Artificial Neural Networks for Shear Strength Evaluation of

Reinforced Concrete Deep Beams

Yasser Sharifi*

Master of structures, Department of Civil Engineering, Vali-e-Asr University of Rafsanjan, Iran

yasser_sharifi@yahoo.com - y.sharifi@vru.ac.ir

Najmeh Mohamadi

Master of structures, Faculty of Engineering, Institute of Higher Education Allameh Jafari Rafsanjan, Iran

Adel Moghbel

Associate Professor, Department of Civil Engineering, Vali-e-Asr University of Rafsanjan, Iran

Abstract

Shear strength is increasingly important to design of reinforced concrete structural members. An extensive numerical study was investigated to assess shear capacity of deep reinforced concrete beams subjected to concentrated load. For this purpose effects of section geometries and materials strengths of deep reinforced concrete beam were incorporated. A network consisting of nine inputs developed based on artificial neural network to investigate shear capacity of deep reinforced beams as output. Then a comparison was made between the results obtained from artificial neural networks and results of code recommendations. Based on this comparison it can be found that the presented equation gives better result than code recommendations.

Keywords: deep reinforced concrete beams, shear strength, artificial neural network, code
نشریه علمی و ترویجی مصالح و سازه‌های بتنی


[16] ACI , Committee 318. (2015). Building Code Requirements for Structural Concrete (ACI 218 – 05) and Commentary (ACI 318 – 05), USA.