

Mechanical Drawing: Board & CAD Techniques

Chapter 4 Basic Drafting Techniques

Chapter Summaries

Section 4.1 Getting Ready to Draw

- Preparing the drawing sheet includes choosing an appropriate size and type of drawing sheet, fastening it to the drawing board, and laying out the borders and title block.
- Preparing a drawing file in CAD includes creating a new drawing, selecting a drawing template for the appropriate standard sheet size, and setting up units, limits, and layers.
- Layers in AutoCAD have specific properties such as line width, linetype, and color.
- Commands are the drafting tools used in a CAD program.
- Technical drawings created in CAD can be printed using ASME or ISO standard layouts in paper space.

Section 4.2 Creating a Drawing

- The use of a drafting pencil differs from the use of a technical pen.
- The lines and line symbols used on drawings come from the alphabet of lines.
- Techniques for drawing circles, arcs, lines, and inclined lines require the use of a compass, circle template, T-square, protractor, drop-spring bow compass, dividers or triangle.
- In a CAD system, the LINE, ORTHO, polar coordinate, and PLINE commands are used to produce straight lines, vertical or horizontal lines, inclined lines, and to join lines into a single line, respectively. The CIRCLE and ARC commands are used to produce circles and arcs. Grid and snap commands produce lines that meet exactly.