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## **System for Corrosion Inspection and Monitoring**

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**Author Note:** The University Student Design and Applied Solutions Competition team representing the United States Military Academy (USMA) is a joint endeavor by cadets from the USMA Department of Systems Engineering (SE) and the USMA Department of Civil & Mechanical Engineering (C&ME).

**Abstract:** This paper contains has conducted research and analysis on different corrosion identification and monitoring methods to develop an autonomous corrosion inspection system to solve the challenge issued by the University Student Design and Applied Solutions Competition. This challenge is to build an autonomous corrosion detection and monitoring system to help provide new ideas and innovations to the Department of Defense. Using research and stakeholder analysis, this research produced a system to best meet the demands of the competition and determine the best possible solution to the design challenge. Our integrated team used a systems engineering approach to produce the design that will be fielded at the competition in April 2016.

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