



## **Strength of Lightweight Concretes Produced with Pumice and Fly Ash under Aggressive Water Conditions**

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**Abstract:** In this study, the variation that occurs on the mechanical strength of lightweight concretes produced with pumice, fly ash and sulphate-resistant cement was investigated under aggressive conditions. For this purpose, 90 lightweight cubic, cylindrical and beam specimens were produced with 350 kg/m<sup>3</sup> and 450 kg/m<sup>3</sup> dosages and cured under salty water, acidic water and normal water conditions for selected 7, 28 and 90 day-periods. At the end of the curing periods, the specimens were subjected to axial compression, split tensile test and flexural beam tests to investigate the variations in the compressive and tensile strengths of the specimens.

**Keywords:** *Lightweight concrete, pumice, fly ash, sulphate-resistant cement, aggressive environment, mechanical properties of concrete.*

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