

## Abstract Details

**Title:** Effect of Fire on R.C.C. Structures

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**Abstract:** With the exaggerated incidents of major fires in buildings; repairs, assessment and rehabilitation of fireplace broken structures has become a topical interest. This can be a specialized field involves experience in several areas like material science, testing and concrete technology, structural engineering, repair techniques and materials etc. analysis and biological process efforts square measure being applied during this space and different connected disciplines. During this topic the expertise of reality issues square measure conferred that add large price to the current. this subject additionally offers a comprehensive data on the overall strategy for the restoration of fireplace broken buildings and additionally presents an assessment of the assessment procedures by completely different non damaging techniques, specifications and execution of repair techniques. The experimentation has been done to search out the impact of the hearth on reinforcement steel bars by heating the bars to 100°, 300°, 600° and 900° C of six samples each. The heated samples square measure quickly cooled by extinguishing in water and ordinarily by air cooling. The modification within the mechanical properties square measure studied victimization universal testing machine (UTM) and also the microscopic study of grain size and grain structure is studied by scanning microscope (SEM). The general conclusion is that majority of fireplace broken RCC structures square measure serviceable. However the impact of elevated temperature higher than 900°C on the reinforcement bars was discovered that there's important reduction in malleability once quickly cooled by extinguishing. Within the same case once cooled in traditional atmospherically conditions the impact of temperature on malleability isn't high. By heating the reinforcement bars, the mechanical properties will be modified while not variable the chemical composition.

**Keywords:** R.C.C. Structures, Fire, UTM, SEM.