No.27 二方向アラミド繊維シート接着補強床版の疲労耐久性評価の一手法

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No.27 An Evaluation for Fatigue Durability of Damaged Concrete Slab Strengthened by Cross Textile Aramid Sheet

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It has already clarified that the fatigue durability of damaged RC slab stiffened by pasting with fiber sheet can effectively by improved. In this paper, several fatigue tests under wheel running machine carried out to verify effects of repair for damaged slab strengthened by cross textile aramid sheet. From some testable results, it is confirmed that decreace of 30-45% amount is immediately brought by strengthening work in erastic deflection corresponded to magnitude of the standard load in Japanese Code, and also the increasable rate of this deflection per one running cycle of wheel load is recovered to magnitude of about 30-50% throughtout fatigue process. An available method derived from a notion of the serviceable limit state in viewpoint about deflection is proposed and a period of extended life in strengthened slab is numerically compared with original term in damaged slab as an example of actual slab in a certain highway bridge.

Key Words:wheel running machine, aramid sheet bonding method, fatigue life

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