

PROJECT BRIEF

Strengthening of the fire-damaged Yamaha Music Factory using the TYFO® Fibrwrap® Composite System



Jakarta, Indonesia
June 2005



An accidental fire broke out in March 2005 and damaged part of a 4-storey manufacturing facility owned by the Yamaha Music Manufacturing Industry in Jakarta, Indonesia, causing a major slowdown of in its manufacturing capacity.

An initial visual inspection on the condition of the facility after the fire revealed severe spalling of the concrete and cracks in many of the reinforced concrete beams, slabs and columns. Based on a structural assessment on the integrity of key structural elements after the fire, it was found that the concrete and steel strength had deteriorated as a result of the fire's impact.

FYFE Asia Pte Ltd, Singapore was approached by the structural consultant representing the owner to jointly assess the extent of the damage and to propose a strengthening solution for the affected portion of the building. The final proposal called for concrete enlargement of the columns and strengthening of the damaged beams using TYFO® Fibrwrap® Composite System. A majority of the RC beams were strengthened for flexural enhancement using the TYFO® SCH41 Carbon Composite, and for shear enhancement using the TYFO® SEH51-A Glass Composite by FYFE Asia Pte Ltd's certified applicator in Indonesia.

Owing to the system's ease of application, strengthening using the TYFO® Fibrwrap® System was completed within a short duration of 15 days allowing the facility to reach its pre-fire structural and manufacturing capacity without further delay.

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