

CONTENTS

Comparative Analysis of Current Approaches to Digital Twins of Electro-Hydraulic Mechatronic Systems Creations Alexander Skvorchevsky	1 - 5
Impact Velocity Control of Hopkinson Bar Mechatronics System Using Driving Robust Pressure, Numerical Calibration Strain Wave Measurement and Inverse Analysis Adinel Gavrus	6 - 19
CAD Tools, Reverse Engineering, 3D Measuring and Artificial Neural Networks in Axial Piston Pumps Study Nicușor Baroiu, Viorel Păunoiu, Virgil Gabriel Teodor, Georgiana-Alexandra Moroșanu, Marius Geru	20 - 30
Experimental Analysis of an Open/Closed Hydraulic System Ionela Mihaela Baci, Mihai Avram, Bogdan Grănescu, Victor Constantin	31 - 36
Optimal Design and CFD Verification of Axial Flow Fan Chan Lee, Hyun Seok Ko, Sang Yeol Lee, Sang Ho Yang	37 - 43
Appreciation of Wear on Active Surfaces of the Automatic Hydraulic Systems in Terms of Contaminating Particles Aristia-Ioana Popovici, Mihail Ioan Savaniu	44 - 52
Experimental Research on a Clamping Device Adrian Constantin Hanganu	53 - 66
Method and Means of Measuring the Pulsating Flowrates of Oscillating Hydraulic Pressure Intensifiers Teodor Costinel Popescu, Alexandru-Polifron Chiriță, Krzysztof Nieśpiałowski, Ana-Maria Carla Popescu	67 - 76
Performance Evaluation of Hydrokinetic Rotors Using Custom Made On-Site Testing System Rareș-Andrei Chihai, Gabriela Cîrciumaru, Andreea El-Leathey, Alexandru-Ionel Constantin, Corina Băbuțanu, Constantin Dumitru	77 - 86
The Importance of Maintenance in Hydraulic Drive Systems for Microhydropower Plants: A Comparative Analysis Daniel Vasile Banyai	87 - 96
Comparative Study of Non-Invasive Methods Used for Measuring the Human Joint Angles and Joint's Range of Motion in Static and Dynamic Conditions Cristian Radu Badea, Paul-Nicolae Ancuța, Sorin Ionuț Badea, Florentina Badea	97 - 115
Research into Freon-Free Ecological Compressed Air Cooling and Conditioning Processes Florin Teișanu, Constantin Chelan, Marinela Butoi, Daniela Iovan, Daniel Ocoleanu, Cristian-Eugeniu Sălceanu, Ancuța Mihaela Aciu, Cristina Maria Nițu, Claudiu Nicola, Marcel Nicola, Mihai Teișanu	116 - 124
Fruit and Vegetable Drying Machine with Energy Independence Ioan Pavel, Gheorghe Șovăială, Gabriela Matache, Valentin Barbu, Kati Pavel, Ana-Maria Popescu	125 - 132
Aspects of the Use of AI (Artificial Intelligence) Technology in Construction Equipment Management Mihail Savaniu, Oana Tonciu, Radu Panaitescu-Liess, Cristina Sescu-Gal, Magdalena Culcea, Anca Ruxandra Sasu	133 - 139

• Implementing the Functionality of Electrohydraulic Actuated Machines by Programmable Logic Controller Programmed Using Finite-State Machine Robert Blejan, Marian Blejan, Alexandru Ionescu	140 - 144
• Determinant of the Variability of the Load Cycle of a Multi-Source Hydrostatic Drive System Krzysztof Kędzia	145 - 153
• Heat Pumps. Calculation Elements for Solar Air Heaters Ioan Pavel, Ștefan-Mihai Șefu, Liliana Dumitrescu	154 - 161
• Cold Sprayed Ti-6Al-4V Coatings on Hydraulic Components Wojciech Żórawski, Rafał Chatys, Medard Makrenek, Dominika Soboń	162 - 170
• Analysis of the Influence of the Characteristics of Working Fluids in Hydraulic Systems on Functional Performance Adriana-Mariana Borș, Liliana Dumitrescu, Ștefan Șefu, Kamil Szeverda	171 - 182
• Comparative Thermal Analysis of Hydraulic Oils Andreea Mirela Teleașă, Sorin Cănanău, Cătălin Dumitrescu, Alexandru Valentin Rădulescu, Alina Maria Stoica, Geanina Mihaela Mateescu	183 - 191
• Neural Network Controller for Fault Detection and Monitoring of a Closed-Loop Compact Hydraulic Direct Drive Servomechanism Alexandru-Polifron Chiriță, Bogdan-Alexandru Tudor	192 - 205
• Involving Fluid Power in Art – A Possibility to Materialize the Artistic Vision Adrian Ciocănea, Cătălin Dumitrescu, Teodor Frolu, Dan Vezentan, Valentin Barbu	206 - 212
• Measuring Catalase Activity in Li Treated Aquatic Plant Tissues Anamaria Iulia Török, Eniko Kovacs, Erika Andrea Levei	213 - 217
• Electrification and Digital Transformation - Chances and Challenges for Fluid Power Technology Katharina Schmitz	218 - 227
