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ON-LINE DIAGNOSTIC MONITORING OF ELECTRICAL VALUES AND TRANSIENTS

ABSTRACT

On-line electrical values diagnostic monitoring system and transient recorder is described in this article. System is providing permanent monitoring during steady-state operation (currents, voltages, THD, power factor, phase symmetry, active and reactive power) and automatic recording of all transients. Such a system solution is illustrated with description of 100-channel system installed in Thermal Power Plant TE-TO Zagreb. As an example, records of major transmission system disturbance, causing serious consequences on power system stability, are presented, illustrating some additional system analysis capabilities (power dynamic analysis during transients).

Based on the example, some positive experiences and improvements of this system are discussed in the article, with some suggestions for further system development, mainly concerning application of more sophisticated electrical values analysis methods and including non-electrical values in this type of monitoring as well.

Keywords: Monitoring, transients, power plant.