

H.K.E's Society
POOJYA DODDAPPA APPA COLLEGE OF ENGINEERING
Gulbarga -585 102

(An Autonomous Institution, Affiliated to VTU Belgaum and Approved by AICTE)

A
Project Report
On

“Impact Resistance of Reinforced Concrete Beams”

Submitted to

POOJYA DODDAPPA APPA COLLEGE OF ENGINEERING
Gulbarga -585 102

In partial fulfillment of the requirement for the award of the degree of

Bachelor of Engineering (Civil)

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Synopsis

Impact loading on a structure is characterized by very short duration of loading and hence provide very high strain rate loading. This type of loading has dynamic effect and the duration of loading is measured in milliseconds. Several factor like position of impact on the structure, kinetic energy of delivering system, shape etc make the impact phenomenon complex. Impact resistance of structure is therefore one of the most important properties to consider in the design and also the most difficulty to quantify.

In this project 12 no of RC beam and 3 no of Confined Concrete beam of size 1150 mm x 100 mm x150 mm using M20 grade concrete are cast to study the energy absorption capacity of Reinforced Concrete beam subjected to low velocity impact and to find out the residual energy of RC beam after the impact loading under the static loading.

The impact resistance of the beam specimen is partially increased with respect to the increase of no of blow of impact, after decreasing of the velocity of the impact. The residual flexural strength remains same in almost all the beam specimens though they were tested by varying the velocity of impact (drop height).