

Vehicle & Mechanical Engineering and Information Technology

Selected, peer reviewed papers from the 2012 International Conference on Vehicle & Mechanical Engineering and Information Technology (VMEIT 2012), September 7-9, 2012, Shenyang, Liaoning, China

von
X.D. Yu

1. Auflage

Trans Tech Publications 2013

Verlag C.H. Beck im Internet:
www.beck.de
ISBN 978 3 03785 580 5

Table of Contents

Preface

Chapter 1: Constructions, Mechanical and Vehicle Engineering

Research on Temperature Detection Based on Spectrum Analysis of the Speckle Pattern Interferometry J.H. Wu, R.F. Yang and G. Wang	3
Finite Element Model for Laplace Equation S.O. Shim, T.H. Jung, S.C. Kim and K.C. Kim	9
Seismic Protection of Steel Frames Using Friction Damper Devices M. Valente	13
Plastic Deformation and Fracture Initiation Typology Analysis under a Triaxial Tensile State of Stress Using the Quantitative Assessment of Microstructural Changes V.I. Safta and V.I. Safta	17
A Study on the Development of Micro Metal Gear with Outer Diameter of 500um Using MIM Process Y.M. Heo, K.H. Shin and J.D. Kim	25
Impact of Wind Generation in the Generation Reliability Assessment M.A. Rios and A.M. Garzón	29
Assessment of Redundant Steel Structural Systems Considering Effects of Member Strength Variability on the System A. Rasooli and H. Idota	33
Numerical Investigations of Different Seismic Retrofit Techniques for Flat-Slab Structures M. Valente	42
EDA-Based Charging Algorithm for Plug-In Hybrid Electric Vehicle to Shift the Peak of Power Supply T. Tazoe, S. Yamamoto, H. Onda, H. Takeshita, S. Okamoto and N. Yamanaka	46

Chapter 2: Advanced Technologies in Materials Science and Engineering

Comparative Study of Biogas and DME Fed Micro-CHP System with Solid Oxide Fuel Cell J. Kupecki, J. Jewulski and K. Badyda	53
Simulation of High Temperature Air – Steam Biomass Gasification in a Downdraft Gasifier Using ASPEN PLUS W. Ngamchompoo and K. Triratanasirichai	57
Optimization of the Working Conditions of a Single Molten Carbonate Fuel Cell J. Milewski and A. Miller	64

Chapter 3: Automation, Control, Information Technology and Electronics Engineering

WAMS COI-Based Phasor Visualization Frame for Power System Area Separation Y.J. Bernal and M.A. Rios	75
An Ontology-Based Collaborative Filtering Personalized Recommendation P. Wang	79
Line Level Scheduling by Integrating Area Level Scheduling in Manufacturing Systems S.O. Shim	83
A Collaborative Filtering Recommendation Algorithm Based on Product Clustering P. Wang	87

Modeling and Simulation of the Single-Phase Unity Power Factor Active Rectifier for Minimizing the Input Current Harmonic Distortions

R.G. Mapari, D.G. Wakde, R.G. Tambe, A.B. Kanase and S. Patil