

1990, □ 4

## CONTENTS

### Electrodynamics of Power Engineering Devices

*Batygin Yu.V., Khimenko L.T., Shchetinskaya I.I.* Magnetic Field in the System

of Two Solenoids Separated by Thin-Walled Conductors \_\_\_\_\_  
\_\_\_\_\_ 3

*Kolesnichenko A.F., Yushchenko B.A., Podoltsev A.D., Chemeris V.T.* Mathematical Modelling

of the Processes of Magnetic-Pulse Squeezing of Crystallized Metal in the Continuous

Casting  
Machines \_\_\_\_\_

\_ 8

*Sokolovsky S.A., Romanenko Yu.V.* Mathematical Model of Thermally Stressed Electroinsulation

Under Dynamical Conditions \_\_\_\_\_  
\_\_\_\_\_ 15

*Lavrov V.Ya., Kirpanev A.V., Pukhanov A.P.* Theoretical Principles of Identification

of Electromagnetic Fields of Complex Sources \_\_\_\_\_ 19

*Chuchalin A.I., Matveev A.M.* Electric Motor Pulse Oscillator with Pairwise-Sequential

Commutations of Windings \_\_\_\_\_ 25

### **Transformation of Electric Energy Parameters**

*Kuleshov V.I., Shmyreva M.M.* Method of Symmetrical Components for Studying Distorting

Effect of Thyristor Converters \_\_\_\_\_  
\_\_\_\_\_ 30

*Kostin S.N., Balyasny V.S., Kordyukov E.I.* Mathematical and Structural Model of Automated

System of Control of Multifunctional Optimizing  
Devices \_\_\_\_\_ 34

*Anisimov Ya.F., Shamrai I.A.* Dynamic Model of Thyristor Converter as a Continuous Device

under Random Input \_\_\_\_\_ 40

*Andrienko P.D., Sukharev V., Khantsevich V.I.* Procedure Choice of Commutating

Condensers in Frequency Converters with Latitude Sampled-Data Control \_\_\_\_\_ 44

*Solomakha O.N.* Method of Processes Optimization in the Pulse Voltage Regulators \_\_\_\_\_  
\_\_\_\_\_ 48

## **Electromechanical Energy Conversion**

*Khutoretsky G.M., Fedorenko G.M., Vartanyan A.G., Krushinsky A.G.* Heating of a

Stator Winding Rod of a Powerful Turbo-Generator with Direct Cooling \_\_\_\_\_  
\_\_\_\_\_ 55

*Antonov A.E., Lavrinenko V.A.* Construction of Optimal Two-Coordinate Moment Engine with

TwonPole Spherical  
Rotor \_\_\_\_\_ 62

*Firsanov E.P.* Determination of Parameters of Turbo-Generator Stator Winding Binding \_\_\_\_\_  
\_\_\_\_\_ 67

*Ghaban V.I., Kharchenko E.V.* Mathematical Model of Torsional Vibrations of a Turbine-Driven  
Sets \_\_\_\_\_ 71

## **Power Engineering Systems and Plants**

*Zorin V.V., Haddad Bassam, Belov A.S., Zhuravlev A.A.* Complex Reconstruction of the  
Distribution

Electric  
Networks \_\_\_\_\_  
\_\_\_ 76

*Taranov S.G., Rudenko N.A.* Study of Metrological Characteristics of the Analyzer of Harmonics

of Symmetrical Components under Statical Conditions \_\_\_\_\_

81

*Enikeev A.F., Shcherbak L.N.* Analysis of the Error of Power Control Device for Transport Direct

Current  
Diesel-Generator \_\_\_\_\_

\_\_\_ 88

*Nikolaichenko V.G., Mikhalishin B.E.* Study of High-Voltage Electrogyration Meters with

Extended Limits of  
Measurements \_\_\_\_\_

92

## **Discussions**

*Shidlovsky A.K., Muzychenko A.D., Trokhimenko A.P.* Experimental Check of the Reactive

Power  
Theories \_\_\_\_\_

\_\_\_ 98

## **Brief Notes**

*Gorelik E.I., Mikhailov V.M., Movmyga I.N.* Maximum Current Density on the Rounded-off Edges

of Solenoid  
Opening \_\_\_\_\_ 1  
09

### **Criticism and Bibliography**

*Shumilov Yu.A., Vakulenko K.N., Reutsky N.A., Anpilogov N.G.* Review of the Book: K.G. Rego.

Metrological Processing of the Results of Technical Measurements. – Kiev: Tekhnika, 1987.–128 p\_\_\_\_\_ 112

### **Scientific and Technical Information**

*Andrievsky E.A., Lesnik L.N., Sheverdin G.P.* Digital Automatic System for Stabilization and

Calibration of High-Energy Constant Magnets \_\_\_\_\_  
\_\_\_\_\_ 29

*Shevchenko E.V.* Miniature Electromagnetic Active Contour-Antenna "Mini-EMA" \_\_\_\_\_  
\_\_\_\_\_ 10  
8

