

DOI: <https://doi.org/10.15407/techned2017.04.041>

ANALYSIS OF FLUCTUATIONS STATIC STABILITY OF IPS UKRAINE USING HARMONIC FUNCTIONS WITH VARIABLE AMPLITUDE

Journal	Tekhnichna elektrodynamika
Publisher	Institute of Electrodynamics National Academy of Sciences of Ukraine
ISSN	1607-7970 (print), 2218-1903 (online)
Issue	No 4, 2017 (July/August)
Pages	41 – 47

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Abstract

The purpose of this work is to investigate the approximation method using a damped harmonic functions (DHF) for power flows on the line in the section of the IPS of Ukraine, to estimate the level of steady state stability in cross-section. The research method is simulation of free oscillations by the calculation of electromechanical transient process after a small disturbance. On the basis of calculations of transients after a small disturbance of the real IPS mode, the approximation functions for modes with different levels of stability are obtained. It is shown the connection of the safety factor, or the excess of the limit flow with the dynamics of the approximation function parameters. References 7, figures 7, table 1.

Key words: grid, cross-section, steady state stability, simulation, free oscillations, harmonic functions.

Received: 09.12.2016

Accepted: 21.04.2017

Published: 15.06.2017

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