

PROJECT BRIEF

Asian Development Bank Bridge Upgrading Project using the TYFO® Fibrwrap® Composite System



Antique Province,  
Philippines  
March 2004



As part of an Asian Development Bank (ADB) funded project in the Philippines, a 150 km stretch of 30-year-old highway in the jungles of Antique Province, including 19 bridges, was upgraded to cater for an increase in traffic loads, severe environmental degradation and change of seismic codes.

The original design called for beams and girders of 11 of the 19 bridges to be upgraded for flexure and shear capacity using conventional steel plate as well as concrete jacketing methods. For this component of the ADB project, an alternative method for strengthening the beams was designed and proposed using the TYFO® Fibrwrap® Composite Systems.

The TYFO® Fibrwrap® Composite System uses aerospace technology and materials, i.e. carbon/glass/aramid fibres and epoxy composites and works on the concept of wrapping structural members such as columns, beams, slabs and walls to enhance ductility and load carrying capacity of the members.



This unique strengthening system was accepted for its speed of application, as well cost effectiveness. The project was completed in 10 months almost 8 months ahead of schedule and to the great satisfaction of local authorities.

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