MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE GWALIOR

Department of Mechanical Engineering

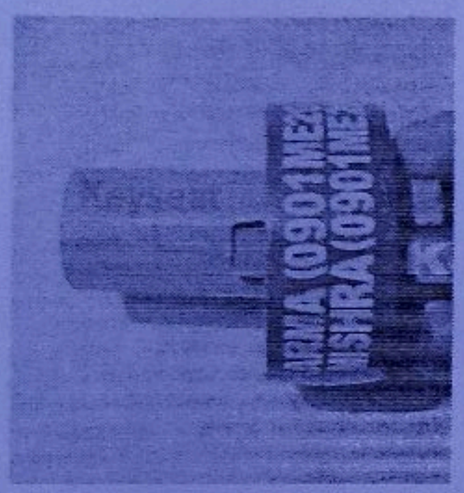
REPORT OF SKILL BASED MINI PROJECT

Design of Machine Elements (120412)

Title of project: Square Key

Introduction:

A key is a machine element used to connect a rotating machine element to a shaft. Square keys are used for smaller shafts and rectangular faced keys are used for shaft diameters over 6.5 in (170 mm) or when the wall thickness of the mating hub is an issue. Set screws often accompany parallel keys to lock the mating parts into place.



Description of Model

The model consists of three separate parts which can be joined to form the setup. The square key has a uniform square cross section and does not contain any taper hence, it is a parallel key. Square keys are small bars of any length with similar height & width.

Applications of Model

It may be noted that a parallel key is a taper less and is used where the pulley, gear or other mating piece is required to slide along the shaft.

What I Learned Through Project:

I learned form this project of square key that it is used in temporarily joining a shaft and a gear or tool on top and these are used in general industrial machinery. They are inserted between a shaft and a hub to prevent relative rotation.

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