1. Record Nr. UNINA9910789584603321

Titolo	Deformation and fracture in technological processes : special topic volume with invited peer reviewed papers only / / edited by Y. M. Hwang, Y. R. Jeng and C. P. Jiang
Pubbl/distr/stampa	Durnten-Zurich : , : Trans Tech Publications, , [2013] ©2013
ISBN	3-03813-313-2
Descrizione fisica	1 online resource (200 p.)
Collana	Key engineering materials, , 1013-9826 ; ; v. 528
Altri autori (Persone)	HwangY. M JengY. R JiangC. P
Disciplina	620.1126
Soggetti	Deformations (Mechanics) - Mathematical models Fracture mechanics - Mathematical models
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Deformation and Fracture in Technological Processes; Preface and Organizers; Table of Contents; Ductile Fracture in Metal Forming: A Review of Selected Issues; Propagation of Random Waves in Elastic Media with Microheterogeneities; Finite Element Analyses of Extrusion with a Two Stage Die and Manufacturing of Gradient Micro-Structures; Some Mechanical Models of Chemical-Mechanical Polishing Processes; Fluid Flow Control in Micro- and Nanochannels; Bulk and Surface Stability of Materials; Accumulation and Healing of Damage during Plastic Metal Forming Simulation and Experiment A Correlation between the Magnetic Behaviour and Damage of Metal Materials under Plastic Deformations Limit Plastic State of Notched Stripes with Stress State Dependent Properties; Modes of Stability Loss of Materials; Identification of Defects in an Elastic Body by Means of the Boundary Measurements; Effect of Strain-Hardening Induced Grain Refinement on Springback in Microtube Press Bending Process; Investigation of the Asymptotic Behavior of Stresses at the Tip of Wedge- and Cone-Shaped Cracks 3-D Model of the Periodic Structure Punch Sliding upon the Viscoelastic

Base with Incompressible Fluid in the Contact Gap Grain Refinement of AZ61/SiCp Magnesium Matrix Composites for Tubes Extruded by Hot Extrusion Processes; Theory of Phase Transformations in the Mechanics of Solids and its Applications for Description of Fracture, Formation of Nanostructures and Thin Semiconductor Films Growth; Development of Innovative Algorithm for Nanomechanics and its Applications to the Characterization of Materials; Keywords Index; Authors Index

Sommario/riassunto

This special collection of peer-reviewed papers focuses on mechanical approaches to the experimental study and modeling of the deformation processes and defect formation accompanying various technologies. A series of papers was devoted to the processes of metal-forming. Special attention was paid to the question of micro- and nano-structure adjustment during processes such as extrusion and microtube press-bending. Other papers covered models for damage accumulation and healing, as well as fracture prediction during metal forming. Temporary description, more details to follow. Review from Book