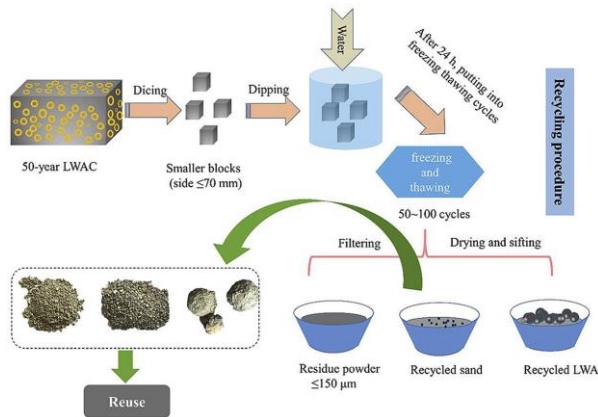




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Tailor- made Recycled Aggregate Concretes





Our mission

The aim of this project is to develop tailor-made concretes by using recycled concrete aggregate (RCA) for structural applications to promote the increased use of RCA in civil infrastructure projects, particularly in marine environment which is currently restricted.

Our team

- University of Plymouth (UoP, UK)
- Chalmers University of Technology (CHALMERS, Sweden)
- Phranakhon Rajabhat University (PNRU, Thailand)
- Ton Duc Thang University (TDTU, Vietnam)
- Shenzhen University (SZU, China).

This project is motivated not only by the environmental protection, but also by the conservation of natural aggregate resources, the shortage of waste disposal land, and the increasing cost of waste treatment prior to disposal

Concrete, owing to its availability, easy preparation and fabrication, is the most popular construction material. Today, concrete is the second most used material after water, with nearly three tonnes used annually for each person on earth. Due to the vast amount of concrete being produced and the huge amount of demolition waste from old concrete structures, the reuse of concrete waste by the construction industry is becoming increasingly important.

Scientific objectives

- Micro and macro-mechanical properties of recycled concrete aggregates (RCAs)
- Microstructure of recycled aggregate concretes (RACs)
- Interactions of RCAs with various supplementary cementitious materials (SCMs)
- Durability of RACs
- Fire behaviour of RACs
- Cost-benefit analysis of RACs
- Design guidelines

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