

Lecture 6.45: Retrofitting Methods - Adding Steel Bracing, Jacketing Method, External Plate...

Concrete Technology (DI04006011)

Civil Engineering Department

Lecture Agenda

- 1. Retrofitting Methods - Adding Steel Bracing, Jacketing Method, External Plate Bonding, Base Isolation Technique, Mass Reduction Technique, Wall Thickening Technique, Fiber Reinforced Polymer (FRP), Adding Shear Wall, Epoxy Injection Method, Section Enlarging Reinforcing Method etc.
- 2. Summary and Q&A

6.7 Retrofitting Methods - Adding Steel Brac...

- Jacketing Method: Encasing existing columns/beams in a new layer of reinforced concrete or steel plates.
- Fiber Reinforced Polymer (FRP): Wrapping structural members with carbon/glass fiber sheets for immense tensile strength.
- Adding Shear Walls or Steel Bracings: Vastly increases the lateral load capacity (seismic retrofit) of the building.
- Base Isolation Technique: Inserting flexible bearings at the foundation to decouple the building from ground motion.
- Mass Reduction Technique: Removing heavy architectural elements to reduce seismic inertial forces.

Summary

- Recap of the specific material properties and methods discussed.
- Always refer back to the standard IS codes for parameter limits.