

Project Title: *Effect of strain rate on strength of geopolymer concrete*

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New fire-resistant, blast-resistant, acid-resistant and environmental-friendly building materials

It is estimated that the manufacture of one ton of cement approximately 0.8 tones of CO₂ are emitted into the atmosphere. This contributes substantial global air pollution, and for the cement industry accounts for 5-8% of worldwide CO₂ emissions. AS a replacement of cement, geopolymer can be used in all structural, panel and precast applications and ready mixes. Compared to production of cement, geopolymer technology has the potential to reduce CO₂ emissions by 80 per cent because high-temperature calcining is not needed. It also utilises fly ash, a waste product from power stations. The current project is to investigate the effect of strain rate on mechanical behaviour of geopolymer concrete.

The project welcomes lively and creative candidates who have a background from civil engineering and materials engineering.