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MEASUREMENT OF THE ENERGY PARAMETERS OF THE FREQUENCY CONVERTERS

ABSTRACT *In measuring the energy parameters of frequency converters, due to the nonlinear voltage and current waveforms, it is not possible to use standard measuring devices. One possibility is to use FFT analysis followed by a calculation of the individual powers. The paper presents the procedures, measurements and advantages of the measurements, which were made on the frequency converter with the voltage inverter at the industrial plant. Measurements were taken out in accordance with EN-6100-4-7. The paper presents not only the results of harmonic analysis of the input and output voltages and currents, but also the performance analysis and power factors. Interesting are also the waveforms of these variables and the changes in the out-put frequency, which was controlled with an industrial computer.*

Keywords: *energy parameters, frequency converters voltage, current, waveforms, measuring devices, FFT analysis, voltage inverter, harmonic analysis, power factor, frequency.*