A Novel Method to use Carbon Dioxide in Concrete for Better Strength and Durability

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- Low-cost process to use CO₂ in OPC concrete
  - Promotes the use of supplementary cementitious materials (SCM)
- Pre-carbonation method
  - Using CO₂ as an admixture
- Two step mixing process
  - Calcium-rich cementitious mixed with water
  - Other ingredients of concrete are mixed

Advantages of A Novel Method to use Carbon Dioxide in Concrete for Better Strength and Durability

- Doesn’t require closed carbonation chamber
  - Usable for in-situ casting
- Increase the strength and durability of concrete
  - With reduction in material cost
- Applicable to concrete with any size
- Less OPC
  - Reduction of greenhouse gases and overall carbon footprint

Figure 1. Two-Step Mixing Approach to Add CO₂ Admixture in Concrete

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