

Rehabilitation of Old Structure with Construction Chemicals

Overview

Every concrete structure demands equal attention at different stages of its life. Surely, they are built with the utmost care but with time, they require maintenance, repair and modifications. They need to be rehabilitated and strengthened to keep these old structures safe for the inhabitants. Our Maxtreat® range of repair & rehabilitation products come into play in these later stages of a structure's life to reinstate, strengthen and retrofit concrete. One such repair project was undertaken for 7 Loves Hotel in Pune.

Challenges

Hotel 7 Loves is celebrated as one of the city's best in Pune. The hotel is strategically located in Swargate. Having been established in the year 1971, this hospitality destination has grown to become the ideal place for travellers and those on business to feel at home when in the city. The chowk next to the hotel got its name as the '7 Loves Chowk' due to this popular building. The commercial building is an old reinforced concrete G + 3 structure which was deeply distressed due to ageing. A series of non-destructive tests revealed that the structure had lower strengths than it was designed for. A mindful decision and technical supervision saved this very relevant structure from a major deterioration and strengthened it for a better future use.



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Solution

Leveraging our rich experience in handling structures, our team evaluated the various options available for strengthening and devised the most economic strengthening scheme to suit the needs of the project. A combination of products and systems were used namely, Maxtreat® Laminate, Maxtreat® EHS, Maxgrout® E10, Maxtreat® Fibrenet-C, Maxtreat® Glue, Maxtreat® Saturant and Maxtreat® EPG to revive the structure. Honeycombing in concrete was treated by densifying it using our epoxy resin based injection grout, Maxgrout® E10. The beams were strengthened using our carbon fibre system and the slabs using our carbon laminate system.



Product Characteristics

Maxtreat® Fibrenet C is a carbon fibre composite wrapping system where Maxtreat® Fibrenet C is used in conjunction with an epoxy sealer cum primer, Maxtreat® Primer, and a high build Maxtreat® Saturant. It is used where improvement to shear strength and deformation characteristics is required.

Maxtreat® Laminate is a composite fibre system where a carbon laminate strip is used in conjunction with an epoxy adhesive, Maxtreat® Glue. It is used for increasing the load-carrying capacity of structural members, particularly where the increase in live load/traffic loads is expected.

Results

Our technical solution facilitated repair for an aesthetic and structurally strong commercial space and preserve the structure which is a prominent one in the locality.

Innovation & Technology

With the help of pre-examination of structures using FEM software's like SAFE, and Maxtreat® range of cement and resin products; Thermax ensures a highly effective overall solution to all the repair problems to structures, including underwater repairs. Thermax also provides in-house design consultation for the repair and rehabilitation of structures.