

Contents

| | | |
|----|---|-----|
| 01 | Mirosław DECHNIK, Szczepan MOSKWA - Smart House - intelligent building - the idea of the future | 1 |
| 02 | Michał SABAT, Dariusz BACZYŃSKI, Karolina SZAFRANEK - The trials of providing the power and energy balancing of the studied area concerning the cooperation of the RES, employing a different number of these sources | 11 |
| 03 | Adam KAWA, Robert STALA - The Multilevel Switched Capacitor Power Converter. Experimental Proof of Concept | 16 |
| 04 | Stanisław BIELECKI - Reactive power demand – verification of a hypothesis of normal distribution values | 20 |
| 05 | Marian HYLA - Synchronous motor synchronization by excitation current | 24 |
| 06 | Prashanna D. BHATTARAI, Leszek S. CZARNECKI - Currents' Physical Components (CPC) of the Supply Current of Unbalanced LTI Loads at Asymmetrical and Nonsinusoidal Voltage | 30 |
| 07 | Piotr GAJEWSKI, Krzysztof PIĘNKOWSKI - Control of LVRT of PMSG in Back-to-Back Wind Energy Conversion System | 36 |
| 08 | Tomasz BAŁKOWIEC, Włodzimierz KOCZARA - Three-Phase Rectifier Dedicated to DC Traction Substation | 41 |
| 09 | Andrzej ŁEBKOWSKI - Management System for Electric Vehicle Battery Pack | 46 |
| 10 | Maciej SIWCZYŃSKI Andrzej DRWAL Stanisław ŻABA - Minimizing the voltage fluctuations of lossy source in transient state – a solution in the time domain | 54 |
| 11 | Antoni SAWICKI - Modified integral method for determining parameters of Mayr model and generalized Mayr model of electrical arc powered by electrical energy source generating sinusoidal stimulation | 58 |
| 12 | Daniel WACHOWIAK, Zbigniew KRZEMIŃSKI - Analysis of model parameters errors in induction machine extended speed observer | 64 |
| 13 | Maciej CISEK, Leszek JARZĘBOWICZ - Synchronization of transistor switching instants with rotor position in six-step IPMSM drive | 69 |
| 14 | Bogusław KAROLEWSKI - The influence of speed control on the power drawn by motors of the belt conveyor | 74 |
| 15 | Tomasz CHMIELEWSKI ¹ , Piotr MARS, Mirosz MIŚKIEWICZ, Paweł BŁASZCZYK - Universal DLL based components for simulations of multiphysical electro-thermal systems | 78 |
| 16 | Mateusz PROROK, Maciej ZAJKOWSKI - The method of modeling optical element cooperating with LED emitter and separate phosphor | 83 |
| 17 | Magdalena SIELACHOWSKA, Maciej ZAJKOWSKI - Analysis of the possibilities of improving the energy efficiency of lighting systems in a selected doctor's office by using daylight | 88 |
| 18 | Przemysław TABAKA, Piotr JAKUBOWSKI, Irena FRYC - The measurement inaccuracy of light sources colorimetric and photometric parameters caused by spectroradiometer spectral sensitivity | 93 |
| 19 | Robert HANUS, Marcin ZYCH, Leszek PETRYKA - Investigation of liquid-gas flow in the pipeline by gamma-ray absorption | 97 |
| 20 | Romuald MAŚNICKI, Marcin LISOWSKI - Analysis of the efficiency of selected photovoltaic systems in northern Poland | 101 |
| 21 | Krzysztof NOZDRZYKOWSKI, Łukasz NOZDRZYKOWSKI - New conception of evaluation the geometrical state and bearing of extralarge crankshafts | 105 |
| 22 | Andrzej ODON - Voltage response of pyroelectric detector to short pulse of optical radiation | 109 |
| 23 | Przemysław OTOMANSKI, Michał SALICKI - Using the optotypes in research of flicker severity of the selected sources of optical radiation | 114 |
| 24 | Beata PAŁCZYŃSKA - The measurement results of portable power bank radiated emissions in GTEM cell | 118 |
| 25 | Eligiusz PAWŁOWSKI - Legal, technical and metrological effects of neodymium magnet field influence on inductive electricity meters | 124 |
| 26 | Dariusz ŚWISULSKI, Anna GOLIJANEK-JĘDRZEJCZYK - Error, uncertainty - genesis of inaccuracies in electrical measurements | 130 |
| 27 | Piotr SYNOWIEC, Piotr PIECHOTA, Wiesław WĘDRYCHOWICZ, Artur ANDRUSZKIEWICZ - Analysis of the accuracy of the ultrasonic flow meter in the measurement behind the pipe's elbow | 134 |
| 28 | Maria WRZUSZCZAK, Janusz WRZUSZCZAK - Eigenvalue and eigenmode analysis in eddy current material testing | 139 |
| 29 | Marcin ZYCH - Measurement of thorium, uranium and potassium content in the samples from drilling cores | 142 |
| 30 | Zbigniew ŁUKASIK, Jacek KOZYRA, Aldona KUŚMIŃSKA-FIJAŁKOWSKA - Monitoring of low voltage grids with the use of SAIDI indexes | 146 |
| 31 | Paweł DRÓŻDŻ, Krzysztof SZABAT - Speed Control of two-mass System with Adaptive Output Filter | 151 |