

Grinding and Buffing

The primary purpose of a grinding wheel is to sharpen tools (eg. drill bits). The hard abrasive of the wheel is made for removing very hard materials like high speed steel. Never grind on the side of the wheel. Also, never grind a soft material such as Aluminum. The material will coat the wheel and prevent the abrasive from working properly.

If Aluminum is pressed against the wheel for too long the wheel could heat excessively and explode. If the grinding wheel does become coated with metal, dress the wheel prior to use.

A deburring wheel is made of a material similar to a pot scrubber -- a mesh of abrasive fibers held together with adhesive. It's good for intermediate polishing. Even very hard materials such as tool steel can be removed with a deburring wheel. A tool that has been smoothed out in this manner can be used to burnish a part in the lathe to achieve a very fine finish.

Working with the deburring wheel, it is critical to maintain proper orientation of the part. If a corner catches on the wheel, it can be thrown down forcefully. The part will probably be marred and you could easily be hurt. This applies to buffing and grinding as well.

A buffing wheel is made of cloth. By itself it is not abrasive. To make it work properly, abrasive must be applied. Abrasives come in a tube and are suspended in wax. The tube is pressed onto the wheel as it spins, melting the wax, which helps the abrasive adhere to the cloth.

To buff a part, hold it against the wheel with a firm pressure. Keep moving the part about and gradually lighten the pressure as the finish gets finer and finer.
