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THE MODELING OF THE OPERATING MODES OF HYBRID FILTER COMPENSATING CONVERTERS TO ENSURE ELECTROMAGNETIC COMPATIBILITY IN THREE-PHASE SYSTEMS

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Abstract

In the article are considered the main aspects of the use of the developed hybrid filter compensating converters(GFCC), which are based on a regulated filtering device and a "distributive" static synchronous reactive power compensator for complex improvement of the electric power quality and provision of electromagnetic compatibility in local power supply systems. GFCC are designed to compensate the load currents in the neutral conductor of a three-phase low-voltage network, symmetrical regulation (stabilization) voltage of the load and

filtering the currents of higher harmonics at the terminals of responsible consumer in the local network. References 3, figures 3, table 1.

Key words: electromagnetic compatibility, local power supply system, voltage quality, hybrid filter compensating converter, responsible electric consumer.

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References

1. Zharkin A.F., Novskyi V.O., Malakhatka D.O. Complex improvement of power quality and ensure electrical safety in local power supply systems when using hybrid filter compensating converters. *Tekhnichna Elektrodynamika*. 2018. No 1. Pp. 69–77. DOI: <https://doi.org/10.15407/techned2018.01.06> (Ukr)
2. Kyryk V.V., Khalikov V.A. Computer technologies of modeling and research of electrotechnical systems. Kyiv: IED NAN Ukrainy, 2009. 213 p. (Ukr)
3. Chetoshnykova L.M., Smolentsev N.Y., Chetoshnykov S.A., Dehtiarev D.V. Energy management system in local low voltage electrical network. *Polzunovskii vestnik: FGBOU Altaiskii gosudarstvennyi tekhnicheskii universitet im. I.I. Polzunova*. 2015. No 1. Pp. 103-107. (Rus)

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