

Chart P4: The shape classification scheme

Certain processes are well adapted to the manufacture of shapes with certain symmetries. Lathes, for example, are well adapted to the making of axisymmetric shapes; other shapes are possible but more difficult. Extrusion, drawing and rolling make prismatic shapes. Indexing gives shapes with translational or rotational symmetry. Shapes can be further subdivided into uniform, stepped, angled or dished. Uniform shapes are obviously easier to make than ones which are stepped or have side branches. Some processes are only capable of making hollow shapes, whereas others can make only solid ones.

The chart gives a shape classification which relates to these facts. The shapes are arranged in such a way that complexity, defined here as the difficulty of making the shape, increases downwards and to the right. Examples of each shape are given in order to facilitate the identification of the shape category which describes the desired design.

