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SYSTEM OF INERTIA CONTROL ALTERNATIVE VOLTAGE

[preview]

Voltage deviation is one of the major problems in power supply systems of industrial enterprises. Its solution is a priority task in the design of power supply systems. The way to improve voltage quality is using semiconductor devices, that will eliminate several disadvantages of mechanical switching devices (low speed, low resource), but leave their main advantage, i.e. sinusoidal nature of voltage curve form.

The possibility of using semiconductor devices to perform switching without distortion sinusoid in the time of passing zero will allow to eliminate the major drawback of mechanical switches discreteness. This allows to create voltage stabilizers of any degree of accuracy, based on the principle of discrete control by switching transformer unsolders without breaking the current and distorting voltage curve and explains the set of development directions both in this country and abroad aimed at replacement of contactor switch at currently working RUL (regulation under load) devices on thyristor.

This book provides a systematic approach to voltage regulation that will allow increasing economic performance of energy sources. The most promising is the regulation method acting on voltage and reactive power.

The book will benefit

- Energy Management System interested parties
- Professional Engineers
- Electrical Engineering students

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Sample diagrams:

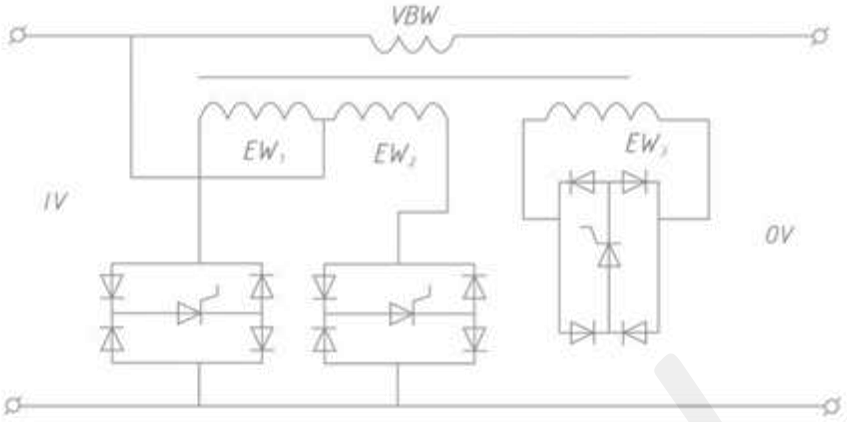

Fig.1. Single-phase booster regulator
with pulse-width voltage regulation (HVSR).

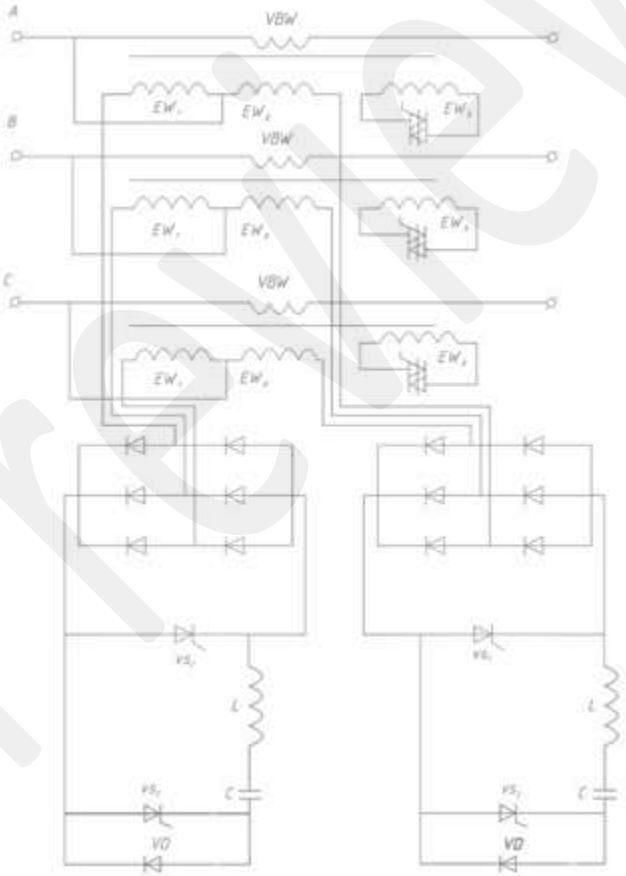

Fig.2. Principle scheme of universal three-phase bridge
VSHNR on thyristors and triacs.

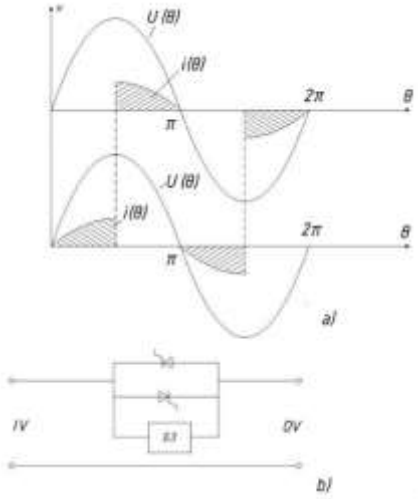

Fig.3. Operating principle of the two thyristor voltage regulators with compensation of reactive power and minimization of higher harmonics (a), block diagram of a thyristor regulator with forced commutated thyristors (b).

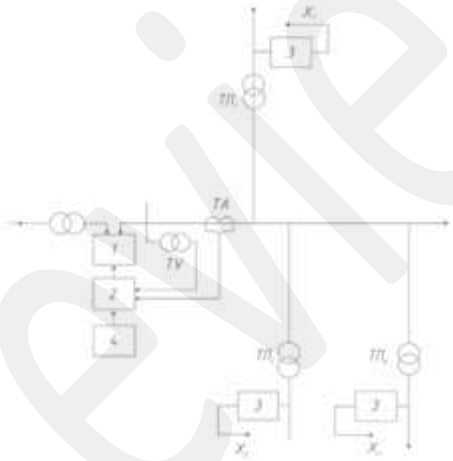

Fig.4. Block diagram of the transmission system of a control signal via voltage regulator VSHRN