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Nota di contenuto	Part1: Instrumentation -- Chapter1. Discussion on elastic wave sources for AE sensor calibration at low frequency -- Chapter2. Proposal for an absolute AE sensor calibration setup -- Chapter3. Difference between FBG and PZT Acoustic Emission Sensor -- Chapter4. Research on fiber bragg grating acoustic emission sensor -- Chapter5. The optimization of magneto acoustic emission testing device -- Chapter6. Power over Ethernet Daisy Chained Acoustic Emission System for Structure Health Monitoring -- Chapter7. Uniscope - instrument integrating NDT methods -- Chapter8. Fiber bragg grating acoustic emission demodulation system -- Part2: Signal Processing and Analysis -- Chapter9. Application of modal acoustic emission technique for recognition of corrosion severity on a thin plate -- Chapter10. Research on the identification of crack status through axle acoustic emission signal based on LMD and grey correlation analysis --

Chapter11. Acoustic emission characteristics based on energy mode of IMFs -- Chapter12. Two-Dimensional Source Location of Acoustic Emission by Means of AI -- Part3: Material Characteristics -- Chapter13. Acoustic emission RA-value and granite fracture modes under dynamic and static loads -- Chapter14. Damage detection in glass fiber reinforced plastics using ultrasonic full-waveform comparison -- Chapter15. Fatigue damage evaluation of 2.25Cr-1Mo-0.25V steel using acoustic emission entropy -- Chapter16. Acoustic emission behavior of TC4 Titanium alloy manufactured by electron beam freeform fabrication during tensile deformation -- Chapter17. An entropy approach for characterization and assessment of fatigue damage accumulation in Q235 steel based on acoustic emission testing -- Chapter18. Tensile deformation damage and clustering analysis of acoustic emission signals for 3D woven composites -- Chapter19. The study of Mechanical Behavior of Alloy Structural Steel Based on DynamicAcoustic Emission Signal -- Chapter20. Acoustic emission characteristic of ceramic matrix composite under static loading.

Sommario/riassunto

This volume collects the papers from the World Conference on Acoustic Emission 2017 (WCAE-2017) in Xi'an, China. The latest research and applications of acoustic emission (AE) are explored, with a particular emphasis on detecting and processing AE signals, the development of AE instrument and testing standards, AE of materials, engineering structures and systems, including the processing of collected data and analytical techniques. Numerous case studies are also included. This proceedings volume will appeal to students, professors and researchers working in these fields as physicists and/or engineers.