

UTRC-REGION II NEWSWIRE

UTRC Press Release

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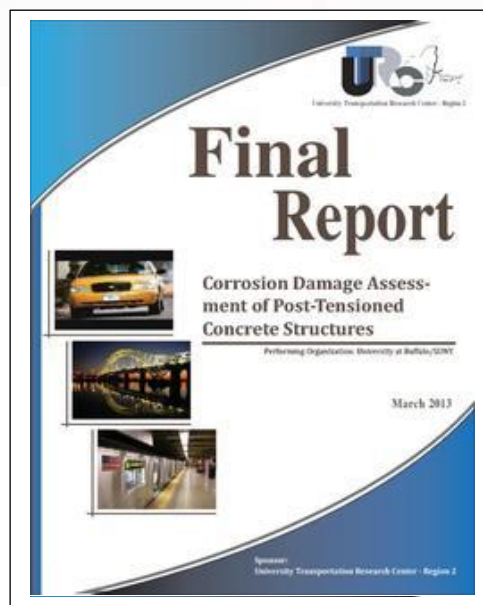
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The University Transportation Research Center Publishes the Final Report for the Research Project Titled: "Corrosion Damage Assessment of Post-Tensioned Concrete Structures"

UTRC has released a final report for the research titled: "**Corrosion Damage Assessment of Post-Tensioned Concrete Structures**", funded by the Research and Innovative Technology Administration/USDOT (RITA). The principal investigator was **Dr. Salvatore Salamone**, an assistant professor of Civil, Structural and Environmental Engineering at the University at Buffalo (SUNY).

Detecting corrosion in the tendons of post-tensioned (PT) concrete structures is technically challenging. The general inaccessibility of the tendons makes evaluation difficult, costly and often inconclusive. This study had two objectives. The first objective was to design, implement and validate the use of an innovative monitoring system based on embedded arrays of low profile piezoelectric transducers to generate and receive guided ultrasonic waves (GUW) over the length of a pre-stressing tendon. The second objective was to develop a new signal processing technique based on fractal theory, to enable the monitoring of the corrosion progression. To accomplish the objectives of the study, accelerated corrosion tests were carried out on two seven wire steel strands embedded in two concrete blocks.

The full report is available for a free download at the UTRC website: <http://www.utrc2.org/publications/corrosion-damage-assessment>



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About The University Transportation Research Center

The University Transportation Research Center (UTRC) is a USDOT Regional Transportation Center addressing surface transportation operations, management, design economics and planning. The Region 2 University Transportation Research Center is one of ten original National Centers, established in 1987, in recognition that transportation plays a key role in the nation's economy and in the quality of people's lives. Located at the City University of New York, the Center is a Consortium of 17 major Academic Institutions in New York, New Jersey, and Puerto Rico. Through the Grant supporting the Center, the mission incorporates research, education and the transfer of technology in the field of transportation. Academically based, the work of Faculty and Students – graduate and undergraduate provide a critical link in resolving our national and regional transportation problems while training the future and current professionals who address our transportation system and their customers on a daily basis. For more information, visit www.utrc2.org.