

1994, □ 2

## CONTENTS

### Electrodynamics of electrical power devices

***Tchemeris V.T.*** Influence of fast-varying magnetic field on electrical conducting particles

motion in gas-dust  
medium \_\_\_\_\_ 3

## Electric energy parameters conversion

**Pyvnyak G.G., Vypanasenko S.L., Kovalev A.P.** New principles of frequency converter

control in contact-free transport  
system\_\_\_\_\_ 8

**Lipkovsky K.A., Modzarovsky A.G., Khalikov V.A.** Comparative analysis of the

elemental transformer switching final-control structures\_\_\_\_\_ 11

**Puzakov A.V., Baranov A.M.** Widely regulating DC-to-DC converters design on two-section  
basis\_\_ 16

**Senko V.I., Kalinichenko A.P., Lebedenko S.A., Fan Kuok-Zoong, Font Kuang Ving.**

New algorithms of three-level PWM and their combined application for 3-phase inverters with

neutral

point  
21

---

**Leporsky V.D., Lukash N.P., Kho Duk Lok.** Digital systems synthesis of autocontrol excited

synchro-nous generators with the given  
spectrum \_\_\_\_\_ 27

**Komarov N.S., Rudenko Yu.V., Lisimov O.P.**

Asymmetric operation of half-bridge magneto-transistor generator \_\_\_\_\_  
\_\_\_\_\_ 31

**Shidlovskaya N.A.** Current resonance in the circuit with the nonlinear resistive load \_\_\_\_\_  
\_\_\_\_\_ 36

**Ovcharenko AA., Yurchenko O.N., Skidanov V.M., Pavlov V.B., Rychkov V. A.**

Analysis of pulse transis- tor converter operation  
\_\_\_\_\_ 42

**Electromechanical energy conversion**

**Styazhkin V.P., Isakov V.N.** Parametric forming of mechanical characteristics of asynchronous

motor with phase-wound rotor

46

**Asanbayev V.N., Babyak A. A., Saratov VA., Strikharchuk D.K.** Improvement in the

effectiveness of heat power stations at industrial plants

51

**Lutskiv M.M., Kylany S.** Pulse tracking drive for combining of technological operations

54

## **Electric energy systems and installations**

**Danko A.V., Mostovyak I.V., Novikova O.I.** Application of method of zero, positive and nega

tive sequences symmetric  
systems

58

**Varetzky Yu.O., Ravlik O.M., Bakhor Z.M.** Features of simulating the processes at faults

to ground in 6-35 V circuits with insulated  
neutral\_\_\_\_\_ 61

**Nedzelsky I.S.** Comparison of power grid models constructed on the basis of overlapping  
classic  
principle and overlapping principle when fictitious emf is brought in power grid passive circuit  
units\_\_\_\_ 64

## Electrical and magnetic measurements

*Popov V. Yu.* Influence of potential electrodes thickness on four-electrode jig metric mesh

cons- tant\_\_\_\_\_ 66

## Brief reports

**Shadlovsky I.A., Zrazhevsky Yu.M.** Leakage currents of electric transport power circuit

with inductive energy  
transmission\_\_\_\_\_71

**Petrushin V.S., Wilbert Laurence.** Asynchronous motor characteristics in a system consists

of thyristor converter electric drive and asynchronous motor with a feedback by rotational  
speed\_\_\_\_\_74

## Scientific and technical information

**"ELETTRICJTA SICURA".** 1st Exhibition of safe electric  
material\_\_\_\_\_78

