



International Journal of ChemTech Research CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555 Vol.12 No.06, pp 86-100, 2019

Development of Non Destructive Techniques in Nano Composite Concrete Specimen Using Software Analysis

A Jayaraman¹*, N Sathyakumar² and S Dhivyabharathi³

^{1,2 and 3} Assistant Professor, Department of Civil Engineering, Bannari Amman Institute of Technology, Sathamangalam-638 401, India

Abstract : This paper presents to study the strength of hardened concrete by software analysis and made comparison with the experimental result. Artificial Neural Network (ANN) and Fuzzy logic is one of the popular testing method used in recent days. The paper focuses on determination of strength of grade (M40) concrete of different mixes in which ordinary portland cement is replaced by Nano silica, Nano calcium carbonate and Nano calcium hydroxide of 2%, 4%, 6% and 8% using Artificial neural network and fuzzy. Artificial Neural Network Model and fuzzy model is constructed and the compressive strength of concrete is predicted by considering specific concrete properties as input variables. Experimental data result of these mixes were obtained by testing and is compared with software result. The result shows that ANN and fuzzy are suitable model and have high potential to predict compressive strength and predicts good result when compared to experimental result.

Key words : Fuzzy, Neural Network, Compressive Strength, Nano Silica, Nano calcium carbonate, Nano calcium hydroxide, Concrete.

A Jayaraman *et al* /International Journal of ChemTech Research, 2019,12(6): 86-100.

DOI= http://dx.doi.org/10.20902/IJCTR.2019.120612
