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**Performance of Steel Fiber Reinforced Concrete Columns Exposed to High Temperatures Under Different Cooling Conditions**

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**Abstract**

This paper aims to present the study conducted on steel fiber reinforced concrete columns that were exposed to temperatures up to 800ºC and cooled by two methods. The study was carried out on 34 columns of length 1200 mm and cross section of 150 mm X 150 mm, out of which 17 were RC columns with steel fibers, while the remaining 17 were made of just reinforced concrete. The columns are heated at temperatures of 100, 200, 300, 400, 500, 600, 700 and 800ºC for a duration of 3 hours at each temperature, and later cooled by two methods, namely, natural air cooling and water quenching. The samples were tested for first crack load, ultimate load and toughness, and the results are discussed

**Keywords:**

Concrete, Temperature, Steel fiber, Compressive strength

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