

MATERIALS TO IMPROVE TENSILE STRENGTH OF CONCRETE AT MICRO LEVEL

GURJIT SINGH¹, & JASPAL SINGH²

¹M.Tech Student, Department of Civil Engineering, Punjab Agricultural University, Ludhiana, Punjab, India

²Professor, Department of Civil Engineering, Punjab Agricultural University, Ludhiana, Punjab, India

ABSTRACT

Concrete is defined as a composite material, which is weak in tension and strong in compression. It becomes very essential to improve the tensile strength of concrete at micro level, to make durable concrete structures. Researchers from various countries are using various materials to improve the mechanical properties of concrete at micro and nano level. In this study, past studies of using various materials are analyzed. This literature survey is to summarize the past experimental data on the properties of concrete with nano particles, nano tubes, nano fibers and waste steel wires. As a solution tensile strength of concrete can be improved up to certain limit with the use of all these materials. Apart from this utilization of waste steel wires is also an eco-friendly phenomenon to improve the mechanical properties of concrete.

KEYWORDS: Tensile Strength, Nano Materials, Nano Tubes, Nano Fibers, Waste Steel Wires

Received: May 01, 2016; **Accepted:** May 12, 2016; **Published:** Jun 10, 2016; **Paper Id.:** IJCSEIARDJUN201605