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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and indexes.
Nota di contenuto	Part I: Instrumentation -- The Development of High Speed Wi-Fi Wireless Acoustic Emission System -- State of the Art Wireless Acoustic Emission System for Structure Health Monitoring -- Some Benefits of Storing AE Data in a Modern Data Base Format -- Calibration Principle for Acoustic Emission Sensor Sensitivity -- Development of a Pipeline Leakage Location Instrument Based on Acoustic Waves -- Part II: Signal Processing and Analysis -- On Assessing the Influence of Intermittent Acquisition and Moving Window on the Results of AE Measurements -- Robust Broadband Adaptive Beamforming Based on Probability Constraint -- Near-field Noise Sources Localization in Presence of Interference -- Noise Diagnostics at AE Monitoring of Hazardous Industrial Assets -- AE Sources Location on Irregular-Shaped Objects Using 3D-Grid Method -- Numerical Simulation of Wave-guiding Properties and Optimization Design for Wave-guiding Rod -- Near-field Beamforming Performance Analysis for Acoustic Emission Source

Localization Based on Finite Element Simulation -- Intelligent Evaluation Method of Tank Bottom Corrosion Status Based on Improved BP Artificial Neural Network -- The Research of Backward Deducing the Peak Frequency of Acoustic Emission Signals in Different Array -- Analysis and Research of Acoustic Emission Signal of Rolling Element Bearing Fatigue -- Research on Compression Method of Acoustic Emission Signal Based on Wavelet Transform -- Feature Extraction of Corrosion Acoustic Emission Signals Based on Genetic-Matching Pursuit Algorithm -- Part III: Material Characteristics -- Damage Evaluation in Consideration of Distance Decay and Frequency Characteristics of Elastic Wave -- Characteristic Identification of Cracking Acoustic Emission Signals in Concrete Beam Based on Hilbert-Huang Transform -- Acoustic Emission from Elevator Wire Ropes during Tensile Testing -- Effect of Specimen Thickness on Fatigue Crack Propagation and Acoustic Emission Behaviors in Q345 Steel -- Acoustic Emission Behavior of Titanium during Tensile Deformation -- Study on Characteristics of Acoustic Emission and Position Entropy of Q345R in Tensile Loading at Room Temperature -- Acoustic Emission Behavior of 12MnNiVR under Stretching -- Statistical Analysis of Events of Random Damage in Assessing Fracture Process in Paper-sheets under Tensile Load -- The Use of Acoustic Emission for the Construction Generalized Fatigue Diagram of Metals and Alloys -- Deflection on Hit-Count Curves in Acoustic Emission could reflect the Damage Extent of C/C Composite Material Structure -- Acoustic Research on the Damage Mechanism of Carbon Fiber Composite Materials -- Damage and Toughening Analysis of Ceramics by AE Location Method -- Acoustic Emission Tomography to Improve Source Location in Concrete Material using SART -- Experimental Research on Tensile Process of Carbon Fiber Composite Materials Basing on Acoustic Emission -- Concrete Crack Damage Location Based on Piezoelectric Composite Acoustic Emission Sensor -- Part IV: Structure -- Visualization of Damage in RC Bridge Deck for Bullet Trains with AE Tomography -- Acoustic Emission for Structural Integrity Assessment of Wind Turbine Blades -- Analysis of Acoustic Emission Parameters from Corrosion of AST Bottom Plate in Field Testing -- Identification of Acoustic Emission Signal of Tank Bottom Corrosion Based on Weighted Fuzzy Clustering -- The Present Status of Using Natural Gas Cylinders and Acoustic Emission in Thailand -- Research on Acoustic Emission Attenuation Characteristics and Experiment of Composite Cylinder -- Research on the acoustic emission and metal magnetic memory characteristics of the crane box beam during the destructive testing -- The Research into the Possibilities for Monitoring Technical Conditions of Underground Pipelines Using the Acoustic Emission -- Underground Pipeline Leak Detection Using Acoustic Emission and Crest Factor Technique -- Comparison between Acoustic Emission In-service Inspection and Non-destructive Testing on Aboveground Storage Tank Floors -- Acoustic Emission Application for Unapproachable Pipeline Drain Point Leakage Detection -- Study of Pipeline Leak Detection and Location Method Based on Acoustic Emission -- Characterization of Acoustic Emission Parameters during Testing of Metal Liner Reinforced with Fully Resin Impregnated CNG Cylinder -- Applications of Acoustic Emission Testing in High Background Noise Environment -- Part V: Condition Monitoring and Diagnosis -- Acoustic Emission—an Indispensable Structural Health Monitoring Means for Aircraft -- Differentiating Signals from Different Sources of Acoustic Emission for Structural Health Monitoring Purposes -- Application of Acoustic Emission Technology for Rolling Bearing condition monitoring on Passenger Ropeway -- Wireless AE Event and Environmental Monitoring for Wind

Turbine Blades at Low Sampling Rates -- Experimental Study on
Acoustic Emission Detection for Low Speed Heavy Duty Crane Slewing
Bearing -- Interlaminar Shear Properties and Acoustic Emission
Monitoring of the Delaminated Composites for Wind Turbine Blades --
Condition Monitoring of Shaft Crack with Acoustic Emission -- Studies
on Automobile Clutch Release Bearing Characteristics Parameter of
Acoustic Emission -- Research Based on the Acoustic Emission of Wind
Power Tower Drum Dynamic Monitoring Technology -- Part VI:
Miscellaneous -- Acoustic Emission and Digital Image Correlation as
Complementary Techniques for Laboratory and Field Research --
Integral Thickness Measuring -- Separation of the Elastic and Plastic
Wave in Electromagnetically Induced Acoustic Emission Testing --
Correlation between Acoustic Emission and Induced Hydrogen of Shield
Metal Arc Welding -- Numerical Simulation Study on Propagation Law
of Acoustic Emission Signal of Slewing Ring -- Three-Dimensional
Finite Element Simulation of Signal Detection Transducer for
Electromagnetically Induced Acoustic Emission.

Sommario/riassunto

This volume collects the papers from the 2013 World Conference on
Acoustic Emission in Shanghai. The latest research and applications of
Acoustic Emission (AE) are explored, with particular emphasis on
detecting and processing of AE signals, development of AE instrument
and testing standards, AE of materials, engineering structures and
systems, including the processing of collected data and analytical
techniques as well as experimental case studies.
