

2005 p., □ 3

## CONTENTS

### Theoretical electrical engineering and electrophysics

PODOLTSEV A.D., KUCHERJAVAJA I.N. Computer simulation of electromagnetic and

thermal processes at induction heating of a steel reactor with loose material \_\_\_\_\_  
\_\_\_\_\_ 3

PENTEGOV I.V., PRISTUPA A.L. About possibility of wireless power transmission

by means of tesla processes \_\_\_\_\_  
\_\_\_\_\_ 11

BOZHKO I.V., PETUKHOV I.S. Investigation of a discharge gap for a plasma reactor at a positive

streamer corona \_\_\_\_\_ 17  
\_\_\_\_\_

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

KOMAROV N.S. Transistor controllers with high-frequency pulse modulation in devices

of power capacitive electrotechnological equipment \_\_\_\_\_ 22  
\_\_\_\_\_

GRECHKO E.N. Pulse network converters which decrease—increase output voltage \_\_\_\_\_ 30  
\_\_\_\_\_

SARATOVSKY R.N., GLEBIN A.G., USHAKOV V.I. Device of thyristor frequency converters

matching with an induction melting \_\_\_\_\_ 34  
furnace \_\_\_\_\_

VELYKY V.I., ANDRIJCHUK V.A. Frequency responses of an output cascade EPRA

for luminescent lamps. A starting mode \_\_\_\_\_ 38  
\_\_\_\_\_

GUBAREVICH V.N., SPIRIN V.M., SALKO S.V., GREBENJUK V.G. Input wide-band LMC filter

for a single-phase rectifier

---

42

### **Electromechanical energy conversion**

DZHURA A.V., MAZURENKO L.I., LESNIK V.A., DYNNIK L.N. A mathematical model

and computations algorithm of a single-phase modes of an induction generator with

valve-capacitive excitation

---

44

### **Electric power systems and installations**

KYZNETSOV V.G., KURINNY E.G., LJUTY O.P. Electromagnetic compatibility.

Voltage asymmetry dose

---

49

KOSTIN M.O., MISCHENKO T.M., GILEVICH O.I. Probabilistic analysis of processes

in power circuits of an electric locomotive DEI \_\_\_\_\_  
\_\_\_\_\_ 54

BOIKOV.S., SOTNIK N.I., SOTNIK I.N. A power efficient pumping plant of the third lifting \_\_\_\_\_  
\_\_\_\_\_ 62

RAMAZANOVA Z.U. Estimation of data aggregation influence of wind velocity on computation

accuracy of electric energy generation of a wind electric installation \_\_\_\_\_  
\_\_\_\_\_ 66

### **Electrotechnological complexes and systems**

VOVCHENKO A.I., SHOMKO V.V., SHYSHOV A.M. Mathematical simulation and optimization of

electrohydraulic pulse technological \_\_\_\_\_  
processes \_\_\_\_\_ 68

## Information measuring systems in power engineering

NEBOLJUBOV E.Yu. Construction of balancing elements of digital transformer bridges\_\_\_\_\_

74

To the 70-th anniversary of corresponding member of NAS of Ukraine

V.G.KUZNETSOV\_\_\_\_\_ 79