

Krishna Conchem introduces **Goldbond® 1893 — A composite strengthening system**

Krishna Conchem Products Pvt Ltd has introduced *Goldbond® 1893* — a composite strengthening system for concrete upgradation and seismic retrofitting. It consists of unidirectional e-glass fibres with epoxy binder.

The system can be used for compression strengthening, strengthening for shear and strengthening for flexure.

Advantages

The advantages of using *Goldbond® 1893* system are as follows.

- Ease of application
- High-strength to weight ratio
- Corrosion resistance
- Resistance to environmental degradation
- Tailorability

Typical application

- Most apartment buildings with parking floors are prone to collapse

due to soft storey behaviour, if the original structure is not designed for earthquake. These soft storey beams, slab and columns can be strengthened and their joint ductility greatly improved so that abrupt collapses which causes heavy damage to property and human life can be avoided. This would be more effective than only jacketing the columns as has been the practice till now.

- Strengthening the piers of bridges which are to receive higher loading due to heavier traffic or due to lane widening (or superstructure widening without changing the piers)
- For strengthening the existing T-beam bridge superstructure. In this case, the flexural and shear capacity of T-beams can be increased.
- Strengthening of slab beam or flat slab structures by adopting composite system by providing additional concrete topping on exist-

ing slab and fibre reinforcement from underside of slab and beam. About 30 percent improvement in structural capacity is possible.

- Strengthening existing RC corrosion-damaged structures like columns, beams, silos, water tanks, process vessels (in RC in industrial plants). The strengthening would provide protection from further attack. It can be done with minimum shutdown and consequently less downtime cost. Silos and water tanks can be put to reuse within a week or 10 days, since the strengthening system cures within 24 hours.
- Tall chimney structures can be strengthened for enhanced performance under changed earthquake conditions.

The *Goldbond® 1893* system has been successfully used in Gujarat for seismic retrofitting.

Services and software support

The application of the system needs technical services in deciding the areas where wrapping is necessary. The wrap layers, extent of lapping, thickness of wrap and wrap detailing needs to be worked out.

Goldbond 1893 – comes with the requisite software and detailing support to the consultants.

A list of approved, qualified application engineers is readily available.

For more details, please contact:

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Retrofitted joint of an earthquake-damaged industrial structure, Gujarat