

Geopolymer concrete creates a low carbon footprint

The CRC for Sustainable Resource Processing (CSRP) took another step along the path to a low carbon future with the first geopolymer concrete path in Australia laid at the Curtin University of Technology campus in Bentley, Perth, Western Australia.

Geopolymer concrete has a number of desirable properties over ordinary Portland cement based concretes not the least of which is that it produces eighty-percent less greenhouse gases.

“This is a very exciting stage in the development of geopolymer concretes for widespread general usage,” says Stevan Green, CSRP CEO. “With cement and concrete estimated to contribute around 5 to 8 percent of the world’s manmade greenhouse gas emissions, a technology which can produce a superior product with a fraction of the emissions will be an important contributor to our response to climate change risk.”

Geopolymer concretes are produced by reacting aluminate and silicate bearing materials with a caustic activator. Often waste materials such as flyash from power generation or slag/waste materials from iron and metal production can be used, thus leading to a cleaner environment in two ways.

Professor Arie van Riessen from Curtin University said that the demonstration geopolymer path is a result of collaboration between many organisations including CSRP, CSIRO, Curtin University, Rocla, Golden Bay Cement, Boral and the Geopolymer Alliance. Researchers will monitor the 100 square metre path for performance. Other demonstration projects are also being planned.

CSRP aims to create new methods to produce minerals and metals in ways that benefit the community, the environment and industry. It has a vision of satisfying the global material needs of society with significantly reduced ecological impacts. To achieve this vision, CSRP aims to find technical solutions for progressively eliminating waste and emissions in the materials cycle, while enhancing business performance and meeting community expectations.

For more information: www.geopolymers.com.au or www.csrp.com.au



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