XII All-Russian Scientific and Practical Conference on Automation Systems in Education, Science and Production 2019

IOP Conference Series: Materials Science and Engineering
Volume 865

Novokuznetsk, Russia
28 - 30 November 2019
# TABLE OF CONTENTS

CONTROL SYSTEMS FOR COMPLEX TECHNOLOGICAL FACILITIES WITH THE ACCUMULATION OF EXPERIENCE IN THE DEVELOPMENT OF CONTROL ACTIONS .......................................................... 1
   *S M Kulakov, M V Lyakhovets, R S Koynov, E N Taraborina*

MODERN CONCEPT OF TECHNOLOGICAL PROCESSES MODAL CONTROL IN A STATE SPACE COMBINED WITH WAVELET MONITORING OF CURRENT MODES ........................................ 8
   *D B Fedosenkov, A A Simikova, B A Fedosenkov*

STRUCTURAL AND PARAMETRIC NON-STATIONARY MODAL CONTROL SYSTEMS .................. 14
   *D B Fedosenkov, A A Simikova, B A Fedosenkov*

DEVELOPMENT AND CREATION OF AN INNOVATIVE SCIENTIFIC AND EDUCATIONAL CLUSTER FOR THE INTEGRATED USE OF COAL AND ITS PRODUCTS ................................. 20
   *V I Murko, E V Protopopov, M V Temlyantsev, V V Chaplygin, Yu A Litvinov, M A Volkov*

ON THE DEVELOPMENT OF A BASE OF NORMATIVE SITUATIONAL CLOCK PERIODS OF THE RATIONAL ROLLING COMPLEX FUNCTIONING .................................................... 26
   *S M Kulakov, A I Musatova, V N Kadykov*

THE DUAL CONTROL ALGORITHM OF NONLINEAR DYNAMIC PROCESSES IN THE CONDITIONS OF INCOMPLETE A PRIORI INFORMATION .................................................... 33
   *A V Medvedev, A V Raskina*

AUTOMATED TEST BENCH FOR RESEARCHING THE CHARACTERISTICS OF AN AC MOTOR BASED ON THE ALTIVAR VARIABLE-FREQUENCY DRIVE ............................................. 40
   *V A Kubarev, T V Bogdanovskaya, O A Ignatenko, O R Gallyamova*

OPERATIONAL ALGORITHM OF LOGICAL CONTROL SYSTEM FOR ELECTRIC DRIVE OF A LIFTING INSTALLATION BASED ON A DOUBLY-FED INDUCTION MACHINE .................... 46
   *V Yu Ostrovlyanchik, I Yu Popolzin*

IMPROVEMENT OF THE REGULATION SYSTEM FOR THE ELECTRIC DRIVE OF ROLLS ROTATION IN THE ROLLING MILL ............................................................... 52
   *V A Kuznetsov, E S Kuznetsova, V N Kharenko, N C Zaitsev*

FUNCTIONAL STATUS TECHNOLOGICAL EQUIPMENT MODELLING .................................. 58
   *G V Makarov, E V Tamarkina, M V Lyakhovets, A S Salamatin*

THE MECHANISM FOR THE FORMATION OF A DIVERSIFIED PRODUCTION PROGRAM OF AN ENTERPRISE, TAKING INTO ACCOUNT ENVIRONMENTAL AND ECONOMIC RESTRICTIONS ............................................................... 65
   *T V Kiseleva, V G Mikhailov, G S Mikhailov, G S Mikhailov*

FLOATATION REAGENT DOSING CONTROL SYSTEM AT THE COIL PREPARATION PLANT LLC JV "BARSASSKOYE TOVARISCHESTVO" ......................................................... 71
   *L P Myshlyaev, M V Lyakhovets, G V Makarov, D E Korovin, G A Kulyushin*

CREATION OF A CONTROL AUTOMATION SYSTEM ON THE EXAMPLE OF THE COAL PROCESSING PLANT .................................................................................. 78
   *M V Shipunov, V V Grachev, L P Myshlyaev, K A Ivushkin, Sh A Fayrushin, G V Makarov*

GEO TECHNOLOGICAL ASPECTS OF MINING PROCESSES AUTOMATION ......................... 85
   *S A Kizilov, S M Nikitenko, M S Nikitenko*
MIRROR SYMMETRY IN TRANSVERSE OSCILLATIONS OF ROPES AND SHAFTS IN ELECTROMECHANICAL SYSTEMS ................................................................. 90
  M Yu Borshchinsky

MODELS AND MECHANISMS FOR PLANNING SERVICE IMPROVEMENTS ................................................................. 97
  A V Zymin, I A Zolin, I V Burkova, V V Zimin

INFRASTRUCTURE MANAGEMENT OF SOFTWARE SYSTEMS OF MODERN “IT” IN THE AUTOMATION OF PRODUCTION PROCESSES ................................................................. 104
  O N Nedzelskay, V V Moiseyev, A N Bikineeva, E N Bulakina

GENERALIZATION OF EXPERIENCE AND CLASSIFICATION OF RISKS OF IT SERVICES BY THE STAGES OF THE LIFE CYCLE ................................................................. 111
  T V Kiseleva, E V Maslova

AUTOMATED VISUALIZATION OF CALCULATION RESULTS IN THE ALGOZIT PROGRAMMING ENVIRONMENT ................................................................. 116
  V O Kaledin, A E Paulzen, A D Ulyanov

TOWARD INDUSTRY 4.0 IN ENERGY SECTOR ................................................................. 121
  Elena Goosen, Sergey Nikitenko, Elena Kagan, Evgeniya Pakhomova

Author Index