



# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE GWALIOR

## Department of Mechanical Engineering

### REPORT OF SKILL BASED MINI PROJECT

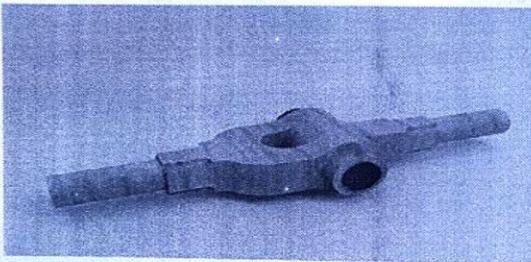
Design of Machine Elements (120412)

**Title of Project:**  KNUCKLE JOINT

#### Introduction:

A knuckle joint is a mechanical joint used to connect two rods which are under a tensile load, when there is a requirement of small amount of flexibility, or angular moment is necessary. There is always axial or linear line of action of load.

#### Description of Model



This is a model of a knuckle joint made of wood. It has one eye end, two eye end, a knuckle pin, a collar and a pin.

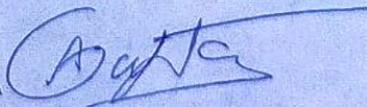
#### Applications of Model

- Tie rod joint of roof truss.
- Tension link in bridge structure.
- Link of roller chain.
- Tie rod joint of jib crane.
- The knuckle joint is also used in tractor.
- Connecting rods between locomotive wheels.

#### What I Learned Through Project:

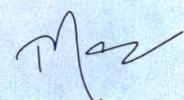
On completing this project I learned about the use of knuckle joint in various places, I also learned about its assembly. Through the project I learned the use of various tool and processes to make the joint.

#### **Submitted By**

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