

A FINAL PROJECT REPORT  
BACHELOR IN ENGINEERING (HONS)(CIVIL)  
FACULTY OF CIVIL ENGINEERING  
UNIVERSITI TEKNOLOGI MARA  
SHAH ALAM

FLEXURAL BEHAVIOR OF REINFORCED CONCRETE BEAM WITH  
POLYPROPYLENE UNDER STATIC LOAD

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APRIL 2001

# DECLARATION

I hereby declare that this has not been submitted, either in the same or different form, to this or any other university for a degree, I accept where reference is made to the work of other, it is believed to be original

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## ABSTRACT

The increase in the use of the fiber reinforced concrete in modern construction is tremendously high. Thus, its behavior need to be understood clearly. In this project, the flexural behavior of reinforced concrete beam with additive of polypropylene under static load with respect to serviceability and ultimate limits were carried out. Two reinforced concrete beams with a characteristic strength of  $30\text{N/mm}^2$  have been casted and tested of which one of them with additive of fiber.

The results reveal that there were an improvement in cracking and deflection when Polypropylene fiber added to the reinforced concrete beam besides reduced the number of cracking to the Beam. From the experimental, it showed that the modulus of elasticity for the Fiber Reinforced concrete beam was  $30.4\text{KN/mm}^2$  while for the reinforced concrete beam without Polypropylene fiber was  $20.29\text{KN/mm}^2$ .

Regarding to these results, it is recommended to use the Polypropylene fiber as an additive to the concrete since it can reduce the cracking and deflection of the elements.

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