PRELOADED REINFORCED CONCRETE BEAM STRESS BLOCK PARAMETERS: A PRELIMINARY APPROACH

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ABSTRACT

Reinforced concrete beam will have tendency to deteriorated after receiving a certain degree of load by leaving plastic strain. Although Many study of plastic strain behavior were performed to establish the behavior of concrete under cylic load such as in seismic activity or under earthquake load there are less information of preloaded concrete stress block has been reported. In this study, the stress block parameter of $\alpha_{re}$ and $\gamma_{re}$ have been defined and derived from empirical model of the early and latest study of concrete behaviour under repeated loading. The result shows match behavior of the parameters value both in every unloading strain increments or concrete reloading increments with particular unloading strain. The result $\alpha_{re}$ are also has been plotted and compared with the previous proposed $\alpha$.

Keyword: concrete stress block, repeated loading, concrete pre-loading