

SESSION A1

ID107, *Investigating the Suitability of Galena (Lead Glance) as a Construction Material for Radiographic Bunkers*, Tejas N. Ingale

ID114, *Determining the Suitability of using X-Ray Fluorescence for Inspection of Archaeologically Excavated Soil Samples*, Tejas N. Ingale

ID154, *Multimodal NDT Assessment of Concrete Structural Elements before Re-use*, Ernst Niederleithinger, Jelena Bijeljic, David Ringeloth, Oleksandr Al Shboul, Iurie Curosu

ID214, *Autogenous Healing of Concrete Assessed through Rayleigh Waves*, Gerlinde Lefever, Didier Snoeck, Dimitrios G. Aggelis

ID231, *Structural and Geotechnical Investigation Campaign using NDTs of the Camp Nou Stadium in Barcelona for the Remodelling project*, Abel Domato, Lluís Aranda, Aureli Ibars

ID374, *Data-Driven Geostatistical Mapping of Concrete Mechanical Properties from Ultrasonic Measurements*, Douha Lakhout, Narintsoa Ranaivomanana, Frédéric Taillade, Bertrand Iooss, Jean-Paul Balayssac

ID426, *Dynamic Monitoring of Monumental Artifacts*, Giorgio Sforza

ID587, *Early-Stage Structural Behavior Assessment using Digital Image Correlation*, Giuseppe Pandarese, Simone Forlano, Maria Teresa Calcagni, Alessia Freddo, Francesco Monni, Enrico Quagliarini, Gian Marco Revel

ID659, *Nano-Destructive Chromatographic Analyses of Cultural Heritage Royal Purple Dyeings*, Zvi Koren

ID698, *ITZ Characterization on Thermally Damaged Glass Beads Concrete by Diffuse Ultrasound*, Manda Ramaniraka

ID771, *Evaluation of the Variation in NDT Results in Reinforcing Bars of Concrete Slabs, Subjected to Accelerated Corrosion Processes*, José P. Peña Caravaca, Carlos R. Arganis Juárez, Manuel Antuch, Pamela F. Nelson, Luis F. Desdín, Angeles Díaz Sánchez, Eduardo Robles Piedras

ID849, *Exploration of On-Site Archaeological Excavation Technology Based on Compton Scattering Tomography*, Yongshun Xiao, Chunbo Hu, Dini Lan, Xujian Ouyang, Wenzhong Xu, Peiyuan Ma, Minghao Dong, Junjun Li, Zhiyong Lu, Yongjian Zhang

ID893, *Thermography in Building Analysis: Peculiar Examples and Field of Application*, Marco Maria Parrini, Anna Isabella Piazza

ID917, *Urban Utilities: NDT-CE on a Concrete Structure, after 28 Years with its Construction Halted*, Sebastian Laprida, Florencia Kihara

ID955, *Beyond Rubble: The Indispensable Role of Non-Destructive Testing in Post-War and Post-Earthquake Recovery for Aleppo's Modern and Heritage Structures*, Tarek Krayem, Dario Foppoli

SESSION A2

ID105, *In-Situ Volumetric Inspection of Reciprocating Internal Combustion Engine (RICE) Piston Crowns as a Preemptive Detection Method for Cracking on Threaded Connection*, Terry Haigler, Jeff Henry, Gang Zhou

ID174, *NDE Challenges and Solutions for the Inspection of CO₂ and Hydrogen Pipelines*, Joseph Krynicki, Lujian Peng, Gustavo Gonzalez, Hyun Jo Jun, Alain Chamberlain

ID202, *Methodologies for Assessing Existing Penstocks*, Lorenzo Artaz, Antonino Sannolo, Maurizio Frola, Simone Ferrarese

ID203, *Fatigue Behavior of Hydropower Shafts in the VHCF Regime*, Antonino Sannolo, Maurizio Frola, Simone Ferrarese

ID243, *Some Insights on Conventional and Advanced Ultrasonic Testing of Large Forgings*, Michele Carboni, Fabio D'Urso, Massimo Guerrini, Lorenzo Parrotta, Giovanni Zappavigna

ID244, *Research on the Application of AI to Simulation-Based Micro-Defect Modeling and Diagnosis in Nuclear Power Plant Facilities*, Jaesun Lee, Soomin Lee, Kseniia Barashok, Yeongil Choi, Dokyung Pyun

ID263, *Determination of Focal Laws for Centrifugally Cast Stainless Steel Using Time-Reversal Method*, Shan Lin, Shohji Hajime

ID307, *Application of the Potential Method for Real-Time Crack Detection in High-Temperature Components*, Pavel Mares, Petr Zivny, Marek Mekuta

ID322, *A New Concept for Calibration of Weld Seam Testing for HFI-Pipelines Using Embedded Mid-Wall-Reflectors*, Till Schmitte, Patrick Labud, Lena Thewes, Thomas Orth, Michael White, Christoph Weil, Marco Böcking

ID380, *Complementary Use of Volumetric and Surface Non-Destructive Techniques for the Detection and Evaluation of Stress Corrosion Cracking in Critical Energy Assets*, Angelique Raude, Florin Turcu, Ghislain Morais

ID405, *Direct Current Magnetic Flux Leakage Testing (DCMFL): Improving Repeatability for Oblique Defects by DC-Demagnetization*, Frank Eibofner, Friedrich Hecker

ID610, *Tackling Advanced UT Techniques at High Temperatures*, Tim Stevenson, Maria Giampani, Roscoe Martin

ID631, *Highly Integrated Solution for Corrosion Testing in the Field*, Benjamin Hoemske, Prashanth Chinta, Christoph Deters, Johannes Büechler, Stephan Falter

ID641, *AI-Assisted In-Vessel Visual Inspections*, Thiago Osorio

ID738, *Eddy Current Array for Inspecting J-Welds on the Reactor Vessel Head in Nuclear Power Plants*, Charles Tremblay, Sergio Loffredo, Mathieu Bouchard

ID954, *Digital vs Film Radiography Performance for High-Energy Nuclear Weld Inspection*, Steven Wissels, Johan Grauls

SESSION A.3: Industrial Technologies and Processes

ID120, *Penetrant Testing = Advantages of using BIODEGRADABLE Penetrants (Health, Safety, Environment)*, Fabien Cormier

ID128, *Online Testing of ERW-Welded Tubes with PAUT*, Wolfram Deutsch, Igor Martini, Massimo Cadeddu, Vasyl Tomnyuk, Timur Sayfullaev, Marius Weiler

ID157, *NDE4.X - Next Level of NDT Automation in Aerospace*, Thomas Gramberger

ID184, *Quantum Physics: New Light in Nondestructive Testing*, Giuseppe Nardoni, Marco Feroldi, Pietro Nardoni

ID205, *Portable, Battery-Powered X-Ray System with a Compact Wired X-Ray Tube and Small Focal Spot*, Sebastian Eckel, Markus Schmid, Berthold Schrieck, Vladimir Alekseychuk, Alexander Alekseychuk

ID213, *Surface Inspection of CFRP Composites Using High-Frequency Air-Coupled Ultrasonic Testing*, Héctor Calas, Tomas Gómez Álvarez-Arenas, Thomas Partiot, Hervé Saulais

ID224, *Online Monitoring of Phase Transformation Evolution in Hot Rolled Steels during Controlled Cooling*, Haibing Yang, Frenk van den Berg, Jos Mosk, Simon Kerley, Mark Dolby, Joe West, Anthony Peyton, Claire Davis

ID225, *Improved Process Control of High-strength Steels by Microstructure Monitoring with an Inline XRD Gauge*, Frenk Van den Berg, Ramon Speets, Cor Jan Boeder, Cornelia Ionescu, Martin Huisert, Suzan Bruinsma, S. Melzer, Horst Krauthäuser, Tobias Terlau

ID258, *Ultrasonic Inspection of Complex Surfaces Using Novel Coupling Materials*, Julián Fernández-Avilés Gómez, Pablo Resa, Amador Sillero, Luis Elvira, Carmen Durán, Alexandre Delannoy, Éric Torra

ID262, *Signal Processing using Synthetic Aperture Focusing Technique for Ultrasonic Testing of Round Bars*, Kazuki Terada, Yutaka Matsui

ID294, *Magnetic Characterization of Structural Steels under Different Heat Treatment using Pulsed Eddy Current Testing*, Athanasios Kyrgiazoglou, Anastassios Skarlatos, Dimitrios Fasnakis, Maria Pappa

ID338, *3D Weld Seam Sensor for the Detection of all types of Defects on the Material Surface*, Jun Zhao

ID357, *Laser Ultrasound in Wire Arc Additive Manufacturing: Imaging of Internal Structure and Defects*, Norbert Huber, Maximilian Hoffmann, Gernot Mauthner, Bernhard Reitingner

ID378, *Development of an Eddy-current Probe for Quality Control of Conductive 3D Printing by FEM Modelling*, Till Schulze, Maren Rake, Martin Schulze, Nataliia Gromberg, Henning Heuer, Welf-Guntram Drossel

ID397, *New Technologies for Improving the Electroacoustic Performance of Transducers*, Galaad Pereyron, Philippe Dumasva

ID403, *New Solutions Focused on Phased Array for the Inspection of High-Density Polyethylene*, Justin Wendorf, Florin Turcu

ID492, *Ultrasonic NDE for Real-Time Monitoring of Vulcanization in Nitrile Butadiene Rubber*, Debasis Datta, Subhasis Mondal

ID500, *Advanced Ultrasonic Phased Array Inspection System with PaintBrush Technique for the Gapless Testing of Seamless Steel Pipes*, Sanjeevareddy Kolkoori, Thomas Weise, Daniel Koers, Claudia Jasperneite, Franz Eggbauer, Friedrich Lorenz

ID510, *Eddy Current Scanner for Case Depth Measurement of Induction-Hardened Axle Bars and Stem Shafts*, Hooman Dejnabadi

ID514, *Acoustic Resonance Testing (ARS/ARI) for Non-Destructive Evaluation of Cast and Advanced Manufactured Metal Components*, Hooman Dejnabadi

ID519, *Sub-THz Radar Line Camera for Inline NDT Applications*, Sven Leuchs, Christian Krebs

ID536, *Comparative Analysis of Non-Destructive Methods for Determining the Thickness of Welding Overlay (Cladding) in Alloy 625 and AISI 316*, Erik Del Forno, Nicola Marasco, Stefano Verdino, Riccardo D'Amico, Dario Tonali, Enrico Vignati

ID563, *Beyond the HP/11 Reference: Architectural Evolution of Minifocus X-Ray Sources for Future NDT*, Arnaud Sottas, Marcel Odermatt

ID565, *Advanced Phased-Array Methods for the Automated SAW Inspection with Wheel Probes*, Christof Breidenbach, Prashanth Kumar Chinta, Stephan Falter, Jörg Ininger, Christian Sturm, Thomas Würschig

ID654, *TFM Inspection in lieu of RT on Welds of Thin WT Pipes in Stainless Steel*, Angelo Bruno, Pasquale Miniello

ID681, *Automatic 3D Analysis of Asphalt Mixtures using High-speed CT & AI Segmentation*, Daniel Cuadra-Rodriguez, Eusebio Solorzano, Lorena Palomo Luis, Jose Simón Grau, Victor Garcia Rabadán, Gloria Motos Cascales

ID723, *A Modular Phased Array-Based In-Line UT System Enabling High-Speed, High-Reliability NDT*, Herve Saulais, Cyril Thibault, Andrzej Wiatrek, Dominique Braconnier

ID724, *RopeWatcher: Advancing Predictive Maintenance through Continuous Magneto-Inductive Rope Monitoring*, Bruno Vusini, Daniel Rossi, Enrico Furno

ID729, *In Line Inspection of Hex Bars with Advanced Ultrasonic Phased Arrays*, Cyril Thibault, Jorn Bolten, Wolfram Deutsch, Dominique Braconnier

ID734, *On-Site Calibration Breakthrough for Phased Array UT Systems*, Dominique Braconnier, Wolfram Deutsch

ID788, *Non-Destructive Evaluation of Micro-Cracks Using Differential Electromagnetic Focusing Vision*, Gaige Ru, Bin Gao, Jiale Ye

ID866, *The New DGZfP Guideline D8 on Displays for Image Evaluation, what is the Message for the User?*, Uwe Zscherpel, Klaus Bavendiek

SESSION A.4: Transportation

ID118, *On-Site Quantitative Characterization and Performance Verification of a New Phased-Array Instrument for the Automated PAUT Inspection of Steel Bars in Accordance with EN ISO 18563-1*, Sanjeevareddy Kolkoori, Cord Asche, Claudia Jasperneite, Daniel Koers, Josef Maier

ID121, *Detection of Fatigue Cracks in Multilayer Riveted Aircraft Structures by Double Differential Eddy Current Probes*, Valentyn Uchanin, Giuseppe Nardoni, Mario Turconi, Marco Feroldi

ID299, *Effective and Modern Methods of Testing Large Forgings or Castings with Customer-Designed MT Systems*, Ondrej Doubek

ID339, *Seven Years of Innovation in Binary Ultrasonic Imaging for NDT*, Pierre Bélanger, Guillaume Painchaud-April, Alain Le Duff, Baptiste Gauthier, Tony Rasolonirina, Aurélien Thon, Rafaël Niddam

ID432, *Integrated System for Advanced Monitoring of Steel Ropes based on 3D Visual and Dimensional Analysis to Support the Magneto-inductive Method (MRT)*, Alessandro Rossi, Matteo Liuzzi, Davide Moschitti, Cristiano Bonetti, Davide Zanetti

ID483, *Enablers to boost the benefits of Artificial Intelligence for NDT*, Cédric Bertrand, Silvère Barut

ID737, *Assessing the Potential of Advanced Imaging with Low Frequency Rayleigh Waves: from Single Beam A-scan to TFM and Phase Coherence Imaging*, Florin Turcu, Raphaël Côté-Vachon

ID747, *Recent Advances in Orbital Weld Inspection using Eddy Current Array Testing*, Mathieu Bouchard, Louis-Daniel Thérroux, Sergio Loffredo, Alain Haddad, Sergio Grond

ID802, *Integrated Non-Destructive Testing Concept for Type 4 Hydrogen Storage Tanks*, Soonho Won, Hak-Sung Lee, Martin Schulze, Till Schulze, Henning Heuer