

Applications of NDT enhanced with Augmented Reality

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This presentation explores the transformative synergy between Non-Destructive Testing (NDT) and Augmented Reality (AR), unveiling a realm of innovative applications. NDT has long been instrumental in ensuring structural integrity without causing damage. Integrating AR into NDT processes opens new avenues, enhancing visualization, accuracy, and efficiency. The convergence of NDT and AR introduces real-time overlays of diagnostic data onto physical structures, empowering inspectors with instantaneous insights. From weld inspections to composite material analysis, AR augments the inspector's field of view, enabling them to detect flaws more intuitively. This fusion minimizes human error and accelerates decision-making, vital in industries where safety and precision are paramount. Furthermore, the presentation delves into the training aspects, showcasing how AR facilitates immersive simulations for NDT professionals. By overlaying virtual defects onto real-world scenarios, practitioners can hone their skills in a risk-free environment. Case studies will highlight successful implementations across aerospace, oil and gas, and manufacturing sectors, emphasizing cost savings and heightened reliability. Ultimately, this exploration of NDT and AR synergy underscores a paradigm shift in inspection methodologies, ushering in an era where cutting-edge technology converges with time-tested practices to elevate the standards of safety and quality assurance. The presentation will also include a solution developed by RUAG and its partners which it is bringing to the market in 2024.