

Mechanical Drawing: Board & CAD Techniques

Chapter 2 Design and Sketching

Chapter Summaries

Section 2.1 Design and Freehand Sketching

- The three main concerns of design are aesthetics, function, and feasibility.
- The traditional engineering design process is a linear process, although it allows for feedback in the development phase.
- The concurrent engineering design process employs a team approach.
- Design communicates ideas in clear, unambiguous, and precise graphic images. Unlike a written description, a graphic image can convey the same idea anywhere in the world.
- Sketches can be pictorial or multiview.
- Oblique and isometric are the simplest forms of pictorial sketches.
- Freehand lettering is generally done in single-stroke Gothic style.
- The ability to estimate proportions helps a drafter create clear sketches that are easy to understand.

Section 2.2 Computer-Aided Sketching

- Although the idea of sketching differs slightly in the board-drafting and CAD drafting environments, in both cases a sketch can be thought of as a rough drawing that will later be refined.
- The SKETCH command in CAD is most helpful in digitizing irregular surfaces, such as lakes and other features on maps.
- AutoCAD provides several ways to add text to a drawing, including the TEXT and MTEXT commands.