# ICES 2024

TITLE OF PROJECT: **PRODUCTION OF SELF HEALING CONCRETE USING RECYCLED AGGREGATE**

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ABSTRACT:
Reduction in natural resources of aggregate leads to the scarcity of materials. This depletion causes to use the available re cycled materials. Microbial self-healing concrete, or SHC, is a clever and clean substance whose carrier greatly affects the effectiveness of repairs. The carriers utilized in this study were utilizing recycled coarse aggregate (RCA) in self – healing concrete. Prior research indicates that the characteristics of NCA concrete are superior to those of RCA concrete. The introduction of bacillus subtilis bacterial and calcium lactate sustainable concrete as a crack repair option was the focus of this inquiry. The new concrete mix offers financial advantages in addition to ecologically suitable substitutes. Using vacuum impregnation, Bacillus subtilis bacteria were added to RCA to increase the effectiveness of crack repair. The effectiveness of crack healing was investigated. Analytical methods were utilized to characterize the healing precipitate, and compressive and split tensile strengths were employed to measure mechanical parameters at predetermined intervals of 3,7, 28 days. From the observation, it has been found that, there in improvement in strength of the self-healing concrete in par with the conventional concrete.

KEYWORDS: *recycled aggregate, Bacillus subtilis, calcium lactate*

CATEGORY: Concrete Technology and Building materials