

ABSTRACT

The diploma project contains 77 pages, 49 figures and 3 plots.

The following problems were solved in the diploma project: analytical review of the influence of nonlinearity loads on the power supply, the technical literature and power factor correction schematic analysis were carried out.

The key features of laboratory setup developing are as follows:

- 1) requirements formation for active rectifier;
- 2) developing schematic solution with calculating and selection elements;
- 3) designing printed circuit board.

The final results were obtained during experiments on the laboratory stand that has been created with methodical instruction for researching active rectifier.

Calculation and realization of the diploma project were provided by using the following software: Microsoft Office Word 2007, Proteus 7 Professional, ARES 7 Professional, Splan 7, Mathcad 14, MathType 6, Matlab R2009b.

ACTIVE RECTIFIER, POWER FACTOR CORRECTION, DEVELOPMENT,
OSCILLOGRAMS, DESIGN OF THE ELECTRICAL SCHEMATIC.

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| <i>Chan.</i> | <i>Sh.</i> | <i>№ docum.</i> | <i>Sign.</i> | <i>Date</i> | The summary. The laboratory stand for researching the active rectifier | | | <i>Liter.</i> | <i>Sh.</i> | <i>Scale</i> |
| <i>Designed</i> | | Zakharchenko Y.O. | | | | | | 8 | | |
| <i>Checked</i> | | Dymko S.S. | | | | | | | | |
| <i>Reader</i> | | Kotlyarova V.V. | | | | | | | | |
| <i>R. control</i> | | Pryymak B.I. | | | | | | | | |
| <i>Approve</i> | | Peresada S.M. | | | | | | Igor Sikorsky Kyiv polytechnic institute,FEA, gr. EP-41 | | |