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STRENGTHENING OF COMPRESSION MEMBER BY FERROCEMENT WITH HIGH PERFORMANCE MORTAR - JACKETING TECHNIQUE

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ABSTRACT: External confinement using Jacketing technique can suitably use for increasing the Axial and shear strength of RC square Column. This paper encompasses an experimental and analytical investigation for studying the effectiveness and suitability of high performance ferrocement mortar mixes as a retrofitting material and its use as jacket for square columns. The experimental programme included development of high performance ferrocement mortar mix by adding 10% of silica fumes and 1% of super plasticizer and its use in retrofitting of square column specimens which were either intact or distressed earlier to certain level. The experimental programme consisted of testing 2 controlled specimens and 6 retrofitted specimens initially distressed to 80–85% of theoretical stress level, repairing, and retrofitting prior to testing. The control specimens were of dimension 100mmx100mm and 500mm height, cast in M30 conventionally vibrated concrete, reinforced longitudinally with four bars of 8 mm diameter and six lateral ties of 6 mm diameter as transverse reinforcement. Three different mixes proportions of 1:1.5, 1:2, 1:3, were used for jacketing around the columns. The jacket was reinforced with mild steel welded wire mesh 50 mm x 50 mm made of 1.16 mm diameter wire. The retrofitted specimens were tested after 28 days of curing. And then the results are interrupted.

Keywords: *Column, Reinforcement, super plasticiser, Welded wire mesh, Ferrocement, Ultimate load carrying capacity*