

## PROJECT BRIEF

**Shamei Building: Architectural Heritage Building Preservation using the TYFO® Fibrwrap® Composite System**


Shanghai, China  
December 2004



This five-storey colonial building in the bustling city of Shanghai was built in the early twentieth century and was to be redeveloped into a commercial-cum-banking premise.



Due to age, severe concrete degradation as well as increase of dead and live loading, the flexural capacities of all existing slabs in the building were found to be inadequate. The structural consultant invited FYFE Asia to submit an alternative proposal to the conventional concrete jacketing or sprayed concrete methods of strengthening, which are time consuming and increase the dead loads on an already weakened structure. A complete design proposal using the TYFO® SCH 11UP Carbon Composite System was proposed using strips of carbon composite to enhance the flexural capacity of the slabs on all 5 five levels. The TYFO® Fibrwrap® Composite System was chosen over other conventional proposals due to its high strength and negligible weight. 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.



The entire strengthening works at the Shamei building was carried out in only one month resulting in additional time and cost savings to the client.

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