



EFFECTIVENESS OF EXTERNAL UNBONDED REINFORCEMENT RETROFITTED TO RC BEAMS FOR FLEXURAL STRENGTHENING — EXPERIMENTAL INVESTIGATION

Author(s): **Sahibzada Farooq Ahmad Rafeeqi**

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Abstract:

The paper presents the effectiveness of the strengthening technique by way of retrofitting external unbounded non-prestressed conventional reinforcement. The focus of the study remains confined to effectiveness under varying parameters at ultimate only, through an experimental study. The changed structural behaviour and the effect of varying parameters have been discussed before presenting the results of an experimental study comprising of 30 simply supported reinforced concrete beam specimen tested under four point bending. The analysis of results demonstrated the effectiveness of the strengthening technique in terms of delay in yielding of bonded reinforcement, strengthening ratio and ductility of the strengthened beams under varying parameters. The technique thus has been shown to have promise as a strengthening technique for flexural strengthening of reinforced concrete beams.

For full paper, contact:

Prof Muhammad Masood Rafi

Editor, NED University Journal of Research

Ph: +92 (21) 99261261-8 Ext: 2413; Fax: +92 (21) 99261255

Email: NED-Journal@neduet.edu.pk

Website: <http://www.neduet.edu.pk/NED-Journal>