

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELGAUM - 590 018**



**PROJECT REPORT
On**

**“DESIGN AND FABRICATION OF MULTI-PURPOSE
VARIABLE TOPOLOGY PRESS MECHANISM”**

**Approved by “Karnataka State Council for Science and Technology” (KSCST)
Bangalore for the sponsorship.**

Submitted as a part of

**Bachelor of Engineering
in
MECHANICAL ENGINEERING
By**

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SYNOPSIS

Man's quest is always search for new things. Manufacturing plays a vital role in getting varieties of products. Machine tools, presses, drilling machines, automats, contribute a lot to the manufacturing. Machines built upon mechanisms and in such mechanisms consist of various links which are connected to move in a constrained way so as to get useful machines.

Present presses are using six bar slider mechanism to perform the press working operations either through compound die or progressive dies etc. All these are based on single degree freedom mechanism. A washer is formed by two different metal forming operations like shearing and blanking. Here the press is using a single input i.e. one motor.

On the other hand if a seven bar slider mechanism with variable topology is used as a press, one can perform two different operations in two-phases so that two variable stroke lengths may be used to do two operations. Thus it acts like two presses which are formed by a single mechanism. Thus saving one press cost. The main advantage of this press is it uses multiple (two) operations through two different Phases.

Hence for the reasons stated above, a project work has been taken up by a batch of four members. The title of the project is **“Design and Fabrication of Multi-purpose Variable Topology Press Mechanism”**.

The project work enlightens the area of synthesis, design and manufacturing fields. The main salient features of the project are compact, portable and easy operations. One can operate and also it is used for demonstrating the press working operations for students and it is having an advantage of performing multiple operations of course in two different phases.

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