

Advance Manufacturing Shop

Introduction

Advance Manufacturing can be defined as the use of innovative technologies to create existing products or new products including production activities that depend on information, automation, computation, software, sensing and networking.

It is advantageous over conventional manufacturing processes because of aspects like:

- 1) Increased level of Quality
- 2) Boost in Productivity
- 3) Gives way to Innovation
- 4) Reduced production time with Digital Manufacturing

Examples of products made using this manufacturing include electric vehicles, robotics & others.

Labs

In collaboration with Tata Technologies Limited, the following five labs have been established :

- 1) Tear Down and Bench Marking
- 2) Mechatronics
- 3) MES / IOT
- 4) Tata Visualization Centre
- 5) Advance Manufacturing Lab

1. TEAR DOWN AND BENCH MARKING

Tear-down means an already assembled part of the engine needs to be torn down to a part level or any engine component needs to be disassembled from a completed or incompleated version.

2. MECHATRONICS

Mechatronics can be defined as the field of engineering that involves both, mechanical as well as electrical engineering.

3. MES / IOT

MES stands for - Manufacturing Execution System
whereas IOT stands for - Internet OF Things

4. TATA VISUALISATION CENTRE

5. ADVANCE MANUFACTURING LAB

Advance Manufacturing lab is the place where advance manufacturing processes take place.

Advance Manufacturing Lab

The Advance Manufacturing Lab has the following machines :

- 1) Laser Cutting Machine
- 2) Pick and Place Robots
- 3) 3-D Printer
- 4) MIG Welding Robot
- 5) CNC Turning
- 6) CNC Milling
- 7) CNC Router Machine