

1. Section lines are very light. When sketching an object or part that requires a sectional view, they are drawn by eye at an angle of approximately 45 degrees, and are spaced about 1/8" apart. Since they are used to set off a section, they must be drawn with care.

2.(a) Dimension and **projection lines** are narrow continuous lines 0.35 mm thick, if possible, clearly placed outside the outline of the drawing. As previously mentioned, the **drawing outline** is depicted with wide lines of 0.7 mm thick. The drawing outline will then be clearly defined and in contrast with the dimensioning system. The projection lines should not touch the drawing but a small gap should be left, about 2 to 3 mm, depending on the size of the drawing.

(b) To enable dimensions to be read clearly, figures are placed so that they can be read from the bottom of the drawing, or by turning the drawing in a clockwise direction, so that they can be read from the **right hand** side.

(c) **Leader lines** are used to indicate where specific indications apply. The leader line to the hole is directed towards the centre point but terminates at the circumference in an arrow. A leader line for a part number terminates in a dot within the outline of the component. The gauge plate here is assumed to be part number six of a set of inspection gauges

3(a) Full section: If the imaginary cutting plane passes through the entire object, splitting the drawn object in two with the interior of the object revealed, this is called a "full section." A full section is the most widely-used sectional view.

(b) Half section: In this view, the cutting plane is assumed to bend at a right angle and cuts through only half of the represented object, not the full length. When the quarter of the object that was cut is removed, the remainder is called a "half section." A half section view is effective only on symmetrical objects, and its main purpose is to show an object's internal and external construction in the same drawing.

4. Leader lines can be terminated using an arrowhead or dots.

7. **Orthographic projection**, common method of representing three-dimensional objects, usually by three two-dimensional drawings in each of which the object is viewed along parallel lines that are perpendicular to the plane of the drawing.

#### Elements for considered during projection

(a) Views

(b) Mathematical elements

9. **First angle projection: First angle** projection is a method of creating a 2D drawing of a 3D object. It is mainly used in Europe and Asia and has not been officially used in Australia for many years. In Australia, third angle projection is the preferred method of orthographic projection.

Third angle projection: Third Angle projection is a method of orthographic projection which is a technique in portraying a 3D design using a series of 2D views.

## Objectives

1. B
2. A
3. C
4. D
5. B
6. D
7. C
8. C
9. A
10. A
11. D
12. B
13. D
14. B
15. C