

BEHAVIOUR OF REINFORCED CONCRETE BEAM WITH SILICA
FUME UNDER STATIC LOAD WITH W/C RATIO OF 0.3 , 0.4 , 0.5

A report submitted to MARA University of Technology in partial fulfillment
of the requirements for the Degree of Bachelor Engineering (Hons) (Civil) in
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Presented by:

ABD RAHIM BIN ABDUL RAFFAR

Faculty of Civil Engineering

MARA University of Technology

Shah Alam

Selangor Darul Ehsan

MALAYSIA

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

A handwritten signature in black ink, appearing to read 'Abd Rahim Bin Abdul Raffar', written over a horizontal line. The signature is stylized with a large, sweeping flourish extending to the left.

(ABD RAHIM BIN ABDUL RAFFAR)

ABSTRACT

The purpose of the study is to investigate the high strength concrete beam which compressive strength is 60 N/mm². The reinforced concrete beam is mixed to various water-cement ratios where 15% of silica fume for adding due to cement-replacement (weight). The experiment is to study the behavior of reinforced concrete beam under static load with respect to the serviceability and ultimate limit strength. An experimental program is set-up and three beams have been tested. The load is applied in two-point load onto singly reinforced concrete beam. The deflection automatically gives the measurement of crack width, and crack length . The crack width and crack length at each step loading are observed during the process. This study needs a lot of analysis of crack and design of the reinforced concrete beams which containing silica fume and varies water cement ratios.

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