

2004, № 6

## CONTENTS

### Theoretical electrical engineering and electrophysics

SHCHERBA A.A., PODOLTSEV A.D., KUCHERYAVAYA I.N. Spark erosion of conducting granules

in a liquid: analysis of electromagnetic, thermal and hydrodynamic processes \_\_\_\_\_ 4

VOLOKHOV S.A., ROZOV V.Yu., MYSLOVICH M.V., KOKOSHIN S.S. Electromagnetic screening with

a ferromagnetic body of an electric motor \_\_\_\_\_  
\_\_\_\_\_ 18

## Conversion of electric energy parameters

DENISOV Yu.A. Absolute stability of a two-circuit constant voltage regulator with a pulse-width

converter (PWC) \_\_\_\_\_  
\_\_\_\_\_ 23

## Electromechanical energy conversion

TITKO O.I., BEREST E.P. A method of electromagnetic diagnostics of an excitation circuit

of a turbo-generator  
rotor \_\_\_\_\_ 27

ANTONOV A.E., VELICHKO O.N. Principles of arrangement and computation of control  
windings

of an electric motor with a three-stage rotor \_\_\_\_\_  
\_\_\_\_\_ 30

## Electric power systems and installations

SHIDLOVSKY A.K., ZHARKIN A.F. Development of an electromagnetic compatibility theory and

mathematical models construction of low-voltage electric circuits with non-linear using  
equipment\_\_\_\_\_ 35

GURA Yu.L., CHORNOGOTSKY V.M. Problems of insulation elaboration of power transformers

with  $SFe$  gas filling\_\_\_\_\_ 42

PIVNJAK G.G., BESHTA O.S., KHILOV V.S. An adaptive indistinct power controller for a drilling

process  
control\_\_\_\_\_ 47

DUBOVENKO K.V., KURASHKO Yu.L, KLIMANSKY N.N. High-voltage resonance power  
source for  
discharge-pulse submerged borehole plants\_\_\_\_\_ 52

## **Information measuring systems in power engineering**

BRAGINETSI A., KONONENKO A.G., MASJURENKO Yu.A., NIZHENSKY A.D. Application

of a phase-frequency method of distances measurement in laser ranging \_\_\_\_\_  
\_\_\_\_\_ 56

MAZMANJAN R.O. Characteristics of ordered samples of a random non-correlated signal \_\_\_\_\_  
\_\_\_\_\_ 60

NAKONECHNY A.I., NAKONECHNY R.A., GUDIM V.I. Application of low-wave functions

for oscillating processes analysis in power supply systems of sharply variable using  
equipment \_\_\_\_\_ 65

## **Economic and ecological aspects of power engineering**

DOBROVOLSKY V.K., STOGNIYO.V. Normative prices in power engineering and their  
dependence

on losses level in distributive circuits and specific fuel  
losses \_\_\_\_\_ 69

Scientific information	79
------------------------	----

INDEX of papers in 2004	81
----------------------------	----

**Abstrarts**