

Study of the Long-Term Durability of Self-Healing Concrete

Shreyas Pandey, Dr. Shweta Umale, Swati More, Nutan Kumar Kale

Assistant Professor, Chhatrapati Shivaji Maharaj Institute of Technology, Panvel, Navi Mumbai, Maharashtra, India

Abstract: *Self-healing concrete has emerged as a promising solution to mitigate the degradation and deterioration of concrete structures over time. However, to fully realize the potential of self-healing concrete in practical applications, its long-term durability needs to be thoroughly investigated. This study aims to evaluate the long-term durability of self-healing concrete by assessing its resistance to fatigue, creep, and corrosion over an extended period. Experimental testing will be conducted on different types of self-healing concrete samples, including those containing different healing agents and those subjected to different environmental conditions. The mechanical properties, such as compressive strength, flexural strength, and toughness, will be evaluated periodically to assess the effectiveness of the self-healing mechanism over time. The durability performance of the self-healing concrete will also be compared to traditional concrete to determine its advantages and limitations. The results of this study will provide a better understanding of the long-term durability of self-healing concrete and will contribute to its wider adoption in the construction industry.*

Keywords: Self-healing concrete, Concrete, mechanical properties.

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