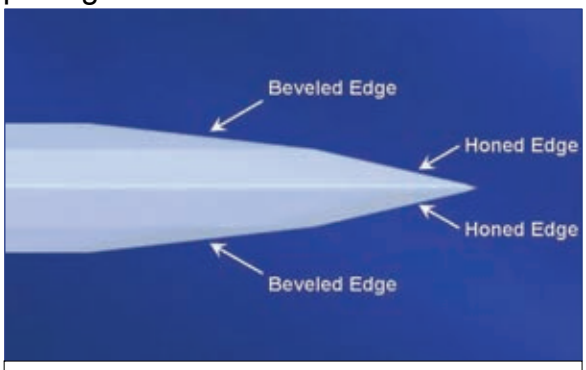
Technical Bulletin

HYDE™
Industrial Blade Solutions

Blade Re-Sharpening - Helpful Hints

Proper technique and care must be used when re-sharpening machine blades and hand knives to ensure maximum blade life and edge integrity. Maintenance of the appropriate edge geometry, utilizing proper fixturing and proper use of coolant are all crucial to the process.



Dia. #1 – basic blade terminology

When a blade is re-sharpened, concentration should be focused primarily on the honed edge. The honed edge is the area located just in from the periphery of the blade (Dia. #1 - note that in this illustration the size of the honed edge is exaggerated). This portion of the blade is generally very small, measuring 1/16" or less.


Dia. #2 – proper orientation of a blade to the grinding wheels during re-sharpening

Maintaining Proper Edge Geometry - During the re-sharpening process, blades should be held at 90° to a pair of offset grinding wheels and run against the two wheels (Dia. #2) – this is called "re-honing". By focusing on the honed edge (rather than the beveled edge), very little stock removal is required to return the blade's edge to its original factory condition. Following this guideline will extend significantly the useful life of your machine blade.

Proper Fixturing - The use of proper fixturing will ensure the blade is secured at 90° to the grinding wheels. Any positional variation during re-honing will result in an edge that is wider on one side than the other, and also produce an edge that is out of alignment with the knife's centerline axis. This will cause the blade to oscillate, or wobble, in use and reduce cut quality. Inconsistent edge geometry will also physically weaken the blade edge and contribute to edge cracking and flaking.

Coolant Use - Coolant is also a key ingredient in the re-sharpening process. Coolant helps dissipate the heat that is caused by the friction produced during the grinding process. Without coolant, the heat generated during this process can alter the molecular structure of the steel producing a blade with a work-hardened edge. Work-hardening will make the blade's edge brittle, and brittle edges are prone to cracking, chipping and flaking during use.

Using re-sharpened blades with edges in optimal condition improves cut quality and yield, while also reducing down time. Following these steps will maximize your blade investment and improve your operational efficiency.

HYDE™ Industrial Blade Solutions
54 Eastford Rd., Southbridge, MA 01550 • www.hydeblades.com
Ph: 800-872-4933 or 508-764-4344 • Fax: 508-764-8172 • info@hydeblades.com