

Table of Contents :

1. **Design for Assembly**
 - Assembly methods
 - Ease of assembly and disassembly
 - Assembly sequence optimization
 - Accessibility of components and tools
2. **Maintainability and Serviceability**
 - Maintenance-oriented design
 - Inspection and repair
 - Safety and protective devices
 - Reliability during operation
3. **Design of Cast Components**
 - Casting processes
 - Wall thickness and draft angles
 - Shrinkage and stress reduction
 - Design recommendations for castings
4. **Design of Machined Parts**
 - Machinability considerations
 - Simplification of machining operations
 - Tool accessibility
 - Dimensional accuracy and tolerances
5. **Welded Structures**
 - Types of welded joints
 - Weld design principles
 - Structural strength
 - Distortion control
6. **Riveted Joints**
 - Rivet types and applications
 - Joint design
 - Strength calculations
 - Structural considerations
7. **Cold-Formed and Press-Fit Assemblies**
 - Plastic deformation methods
 - Press-fit joints
 - Interference fits
 - Permanent mechanical connections
8. **Manufacturing-Oriented Design**
 - Design for Manufacturability (DFM)
 - Production cost reduction
 - Standardization of components
 - Production efficiency
 - Product quality improvement

Main Themes

- Design for Manufacturing (DFM)
- Design for Assembly (DFA)
- Machine Reliability
- Maintainability

- Manufacturing Efficiency
- Cost-Effective Mechanical Design
- Structural Integrity
- Industrial Production Methods