applied in a straight line, from upwards towards down.

During the second measurement, the generator was held in a hand, and the force was transferred by hand through the generator on the weight hanging on a lever and moving in a vertical plane. This experiment measured only a fraction of the power turned into electrical power.

Measurement took place in a room at the temperature of 12 ± 3 °C with a voltmeter and ampermeter with 0.5 accuracy class and 1 accuracy class. Voltmeter and ampermeter measure real effective value of the input signal (2 seconds interval) and a wattmeter calculates the samples of current values of the voltage and current multiplied together, also in a period of two seconds. The strength factor of the consumer is also measured.

Successively measured values for the voltage, current and strength factor have been recorded automatically.

A bulb for the flashlight has been used as a consumer. It has been established that the consumer has a negligible influence.

Generator provided voltage with a sine curve, with frequency of 200Hz, and an amplitude that changes with time.

Research performed by:

Dr. Slobodan Milovančev

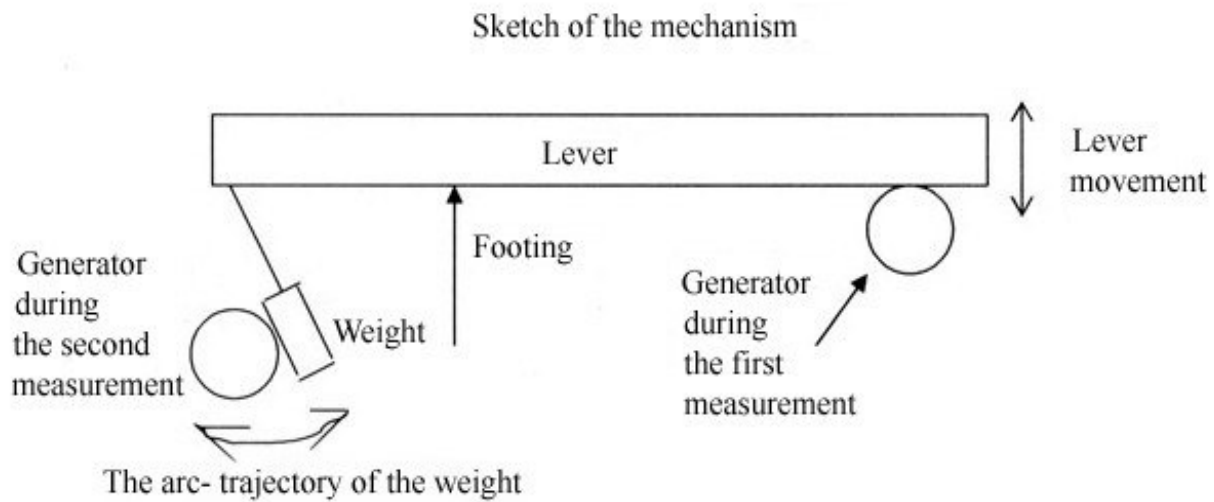
Institute director:

Prof. Dr. Veljko Malbaša

Appendix 1: Sketch of the mechanism

Appendix 2: Diagrams of the voltage, current and strength factor changes for the first measurement

Appendix 3: Diagrams of the voltage, current and strength factor changes for the second measurement



First measurement: the lever is moving the generator

The values of the measured voltage varied between 1.439 V and 2.547 V.

The values of the measured current varied between 65 mA and 89 mA.

The values of the measured electrical current varied between 91 mW and 228 mW.

The values of the measured strength factor varied between 0.973 and 0.999.

Second measurement: the hand is moving the generator

The values of the measured voltage varied between 164 mV and 375 mV.

The values of the measured current varied between 13 mA and 26 mA.

The values of the measured electrical current varied between 2 mW and 9 mW.

The values of the measured strength factor varied between 0.820 and 0.957.

