

MANUFACTURING – WELDING LAB

Description

The Welding course of study provides students with an opportunity to learn about the Industry as it relates to welding. Students will master a variety of welding competencies. Program standards are aligned to the requirements of the American Welding Society (AWS) for a Level I entry-level welder. The lab is equipped for most common welding and cutting processes including oxy-fuel welding, shielded metal arc welding, gas tungsten arc welding, gas metal arc welding, resistance spot welding, and oxy-fuel cutting.

Objectives

The main objective of this lab is to teach students, the basic and advanced welding techniques and methods including safety precautions necessary while welding. The course is taught in line with the industrial needs. After completing this course, students will be able to:

- Describe and demonstrate proper welding shop safety.
- Read and interpret symbols and plans utilized in the Welding industry.
- Demonstrate competency in shielded metal arc welding.
- Demonstrate competency in metal inert gas welding
- Describe how the effects of heat, metal thickness and metal length influence welding/cutting techniques.
- Describe how the effects of heat, metal thickness and metal length influence cutting techniques.

Features of the Laboratory

- Welding lab consists of four types of welding Methods these are the following
- SMAW (Shielded metal arc welding)
- GMAW (Gas Metal Arc Welding)
- GTAW (Gas Tungsten Arc Welding)
- OAW (Oxy- Acetylene Welding)

Significance of the Laboratory

This lab is suitable for students of ITI, Diploma, Engineering.

- It gives hand experience on welding techniques
- It provides command on identifying welding defects.
- It has wide range of applications like automobile, aerospace, railways industries

Key areas covered

1. Welding safety and precautions
2. Introduction to welding tools and equipment
3. ARC Welding-AC
4. ARC Welding-DC
5. TIG Welding
6. MIG Welding
7. Oxy Acetylene Gas Welding
8. Oxy Acetylene Gas Cutting

List of equipment available

Auto K-400, Easyweld 400-T, RS 400, Migmatic 250, Transweld, Gas welding, Gas Cutting equipment, safety equipment and tools.



