

Insight into the Future of the Self-Healing Cementitious Composites

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Abstract- Concrete is the most widely used man-made building material, and cement is employed to fabricate approximately 2.5 t of concrete per person per year. However, the concrete is susceptible to the formation of the cracks, especially when they are faced with tension and bending applied loads, which reduces the durability of this material and leading to increases in the maintenance costs. Therefore, the self-healing ability of the created cracks in the concrete is an interesting topic to address this problem. The paper aims to introduce the necessity of research on the development of self-healing concrete. The mechanisms for the development of self-healing concrete are subsequently introduced. Finally, insight into the future of these smart materials is described.

Keywords - Cement, Concrete, Mechanisms, Self-healing.