

Joe Silvera demonstrates how to create polished and textured hammers

Techniques: Filing and polishing steel, texturing hammers with power tools

Tools:

- Large coarse file or bench grinder
- Vise (optional)
- Flex shaft or Dremel
- Split Mandrels
- Sandpaper: 180, 320 and 600-grit
- White diamond polishing compound
- Felt buff polishing wheels
- Separation Discs
- Mini Reinforced Screw Mandrels

Materials:

- Hammer blanks for finishing (cross peen or ball peen recommended, preferably mild steel)



Safety:

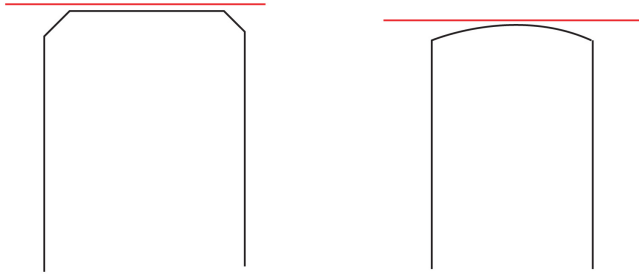
- If anything goes wrong, the first thing you should do is turn off your tool.
- Always use eye protection, like safety glasses that have temple guards to protect your eyes, or a face shield. Your glasses or magnifiers are not safety glasses.
- Wear a dust mask rated for sanding to avoid inhaling polishing dust. The mask should fit snugly against your face when worn.
- Tie back loose hair and clothing, because, to a rotary tool, anything loose is something that can be wound up and ripped out! Never bring your tool, whether it's off or on, close to your head, body or clothing.
- Keep your tools and accessories out of the reach of children or curious adults.
- Avoid the spinning chuck of any rotary tool, which can catch or burn your hand.
- Metal heats up when polished because of friction. Take breaks or your might burn your hand or let go of the piece during polishing, causing it to fly off possibly dent your work.
- Don't wear loose gloves while polishing and never use gloves with anything larger than a flex shaft, like a polishing motor. If you have tight fitting gloves, like the Atlas brand Nitrile Tough Gloves, that fit so snugly that they take on the crease-lines and shape of your fingers, then you can wear them safely for most polishing with flex shafts. Loose gloves will get caught in your tool and can bind up with your fingers inside - or worse! Wearing gloves protects your hands from dust and abrasion, but wear them at your own risk.

Instructions:

Any defects, dents and pits on a hammer will mar your metal. A polished hammer polishes your metal while you forge or texture, burnishing it as you planish to a brilliant shine. Texture hammers can quickly imprint metal faster than stamping. Hammers often come unfinished, with rough and sharp edges from a basic shaping. It was left to the jeweler to put his own form and polish on the hammer, turning into a custom tool. The way a hammer is modified determines the shape and depth of your planish marks, making them almost like brushes for patterning and moving metal. Today, polished and textured hammers are available from makers like Fretz, but you can modify your own hammers for a fraction of the cost.

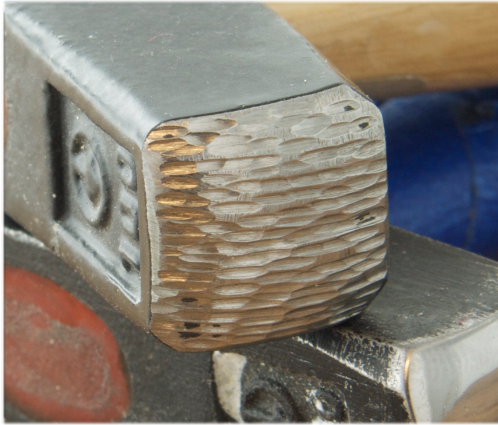
Mild Steel versus Tempered Steel

Some hammers are made of hardened, tempered steel, and some are made of mild steel. The difference is that tempered steel cannot be filed. Mild steel can be filed with a coarse file. Both can be shaped and sanded with grinders and silicon carbide wet/dry sandpapers. Hardened steel hammers are less prone to damage, but are brittle and can chip. Mild steel hammers will nick and dent more easily, but are easier to polish and maintain.



Steps to Polish a Hammer:

- File or grind the hammer to modify the shape: In general you want to improve the hammer for better forging, texturing, etc. Remove any sharp corners and bevels by filing or grinding. The corners should recede back from the center of the face. The rounder the hammer face, the deeper the mark (for example, a round ball shape makes a deep, ridged mark compared to a more subtle, shallow hammer mark made by a slightly curved hammer face. Remove any scratches or pits during filing.
- Polish with Sandpaper: The fastest way to polish the hammer is with split mandrels and wet or dry sandpaper from the hardware store (although for this purpose, it's always used dry!) and a power tool, like a Dremel or flex shaft. Cut 1x4" strips of each sandpaper: 180, 320 and 600-grit. Start with 180 grit and sand across the texture from the filing or grinding until only the texture of the sandpaper remains. Be careful to maintain the new shape of the hammer. Continue with 320 grit sandpaper, changing direction to sand across the lines left by the 180-grit papers. When only the texture from the 320 grit remains, switch to 600 grit and change directions again to sand across the lines made by the 320 grit paper. Sanding across scratches and changing directions with each successive grit used makes it easier to see and remove defects.
- Polish with White Diamond: To bring your hammer up to a mirror polish, buff with a felt wheel and white diamond polish. Buff across the hammer face, alternating directions each round for an even finish.
- Maintenance: Most often, your hammer's finish can be restored with a quick buff on the wheel with white diamond. But in case of nicks or scratches, you'll have to do some sanding. Back your way down the papers, trying first 600-grit, then 320 if necessary, to try and avoid having to go through all of the polishing steps again.



Steps to Make a Texture Hammer:

- Repeat the steps above to modify the hammer by filing or grinding the shape you want, then sand with split mandrels through a 320 or 600 grit finish depending on how rough or polished you want the texture from the hammer to be.
- Patterns can be created on the faces of the hammer with files, saws, grinding wheels, punches and more. A fast way to make a textured hammer is with separation discs and a flex shaft. Separation discs are made of the same materials as the sandpaper used for polishing the hammers. Stack 1 - 4 discs on a screw mandrel and use safety glasses. Then use the discs at low speed to grind patterns into the face of the hammer. In as little as 5 minutes you'll have a great texture hammer!

Contact Joe

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