BOND STRENGTH OF THE UNRESIN CONTINUOUS CARBON FIBER CABLES

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Abstract

Unresin continuous carbon fibers, UCCF, is a new material developed as an alternative reinforcement and cable sling for civil construction. Generally, UCCF has the tensile strength of 4800 Mpa with Modulus Elasticity of 230 Gpa. This material is also has very good characteristic of stainless. Integrated carbon fiber will become a cable sling which used as a reinforcement in reinforced concrete and as a tendon in prestress concrete. As a reinforcement, the tensile strength in reinforced concrete would be a main parameter to be identified in the research by doing tensile test. Research shows that the tensile strength of this fiber is lower than reinforcing steel relatively. With this research, it shows also that the tensile strength is influenced by diameter of fiber.

Keywords *: bond strength, concrete, carbon fiber, pullout*