International Journal of ChemTech Research
CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.10 No.14, pp 322-330, 2017

Bond Stress Evaluation of Embedded Steel in Self Compacting Geopolymer Concrete

Mahima Ganeshan*, Sreevidya V., Nirubanchakravarthy L., Narendran G., Keerthivasan M., Balaji K.N.

Civil engineering Department, Sri Krishna College of Technology, Coimbatore, India.

Abstract : This paper deals with evaluation of bond performance of steel with concrete when geopolymer is used instead of cement. Geopolymer technology is introduced to Self compacting concrete which was proved to be superior in bonding than ordinary concrete. Low calcium Fly ash is used as basic source material along with alkaline solutions of sodium hydroxide and sodium silicates. Self compacting concrete has been made with slight modifications to fit under the external exposure curing conditions. Modifications were made by introducing additives to improve the setting time. OPC are added in minimal amount and comparison has been made for the same based on bonding stress. Normal self compacting concrete, self compacting geopolymer concrete with added Portland cement are investigated using pull out tests and results proves appreciable properties for modified self compacting geopolymer concrete.

Key words : Self compacting geopolymer concrete, Ordinary Portland Cement , Pull out test, Compressive strength, External exposure curing.

Mahima Ganeshan *et al* /International Journal of ChemTech Research**,** 2017,10(14): 322-330.

*****