

PROJECT BRIEF

Strengthening of Severely Corroded Flat Slab and Column Elements of a Commercial Building using the TYFO® Fibrwrap® Composite System

INDIA



Mumbai, India
August 1999



This commercial office building is located at Worli, a prime business hub in the city of Mumbai, India. Severe corrosion of steel reinforcement due to adverse environmental conditions coupled with poor quality of concrete in the columns and flat slabs had resulted in drop in the intended strength of the structural members in this sea-facing 9-storey building. It warranted immediate action to be taken to restore the loss in strength due to the aforementioned factors.



When this project was taken up in July 1999, the retrofitting work was already in progress using conventional steel plate jacketing method. This conventional operation was time-consuming and cumbersome besides being a source of continuous nuisance and loss of revenue to the occupants of the building.



A strengthening scheme using the TYFO® Fibrwrap® Composite System was devised to replace the conventional steel plate bonding technique. Load-carrying capacities of the circular columns were enhanced by application of suitable number of confining wraps of the TYFO® Fibrwrap® Composite System. Flexural strengthening of the flat slabs was carried out by the application of strips of TYFO® Fibrwrap® Composite System at the soffit. The entire operation was quick, neat and easy, as compared to steel plate jacketing. This resulted in early commissioning of the project and savings in overall project cost.

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