

PROJECT BRIEF

Strengthening to Beams, Slabs and Columns at Boutique Hotel @ Tiong Bahru using TYFO® Fibrwrap® System



Boutique Hotel @ Tiong Bahru
Singapore
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Located in Tiong Bahru, one of Singapore's oldest and most charming neighbourhoods, it offers visitors a first-hand and uniquely Singapore experience of living in the heartlands. The two four-storey blocks which comprise of a total 78 units of 3-rooms and 4-rooms flats, were converted into the new Boutique Hotel @ Tiong Bahru . The addition of 288 themed guest rooms while preserving the distinctive facade of the building resulted to an increase in loads. This increase in loads precipitated in the need for enhancing the capacity of the reinforced concrete beams, slabs and columns of that old building structure.



A feasibility study on the technical and commercial viability of refurbishing the two blocks of flats for the proposed hotel was done and the agreement to lease was signed on 14 September 2005. According to record, the uniqueness of this project of transforming two four-storey blocks into Boutique Hotel @ Tiong Bahru has remained as the "first adaptive re-use of Housing and Development Board of Singapore's flats as a hotel in Singapore".

After a thorough structural analysis, a proposal recommending the use of the high strength TYFO® Fibrwrap® Composite System was submitted for approval. This advanced building technique is not only non-intrusive but also faster than conventional strengthening methods. Due to its advantages of rapid speed and ease of installation, a total of 1041 beams, 460 slabs and 306 columns at Boutique Hotel @ Tiong Bahru were strengthened using the TYFO® SEH 51A together with TYFO® S Epoxy. One interesting aspect of the strengthening works was the cutting of slots and the insertion of laminates before the grouting of epoxy was carried successfully hogging moment enhancement of the beams. The time taken to complete the entire work was about 6 months with no delay.

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