CERTIFICATION OF APPROVAL

Shear Strengthening of Reinforced Concrete (RC) T-beams

By

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CERTIFICATION OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and that the original work contained herein have not been undertaken or done by unspecified sources or persons.

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ABSTRACT

Reinforced Concrete (RC) beams have been retrofitted with Fibre-Reinforced Polymer (FRP) composite externally in order to increase the strength. There are many researches regarding beams strengthened with FRP nowadays. However, there are still not enough aspects on behaviour of externally bonded FRP to RC beams. One of them is the effect of the interaction between internal shear reinforcement and externally bonded FRP. Besides that, the effect of shear reinforcement ratio is still questionable. Ten RC T-beams has been set up for this experimental program to study both of effect of two shear component and to determine the shear reinforcement ratio. The results of this experiment are obtained most likely similar with many other researchers which shows that the importance of internal steel stirrups and the effectiveness of externally bonded FRP. In addition, continuous wrap of FRP has greater FRP contribution to shear resistance as compared to small amount of FRP usage. This reflect the effectiveness of FRP based on the percentage of the usage.

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