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Guided By

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Project Title

PERFORMANCE ANALYSIS OF SELF HEALING CONCRETE BY PRE AND POST ADDITION OF BACILLUS PASTERUII

Abstract:

Concrete is the most widely used construction material which has less tensile strength which is more sustainable to compressive force rather than tensile force. Concrete is a major component in the construction Industry as it is relatively cheap, easily available and convenient to cast. Cracks in concrete are inevitable and are one of the inherent weaknesses of concrete. These crack are mainly formed due to shrinkage, insufficient curing etc. Without immediate and proper treatment, cracks tend to expand further and eventually require costly repair. In this study, Bacillus Pasteurii, a common soil bacterium has been used to induce calcite precipitation. This technique is highly desirable because the mineral precipitation induced as a result of microbial activities, is pollution free and natural. After the completion of the process by the bacteria they produce limestone layer in the crack which help to protect against the different chemicals. Effectiveness of this technique has been evaluated by comparing strength of cracked specimens. The experiment about to study the strength characteristics of Concrete cubes after injection of bacteria. After adding of the bacteria we will check the strength results at 14 days, 28 days, and 56 days.

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