

2006 p., □ 2

## CONTENTS

### Theoretical electrical engineering and electrophysics

RENDZINYAK S. New algorithm of nonlinear subcircuits matching in multirate method\_\_\_\_\_

3

SHCHERBA A.A., ZAKHARCHENKO S.N., SUPRUNOVSKAYA N.I., SHEVCHENKO N.I.

The influence of repetition rate of discharge pulses on electrical resistance of  
current-conducting

granular layer during its electric-spark  
treatment\_\_\_\_\_ 10

DUBOVENKO K.V. of the main electrical and thermal characteristics of the "high-voltage power

source — dielectric barrier discharge" system Simulation of gas insulation break-down  
probability

of high-voltage devices of pulse electric power systems \_\_\_\_\_  
\_\_\_\_\_ 15

LITVINOV V.V., PODOLTSEV A.D. Investigation of the main electrical and thermal characteristics

of the “high-voltage power source – dielectric barrier discharge”  
system \_\_\_\_\_ 23

### **Conversion of electric energy parameters**

ASSUIROV D.A., SHUBTSOV V.E. Static and stabilizing properties of wide-pulse converters (WPC)

with different methods of output pulses modulation \_\_\_\_\_  
\_\_\_\_\_ 28

LIPKOVSKY K.A. Executive body of a discrete voltage regulator of an alternating current with

decomposition of switch elements of a commutator \_\_\_\_\_  
\_\_\_\_\_ 35

LUPENKO A.M. Single-cascade electronic start controlling unit for sodium lamps of high

pressure\_\_\_\_\_ 42

## **Electromechanical energy conversion**

CHABAN A. Mathematical model of a short-circuit asynchronous motor with a "double squirrel-cage"

structure in phase coordinates\_\_\_\_\_ 48

CHEPKUNOV A.I. Efficient control of an asynchronous electric drive\_\_\_\_\_ 52

KUTSYK A.S. Entity orientated method of electromechanical systems analysis\_\_\_\_\_ 57

## **Electric power systems and installations**

TERESHKEVICH L.B., TSYBULSKY M.I. Mathematical methods of voltages asymmetry control

in power supply systems\_\_\_\_\_ 64

## Information measuring systems in power engineering

VOLODARSKY E.T., BURBELO M.I., RYKOV K.Yu. Measurement of dynamic entities

parameters with supply voltage frequency control \_\_\_\_\_  
\_\_\_\_\_ 68

VARSKY G.M, TANKEVICH E.M., NOSENKO V.K. Methods and test circuits of transformer

converters of current of static electric energy meters \_\_\_\_\_  
\_\_\_\_\_ 71

To the 70-th anniversary of academician of NAS of Ukraine B.S.STOGNIY \_\_\_\_\_  
\_\_\_\_\_ 76

To the 70-th anniversary of corresponding member of NAS of Ukraine  
S.G.TARANOV \_\_\_\_\_ 77