

# AMTD18 WELDING TECHNOLOGY

## UNIT-1 GAS AND ARC WELDING PROCESSES

- 1.1 Fundamental principles- Air Acetylene welding, Oxyacetylene welding, Carbon arc welding, Shielded metal arc welding,
- 1.2 Submerged arc welding, TIG & MIG welding, Plasma arc welding and Electro slag welding processes- advantages, limitations and applications.

## UNIT-2 RESISTANCE WELDING PROCESSES

- 2.1 Spot welding, Seam welding, Projection welding, Resistance Butt welding,
- 2.2 Flash Butt welding, Percussion welding and High frequency resistance welding processes
- 2.3 Advantages, limitations and applications.

## UNIT-3 SOLID STATE WELDING PROCESSES

- 3.1 Cold welding, Diffusion bonding, Explosive welding, Ultrasonic welding,
- 3.2 Friction welding, Forge welding,
- 3.3 Roll welding and hot pressure welding processes
- 3.4 Advantages, limitations and applications.

### Reference Books:

1. Schwartz M.M. "Metals Joining Manual". McGraw Hill Books, 1979.
2. Tylecote R.F. "The Solid Phase Welding of Metals". Edward Arnold Publishers Ltd. London, 1968.
3. AWS- Welding Hand Book. 8th Edition. Vol- 2. "Welding Process"
4. Nadkarni S.V. "Modern Arc Welding Technology", 1st edition, Oxford IBH Publishers, 2005.
5. Christopher Davis. "Laser Welding- Practical Guide". Jaico Publishing House, 1994.