

INFUSE 2025: International Conference on Frontiers of Unified Science and Exploration



Contribution ID: 216

Type: Oral

An experimental study on self- curing concrete using GGBS slag and poly ethelene glycol

During construction curing plays a major role in the development of concrete properties. Curing is frequently used to describe the process by which hydraulic cement concrete matures. The role of curing is to reduce water evaporation from the concrete and maintain satisfactory moisture content, especially during early ages, for continuation of the hydration process that is necessary for the development of cement microstructure. This will lead to a better-quality cement paste and concrete and will help to achieve the desired properties. However, good curing is not practical in many cases, it was found that the benefit of using self-curing agents is to reduce water evaporation from concrete, thus increasing its water retention capacity compared with that of conventional concrete and that water-soluble polymers might have this potential. Construction industry use lot of water in the name of curing. The curing period may depend on the properties required of the concrete. The investigation of this study the mechanical characteristics of concrete such as compressive strength, split tensile strength and flexural strength by varying the different percentage of GGBS from 0% to 30% by weight of cement for M25 grade concrete using self-curing technique by using polyethylene glycol 400. To identify the effect of polyethylene glycol (PEG) along with the GGBS on strength characteristics of self-curing concrete and also to evaluate influence of poly ethylene glycol and GGBS on mechanical properties which are experimentally investigated.

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Track Classification: Engineering & Technology