

SELF COMPACTING FIBRE REINFORCED CONCRETE FOR PAVEMENTS-FATIGUE PERFORMANCE

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ABSTRACT. The paper reviews the findings of various investigations carried out to study the performance of Self Compacting Concrete (SCC) and Self Compacting Fibre Reinforced Concrete (SCFRC) and to correlate their hardened properties with those of Normally Vibrated Concrete (NVC) and Normally Vibrated Fibre Reinforced Concrete (NVFRC). An attempt has been made to summarize some of the mechanical properties under statically applied loads, but more emphasis has been laid on the flexural fatigue performance of SCC and SCFRC. The results on mix proportioning of SCC and mechanical properties as reported in some important investigations are briefly presented. Also, the results of some investigations on flexural fatigue performance of SCC, NVC, SCFRC and NVFRC conducted by the author and by other investigators are summarized. As SCC and SCFRC are fast gaining wide acceptance in the construction industry with immense scope of applications in civil engineering structures which are predominantly subjected to fatigue stresses, it is hoped that the characterization of fatigue behaviour of SCC and SCFRC will enable designers and engineers to use this innovative material with greater confidence in practical applications.

Keywords: Fatigue, Mechanical properties, Self compacting concrete, Self compacting fibre reinforced concrete

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