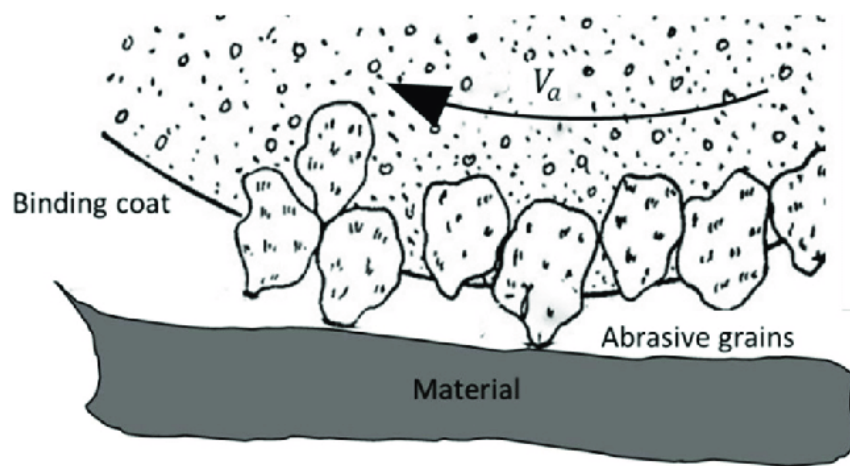


Abrasive processes

The process involves a gradual removal of material from a workpiece additionally incorporating high-pressure equipment. Common abrasive processes are Grinding, Honing, Sanding, Polishing, Buffing, Lapping, abrasive waterjetting, Sand Blasting and Glass Blasting. Abrasive machining works by forcing the abrasive particles, or grains, into the surface of the workpiece so that each particle cuts away a small bit of material.

Abrasive machining is similar to conventional machining, such as milling or turning, because each of the abrasive particles acts like a miniature cutting tool. However, unlike conventional machining the grains are much smaller than a cutting tool, and the geometry and orientation of individual grains are not well defined. As a result, abrasive machining is less power efficient and generates more heat. The grain size may be different based on the machining. For rough grinding, coarse abrasives are used. For fine grinding, fine grains (abrasives) are used.

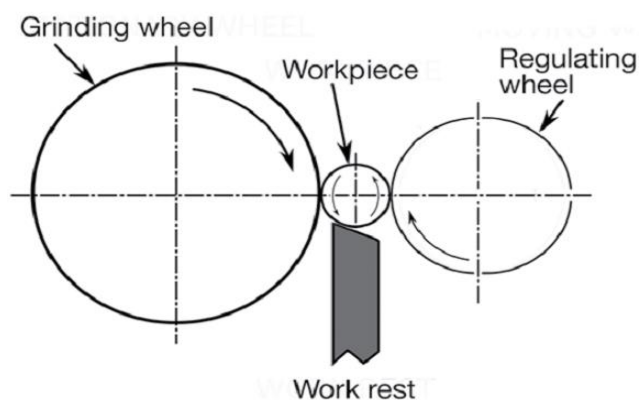


Abrasive machining processes can be divided into two categories based on how the grains are applied to the workpiece.

In bonded abrasive processes, the particles are held together within a matrix, and their combined shape determines the geometry of the finished workpiece. For example, in grinding the particles are bonded together in a wheel. As the grinding wheel is fed into the part, its shape is transferred onto the workpiece.

GRINDING WHEEL

Grinding wheels use an abrasive material for various cutting and grinding purposes, are called abrasive wheels. It uses these wheels for cutting and grinding various metal and other workpieces in a workshop. It also uses these wheels to cut and shape complex workpiece. A vitrified [grinding wheels](#) is the most common equipment in the metallurgy industry. Grinding Wheel cuts metals with different sizes, shapes, and efficiency. Grinding Wheel is generally composed of two types of materials One is the **abrasive cutting compound** used for grinding in Industrial applications. The other is the **bond formed between the abrasives**.



GRINDING WHEEL SPECIFICATIONS

A grinding wheel is specified by the standard wheel markings like diameter of the wheel, bore diameter of the wheel, thickness of the wheel type (Shape) of the wheel. Example 32 A 46 H8V, 250X20X32, Straight wheel. In order to suit the grinding wheel for different work situations, the features such as abrasive, grain size, grade, structure and bonding materials can be varied. A grinding wheel consists of the abrasive that does the cutting, and the bond that holds the abrasive particles together.