

Lecture 3.18: Factors affecting Compressive Strength.

Concrete Technology (DI04006011)

Civil Engineering Department

Lecture Agenda

- 1. Factors affecting Compressive Strength.
- 2. Summary and Q&A

3.2 Factors affecting Compressive Strength.

- Water-Cement Ratio (Abram's Law): Strength is inversely proportional to the w/c ratio.
- Degree of Compaction: Voids dramatically reduce the load-carrying capacity.
- Age of Concrete: Strength increases rapidly initially, then slows down, continuing over time.
- Curing Temperature: Higher initial temperatures accelerate early strength but may reduce long-term strength.
- Aggregate Characteristics: Texture and maximum size affect the transition zone and bond strength.

Summary

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