CONTENTS

Contributions can be found in alphabetical order according to the surname of the first author.

J. D. ANGELO, A. BENNECER, S. KACZMARCZYK, P. PICTON Modelling the Influence of Iron Oxide Layers on the Microstructural Damage of Boiler Tubes	1
Robert BROCKMANN Validation of sensitivity of the UST-Method with a test leak	9
Matthias BUSCH, Dennis WEYRICH, Benedikt FAUPEL A robot inspection system allows the detection of defects in adhesive bonds between CFRP components by using active thermography, leading to reduced cycle times	15
Ladislav CARBOL, Ivo KUSÁK, Jan MARTINEK, Petra VOJKŮVKOVÁ Influence of Transducer Coupling in Ultrasonic Testing	23
Serge DOS SANTOS, Martin LINTS, Nathalie POIROT, Zuzana FAROVA, Andrus SALUPERE, Michael CALIEZ, Zdenek PREVOROVSKY Nonlinear Time Reversal for Non Destructive Testing of complex medium: a review based on multi-physics experiments and signal processing strategies	31
Martin DRAB, Michal HANAK Introduction to the AFF Universal File Format and its Use for NDT Data	41
Dagmar FAKTOROVÁ, Mária PÁPEŽOVÁ, Adriana SAVIN, Rozina STEIGMANN, František NOVÝ, Otakar BOKŮVKA A new approach of microwave resonant methods for bone replacement biomaterials testing	47
Karel HAJEK Some Aspects of Signal Processing for Nonlinear Pulse Ultrasonic Mixing Spectroscopy	57
Mohamed Zied CHAARI "PowerWave.ndt": applied to charge wirelessly the batteries of Gas and Petroleum Pipes Crawlers	65
Milan CHLADA, Zdenek PREVOROVSKY Shortest Ways Finding in Discrete Bodies	69
Alexandr A. KARABUTOV, Elena B. CHEREPETSKAYA, Natalia B. PODYMOVA Laser-ultrasonic measurement of local elastic moduli	75

Tomaž KEK, Dragan KUSIĆ, Aleš HANČIČ, Janez GRUM Acoustic Emission Crack Detection in Injection Molding	81
Sung-Jun KIM, Yoon-Ho NOH, Min-Cheol SON, Dong-Jin LEE and Young H. KIM Propagation Property of Leaky Surface Acoustic Wave on Monocrystalline Silicon Crystal using Large Aperture Line- Focused PVDF Transducer	89
Jan KOBER, Zdenek PREVOROVSKY In Situ Calibration of Acoustic Emission Sensors	93
Ren-Jean LIOU, Jennifer E. MICHAELS Interpolation Analysis of Ultrasonic Guided Wave Signals in the Temperature Domain	99
Pavel MAZAL, Lukas KOMENDA, Frantisek VLASIC, Vladimir BUKACEK, Miroslav JANA New areas of application of acoustic emission method	109
Jaewon OH, Donghyun KIM, Inyoung JUNG, Kyubeom HAN, Young H. KIM Study on Ultrasonic Wave Propagation in Anisotropic Plates Using Large Aperture Line Focusing Transducer	119
Konstantin O. PETROSYANTS, Igor A. KHARITONOV Non-destructive Testing of Electronic Components Overheating Using Infrared Thermography	127
M. S. SALMANPOUR, Z. Sharif KHODAEI, M. H. ALIABADI A Reference Free Method for Damage Detection and Location Based on Geometric Similarity	133
Adriana SAVIN, Rozina STEIGMANN, Nicoleta IFTIMIE, Maria PAPEZOVA, Dagmar FAKTOROVA Complementary near field technique for assessment of fiber reinforced composites	143
Shirsendu SIKDAR, Sauvik BANERJEE Ultrasonic guided wave propagation and detection of high density core region in a honeycomb composite sandwich structure using embedded piezoelectric transducers	155
Mohammad H. TAGHIPOUR Study and evaluation of advanced TOFD method for inspection of polyethylene pipes but welding	165
Efi A. TZOURA, Eleni G. CHOUTOPOULOU, Thanasis C. TRIANTAFILLOU, Costas P. PROVIDAKIS, Aristomenis V. TSANTILIS, Corina G. PAPANICOLAOU, Dimitris L. KARABALIS Damage Detection of Reinforced Concrete Elements Retrofitted with FRP by Using a Wireless Measurement	171

Miroslaw WITOS Modal Analysis as a High Sensitive NDT Method of Compressor Blades	177
ADDITIONAL ABSTRACTS	193
Sigrun HIRSEKORN Materials evaluation and defect detection by elastic wave propagation and scattering phenomena	195
André JUHRIG, Sebastian KÜMMRITZ, Mario WOLF, Elfgard KÜHNICKE A multichannel ultrasound pulser with arbitrary signal excitation unit for scanning acoustic microscopy	196
Alexander A. KARABUTOV Contact laser-ultrasonic evaluation of carbon-fiber reinforced composites	197
Sebastian KÜMMRITZ, Mario WOLF, Elfgard KÜHNICKE Material characterization of layered structures by the simultaneous determination of sound velocity and thickness	198
Elisabeth LEISS-HOLZINGER, Johannes BAUER- MARSCHALLINGER, Andreas BUCHSBAUM, Thomas BERER Multimodal 2D and 3D imaging using a combined optical coherence tomography and non-contact photoacoustic imaging systém	199
Rosario MOLICA NARDO, Donatella CERNIGLIA Pipeline construction: how NDT modelling can help developing, optimizing and validating AUT procedures	200
Anouar NJEH, Mohamed Hédi BEN GHOZLEN, Anouar CHAABANI, Wolfgang DONNER Surface acoustic wave propagation in thin textured BST films	201
Joy PAL, Sauvik BANERJEE, Pertha MAJUMDER Identification of semi-rigid joints in plane steel frame structures using swarm optimization techniques and genetic algorithm	202
Cabanis PATRICK Eddy Current Array no Contact Screw Inspection	203
Zdenek PREVOROVSKY Progress in NDT methods and topics during the last 15 vears	204

Sanita RUBENE Monitoring of water infiltration in autoclaved aerated concrete masonry construction blocks by EIS	205
Mohammad Saleh SALMANPOUR, Mohammad Hossein ALIABADI, Zahra SHARIF KHODAEI Boundary Amplitude Mitigated Transducer Placement Optimisation (BAMtpo) for Guided Wave Structural Health Monitoring	206
Mohammad Saleh SALMANPOUR, Zahra SHARIF KHODAEI, Mohammad Hossein ALIABADI Post Deployment Reparable and Modifiable (pdRAM) Smart SHM Layer Concept.	207
Daniel TOKAR, Zdenek PREVOROVSKY Characterization of the Anisotropy and Directional- Dependent Nonlinearity of the Human Skin In-vivo Using Ultrasound	208