

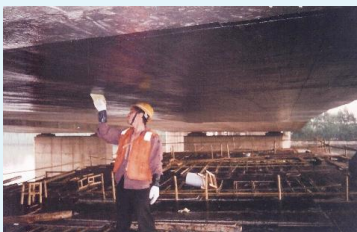
PROJECT BRIEF

Panyu Bridge Structural Repair and Strengthening using TYFO® Fibrwrap® Systems



Guangzhou
China
April 2006

Considered a relatively “young” bridge, the Panyu Bridge was completed in mid-August 1998. It comprises of a suspension cable bridge which forms the main section of the bridge and the secondary section which is known as the Shaxi number two bridge. The total length of the bridge spans 4.875 km. The Total investment for the construction of this bridge was recorded to be approximately RMB 962 million dollars.



Striding across a small section of China’s Pearl River, this bridge handles a very large volume of traffic flow daily. In year 2006, the annual inspection held for the bridge revealed that cracks had developed on the side faces of the main beams of the bridge as well as on the soffit of the Shaxi number two bridge. Thus, the consultant recommended remedial measures to prevent the cracks from developing further which if unmitigated would affect the structural integrity of the bridge. The TYFO® SCH11UP carbon composite, together with the epoxy injection technique was used for all the strengthening and crack control works. The main challenge in this project was the accessibility to the affected soffit of the Shanxi number two bridge since it spans across the river. Boom lift trucks had to be deployed on the bridge deck so as to access the affected regions of the main bridge as well as motorized boats to erect scaffolds for access to the soffit. A total of 840m² of TYFO® SCH11UPN was applied to strengthen the secondary bridge. The repair scopes for this project involved TYFO® S epoxy injection on approximately 130m length of cracks on the bridge piers, main beams as well as corrosion protection works on the anchor plates for the cable ties.

Due to the need for partial closure of the river traffic to allow the work boats to erect scaffold for access to the bridge soffit, the traffic authorities allowed only ten working days for the entire retrofit project. The project was completed smoothly on time and easily passed the consultant’s inspection on the first round.

FYFE Asia Pte Ltd

8 Boon Lay Way, #10-03 Tradehub 21, Singapore 609964

Tel: +65 6898 5248 • **Fax:** +65 6898 5181 • **E-mail:** info@fyfeasia.com • **Web:** www.fyfeasia.com