

University of Miami

REPAIR OF BRIDGES AND BUILDINGS WITH COMPOSITES



The Repair of Buildings and Bridges with Composites (RB²C) is a National Science Foundation Industry-University Cooperative Research Center. RB²C focuses on addressing the needs of the construction industry in the areas of rehabilitation and strengthening of existing structures using the novel, untapped potential of advanced composite materials and technologies.

The center makes possible the opportunity to integrate the knowledge, experience, interests, and resources of industry partners with university research. Industry partners provide expertise and resources in the design and application of advanced composites; University partners provide technical expertise and research resources. The center creates a forum for technology development and transfer



Research Team Testing a Stadium

that could not be achieved alone by any of the individual participants.

RB²C originally started in 1998 at the University of Missouri-Rolla and was transferred in 2006 to the University of Miami 2006. In 2002, the center became a multi-university center when North Carolina State University joined. The mission of RB²C is to provide an opportunity for cooperative research between university researchers and industrial partners to develop appropriate advanced composite technologies for the repair of buildings and civil infrastructure.



Left: Application of Externally Bonded Composite Reinforcement

Structural retrofit work has come to the forefront of industry practice in response to the aging of buildings and civil infrastructure worldwide. In addition, codes have gone through major revisions to ensure that structures can better withstand natural phenomena, such as earthquakes. These two forces create a great need for more effective materials, methods, and techniques for structural rehabilitation.

Right: Installation of Fiber Optics on Steel Girders



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