

Mechanical Drawing: Board & CAD Techniques

Chapter 9 Auxiliary Views

Chapter Summaries

Section 9.1 Developing Auxiliary Views

- An auxiliary view is required to solve problems involving inclined surfaces.
- A partial auxiliary view is acceptable when some curves can be left out but the object is still described completely.
- A primary auxiliary view is one that is developed directly from the normal views. Secondary auxiliary views are projected from primary auxiliary views.
- Drawing an auxiliary section is another way to explain an object's details.
- Auxiliary views are developed by revolving the plane of projection.
- The creation of an auxiliary view in CAD is similar to that used in board drafting but can be done in less time because the CAD software automates many of the more time-consuming tasks.

Section 9.2 Drawing Secondary Auxiliary Views

- A view projected from a primary view is a secondary auxiliary view. It is used to find the true size and shape of a surface that lies along an oblique plane.
- An oblique plane is one that is inclined to all three of the normal planes.
- The steps used to construct a secondary auxiliary view are to draw partial and top views; project lines perpendicular to the inclined line in the top view and draw the primary auxiliary view. Then project lines perpendicular to the auxiliary surface of the primary auxiliary view and draw the secondary auxiliary view. Complete the top view by projecting lines from the top view and distances. Darken all lines and add dimensions and notes to complete the drawing.