

Removal of engraving with Jeffrey Herman

PUK® fine welding technology allows the user to select a welding wire of an identical alloy as the work piece



1. The Challenge

Old engravings can cause a reduction in the visual appearance and the value of silver object. Silversmith Jeffrey Herman from West Warwick / USA is often confronted with such situations.



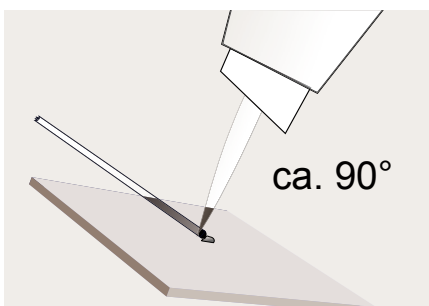
2. Remove dirt and tarnish

With a stiff bristle brush and silver polish remove any contamination from the engraving. Otherwise, this could negatively influence the welding and provoke porosity.



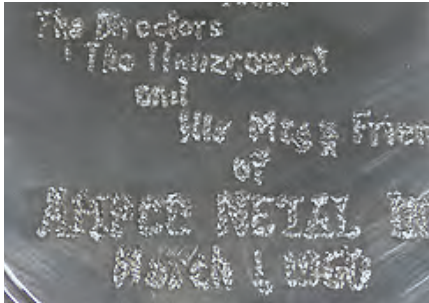
3. Ergonomic sitting position

Sit in a comfortable position - this type of work can take several hours and large items can demand a wide range of manipulation. In some situations you may find it easier to remove the handpiece from its holder and take it directly to the workpiece.



4. Adding material

To guarantee the silver is compressed by the welding arc, the electrode is positioned at a 90° angle, overlapping the welding wire. The welding wire itself (.005" - .010") is melted to the surface drop by drop. Use a very short duration and a power setting between 22 - 55% (PUK04).



5. The filled engraving

Without adding further material, the deposited silver is smoothed by using an electrode with a dull tip and short duration. This allows the pulse to travel over a larger surface area and fill in any small defects.



6.1 Compacting

Large workpieces with flat or curved surfaces can be gently planished on an anvil. This step saves time in abrading and removes any remaining porosity.

Filling in engraving on a large area may require annealing. This is because the planished fill will have a slightly different reflective quality than the material around it and you may see a „ghost“ of what was filled.



6.2 Compacting

For smaller pieces it is helpful to use a burnishing wheel mounted in a flexible shaft. It should not be too aggressive, so if necessary the edges should be rounded.



7. Tools

To achieve the desired results and to save time on the rework, it is useful to have a selection of burnishers suited to the wide variety of objects you'll encounter. (See the variety of tools Herman recommends in the blog section at silversmithing.com/puk.htm.)



8. Grinding

The surplus material is ground away and the workpiece polished to the desired finish.



9. Polishing

Since the added material is of the same alloy as the original, the work piece can be polished to a fine finish with fine muslin polishing buffs.



10. Result

The previous engraving has completely disappeared. There are no marks or variations in color due to the same filler wire as the object's alloy.



Workshop
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You can find further information about welding silver on Herman's PUK review and blog page at silversmithing.com/puk.htm, and his business site at hermansilver.com.