

## **Compressive strength of fly ash based geopolymer / glass fiber composite via filament winding**

### **Abstract**

In general, filament winding technique is used to fabricate the composite pipes using continuous fiber and matrix resin. In this study, fly ash based geopolymer resin composites reinforced by continuous glass fiber were used for fabrication and synthesized by different curing and sintering temperature, different pattern and different viscosity of geopolymer. The effects of that parameter on the product were investigated. The compressive properties of the resulting composite were determined on an Instron Universal Testing under compression mode and the results show that the helical pattern with low viscosity cured at 75°C give the highest strength.

**Keywords;** Composite, Compressive Strength, Filament Winding, Fly Ash, Geopolymer, Glass Fiber