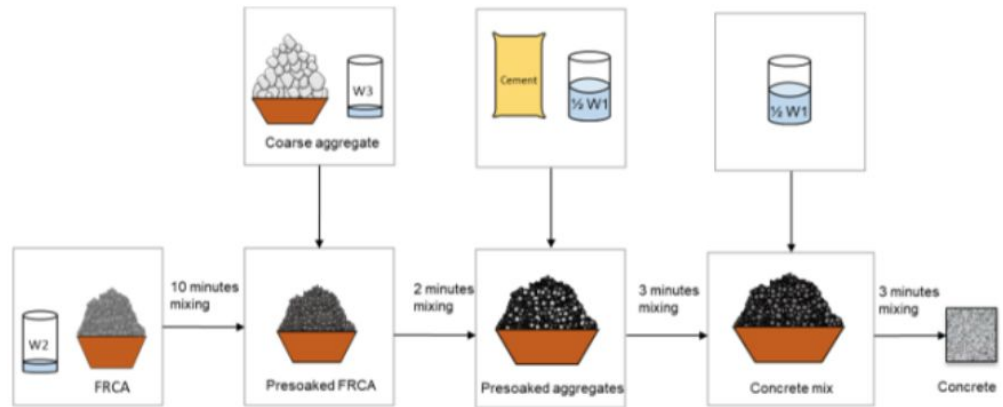


PENDING**(IN202411030230)**

Method for mixing concrete with fine recycled concrete aggregate



NEED

India generates over 150 million tons of construction and demolition waste yearly, yet only 1% is recycled efficiently. Poor water control during recycling leads to 40% strength loss in new concrete, risking \$3.5B in infrastructure failures. Builders urgently need consistent, high-strength recycled material.

TECHNOLOGY OVERVIEW

This technology introduces a controlled method for mixing fine recycled concrete aggregates (FRCA), using precise water absorption matching. By managing the moisture levels during each mixing phase, the process creates strong, consistent, and durable recycled concrete composites, reducing variability and maximizing resource reuse.

TECHNOLOGY KEY FEATURES

Precise water-matching mixing, particle control (150 µm–4.75 mm for fines, 4.75 mm–63 mm for coarse), 3-phase slurry formation, strength retention, waste reduction, scalable for commercial batching, enhances recycled concrete reliability, supports green building certifications, accelerates curing times.

[Read more here](#)

MARKET ANALYSIS

The global recycled construction materials market grows at 9.6% CAGR to reach \$143.5 billion by 2033 (source: Precedence Research, 2024). Indian C&D waste recycling sector grows at 10.5% CAGR fueled by green construction policies and smart city initiatives (source: ResearchAndMarkets, 2024).

Target Industries

Ready-Mix Concrete Plants, Green Building Construction, Infrastructure Redevelopment, Sustainable construction material suppliers, demolition waste processors, green certification consulting firms, eco-friendly building R&D centers.

AT A GLANCE

- SDG 9 (Industry, Innovation and Infrastructure), SDG 11 (Sustainable Cities and Communities), SDG 12 (Responsible Consumption and Production)

Technology is available for licensing/ co-development.

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