

1. Classification of welding and allied processes according to international standards of ISO, AWS.
2. Fusion welding. Classification of processes, brief about them.
3. Solid-state welding. Classification of processes, brief about them.
4. Welding joints.
5. Geometrical parameters of fusion weld.
6. Welding positions.
7. Welding defects. Classification of defects, brief about them.
8. Gas welding and allied processes.
9. Types of fuel for gas welding and allied processes. Comparative characteristics of them.
10. Thermite welding
11. Arc welding in shield gases.
12. Flux cored arc welding.
13. Submerged arc welding.
14. Electroslag arc welding.
15. Plasma arc welding and allied processes. Classification of processes, brief about them.
16. High energy density kinds of welding and allied processes. Classification of processes, brief about them.
17. Laser welding and allied processes. Classification of processes, brief about them.
18. Electron-beam welding and allied processes. Classification of processes, brief about them.
19. Resistance welding (spot, seam, butt, projection resistance welding).
20. Diffusion welding.
21. Friction welding (butt welding, stir welding).
22. Cold welding.
23. Ultrasonic welding.
24. Soldering. Brazing. Surfacing.
25. Additive Manufacturing