

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELGAUM – 590 010



PROJECT REPORT ON
(06IP 85)
“DESIGN AND FABRICATION OF INSTRUMENTED LOW
VELOCITY IMPACT TESTING MACHINE”
(Sponsored by KSCST Bangalore)

Submitted in partial fulfillment of the requirements for the award of the degree

BACHELOR OF ENGINEERING
IN
INDUSTRIAL AND PRODUCTION ENGINEERING

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ABSTRACT

Impact resistance of mechanical components is in many applications a critical standard for the measurement of their life cycle. Impact test systems are used to measure the ability of an object to resist a specific load, and determine the amount of energy that a component can absorb when it is impacted at a determined velocity.

The main purpose of this project is to develop a cost effective impact tester to test materials and determine the behavior when subjected to low-velocity impact loads. The impact tester is built and can be used to measure the impact resistance of part structures that absorb kinetic energy during collision. The dropped weight impact machine is designed to produce impact load to a specimen. The machine is equipped with sensor systems to measure the impact force that crushed the specimen, and with a indicator to show the crushing force for further analysis.

The development process included the design and fabrication of the machine.

Key words: Low velocity impact test, crushing force, composites, load cell.