

## **INVESTIGATION AND COMPARATIVE STUDY OF EFFECT OF ALLUMINIUM POWER IN CEMENTITIOUS GROUTS**

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### **Abstract**

Critical investigation to study the effect of Aluminum power on the compressive strength of cementitious grouts. The aluminum power was added in different percentages of total mix, the percentages were 0.002, 0.004, 0.006, 0.008, 0.01%. Cement component in the grout mix was varied between 30% to 50%, 13% water and 0.7% Salphonated naphthalene-formaldehyde condensate (SNF) were added in all mixes. Cementitious material like silica fume and Plaster of Paris (POP) were also added in fixed percentages of 4% and 3%.. Total number of mixes studied were 25. Increase in cement component is found to have increased the compressive strength, however the addition of aluminium powder in different proportions have not contributed to compressive strength development. It is observed that 0.002% of aluminium powder has resulted in better compressive strengths. The results obtained are critically analysed and are presented and discussed in this paper.

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**Keywords** : Aluminum powder, Silica fume, Compressive strength, Flow test.