

1991, □ 5

CONTENTS

Electrodynamics of Electric Power Devices

Lavrov V.Ya., Pukhanov A.P. Identification principles of weak quasistationary

electromagnetic
fields _____ 3

Zinchenko T.R., Kondratenko I.P., Gaschepkin A.P. Joule's heat releases in roter

of linear induction
machine _____ 7

Bobrov Yu.K. Propagation velocity of gas-discharge plasma in electric field _____
_____ 12

Serdyuk Yu.V., Stril'ko S.I. Electric field of semi-cylinder-strip electrode system _____
_____ 17

Vas'kovsky Yu.N., Dynnik L.N., Chemeris V.T. Elektromagnetic field and electro-dynamic field
and

electrodynamic forces in massive turn of power inductor with radial crack _____
_____ 20

Dubovenko K.V. Energy conversion of shock unipolar generator in a circuit with inductive and

plasma
load _____
25

Electric energy parameters conversion

Skobarihin Yu.V., Nepogod'ev S.V. Construction principles of operating algorithms

of double half-cycle superconducting converte _____ 31

Kurilo I.A., Klimenko A.V. Some peculiarities of pulse-width modulation with harmonics exception _____ 37

Nikitin Yu.P., Chumakova A.V. Parametrical converter of harmonic signals frequency _____ 39

Electromechanical energy conversion

Dvoinyh E.V. Three-stage electromechanical converter in gyroscopic stabilization system _____
_____ 45

Voitek A.A., Popovich A.N., Golovan' V.L., Druchok V.V. Mathematical model of

asynchronous motor with inductive reactance in phase rotor circuit _____ 50

Hutoretsky G.M., Fedorenko G.M., Vygovsky B.I. Defects recognition and identification

in stator winding cores of turbo generator with direct cooling _____
_____ 58

Bychkovska-Lipinska L. Axis oscillations analysis of transformer windings at short circuit

63

Heruntsev P.E. Asynchronous motors modelling peculiarities controlling from

self-excited current
inverters

68

Electroenergetic systems and installations

Shidlovsky A.K., Zharkin A.F. Currents and voltages curves nonsinusoidality analysis

in low-voltage networks with rectifying
load

72

Kostyuk O.M. Two conceptual approaches to determination of power systems mechanical

stability as to small
excitations

79

Mayer V.Ya., Zeniya, Petrovskaya L.L. Methods of voltages disbalance
determination

83

Electric and magnetic measurements

Maidan A.E., Novik A.I. About digital bridges construction with amplitude-phase balancing_____88

Chernyshev A.V. Forming of second harmonic magnetization component at weak excitation fields_____92

Monastyrsky Z.Ya. Automatic correction of systematic error capacitive self-compensated level meter____97

Bazilevich O.Z., Tchaikovsky O.I. Test method of voltage converters_____104

Short reports

Belousov G.F., Vahitov R.Sh., Kuznetsov V.P., Gorbunov V.L. Noise immunitive high voltage converter

for forced charge integrator_____

_____ 108

Scientific and technical information

Gavrilov I. AT, Myagkova N. V. Power source of cathode heater of electronic device _____ 112