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Nota di contenuto	Advanced Concepts in Mechanical Engineering I; Preface and Committees; Table of Contents; Chapter 1: Design and Research of Mechanisms and Machines; Assessment of Systems for Carrying out of Planar Biaxial Tensile Test; Compounding of Concurrent Rotation Movements; The Influence of the Pinion-Shaft Deflection on the Dynamic Characteristics of Helical Gear Pairs; Optimization Design for Car Suspension Elastic Elements; Consideration Regarding the Inverse Kinematics of a Rowing Skiff under the Action of the Oars Movement; Chain Tracking System for Solar Thermal Collector Algorithms for Noncircular Gear Pitch Curves Generation Singularities Classification for Structural Groups of Dyad Type; Transmission Indices Adoption for 6R Structural Group; Naval Centrifugal Compressor Design Using CAD Solutions; Naval Standard Safety Valve Design Using CAD Solutions; Mechanical Characteristics of Electronic Printed Circuit Obtained by the Vapour Phase Soldering Process; Evaluation of Loss of Mass due to Corrosion Using Vibration-Based Methods; Simulation of the Tooth Helix Angle Influence on the Vibration of a Single Stage Helical Gearbox

Some Aspects Regarding the Mathematical Modeling and Dynamic Simulation of a Single Stage Helical Gearbox; On the Synthesis of a Five Bar Linkage for Linear Trajectory Using a CAD Analysis; Low Speed Linear Actuator for Accurate Orientation of Concentrated Solar Convertors; On a New Parallel Tracking System for Accurate Orientation of Concentrated Solar Convertors; Geometrico-Static Modeling and Simulation of the Contact between Chain and Guide of a Reference Transmission; Contribution on the Optimization of the Spur Gears Design Process Using Software Application
Graphic Method Profiling of the End Mill Cutter Generating the Screw Compressor Rotor; ZPA Worms - Definition and Technology; Planetary Gear for Counter-Rotating Wind Turbines; Virtual Model to Generate Motions on Cyclic Trajectories; Dynamic Optimization of a Single-Seater Car Suspension System; Structural Synthesis of Parallel Linkages by Multibody Systems Method; Chapter 2: Mechanics of Deformable Bodies; Some Consideration Regarding the Models for Collisions with Plastic Indentation; Optimizing the Shape and Size of Cruciform Specimens Used for Biaxial Tensile Test
V-Beam Thermal Actuator's Performance Analysis Using Digital Image Correlation; Fatigue Analysis of Large Diameter Threaded Connections Subjected to Dynamic Axial Loads; Stress Analysis and Optimal Design of the Housing of a Two-Stage Gear Reducer; Experimental Analysis Regarding the Degree of Plastic Deformation of Fractured Surfaces under da/dN , K_{Ic} and J_{Ic} Determination; The Influence of the Fatigue Cycles Number on Material Hardness; Influence of Several Parameters on Simulating the Ballistic Impact on a Homogenous Plate
An Analytical Solution for Three-Dimensional Elliptical Elastic-Plastic Rolling Contact

Sommario/riassunto

Collection of selected, peer reviewed papers from the 6th International Conference on Advanced Concepts in Mechanical Engineering (ACME 2014), June 12-13, 2014, Iasi, Romania. The 123 papers are grouped as follows: Chapter 1: Design and Research of Mechanisms and Machines, Chapter 2: Mechanics of Deformable Bodies, Chapter 3: Structural Engineering, Chapter 4: Applied Tribology, Chapter 5: Biomechanics in Biomedical Engineering, Chapter 6: Mechatronics, Robotics and Automated Production Systems.
