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REACTIVE POWER COMPENSATION APPROACH WITH DYNAMIC MODE OF LOAD CURRENT

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Authors

V.J.Zhuikov*, **I.V. Verbytskyi****, **A.G.Kyselova*****

National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”,
pr. Peremohy, 37, Kyiv, 03056, Ukraine,
e-mail: verbitskiy@bigmir.net

* ORCID ID : <http://orcid.org/0000-0002-3338-2426>

** ORCID ID : <http://orcid.org/0000-0001-7275-5152>

*** ORCID ID : <http://orcid.org/0000-0002-7228-3594>

Abstract

The actuality of the compensation of the residual reactive power that arises with the

non-stationary current of the power grid is shown. On the example of the computer power supply unit, the amount of residual reactive power is calculated by using a compensator with one period lag of the power grid voltage. In parallel with the general reactive power compensator, it is proposed to use an auxiliary one, which eliminates distortion of the grid current based on its predicting. It is shown that the use of the additional compensator allows reaching power factor value closed to one with a non-significant increase in the total installed capacity of the compensation system. The proposed compensation method is adapted to the presence of current pulsation of the general compensator. References 10, figures 9.

Key words: reactive power compensation, dynamical grid current, least squares method, power factor.

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