Welding

Welding is the process of joining metals by melting the parts and then using a filler to form a joint. It can be done using different energy sources, from a gas flame or electric arc to a laser or ultrasound.

Until the beginnings of the 20th century, welding was done via a process known as forge welding, which consists of heating up the pieces to be fixed together and then hammering them until they amalgamate. With the advent of electricity, the process became easier and faster, and it played an important part of the industry scene during World War I and II. There are different welding processes in use in modern times:

- Arc welding is done through the use of an electrical current, and can be performed by using inexpensive equipment.
- Gas Welding is widely used for repair work, especially in anything involving pipes and tubes. It is common in the jewelry industry, as well as for connecting plastics and other materials that cannot stand higher temperatures.
- Resistance welding involves the use of additional sheets of metal to encase the pieces to be welded together. It is the most environmentally-friendly of all methods, but it requires costly equipment that cannot be used in all situations
- Energy beam welding, also known as laser beam welding, is one of the most modern techniques used. This method is fast and accurate, but the high equipment cost makes it prohibitive for many industries.

Safety

Wear pants and closed toed shoes

Get safety equipment in class and use it

Listen to instructor at all times

Do not touch the equipment before instructor says to

Follow all Welding Lab safety rules