

## Things to Try with Arc Welding

### Removing Porosity from a Casting

1. Use a ball bur to remove porosity.
2. Weld to fill with same metal wire into the cavity. A good thickness for fill wire is 28 ga. (For sterling silver, some people prefer using fine silver, palladium silver, or argentium for fill wire.)
3. File, sand, burnish, and polish as necessary.



## Bezel Setting

This is especially helpful with oddly shaped and large cabochons.

1. Measure, cut, and form bezel around stone.
2. Tack weld bezel together. (This weld ensures that the bezel doesn't reopen when soldering.)
3. Solder bezel.
4. Put stone into bezel with dental floss (for removal) onto base plate.
5. Tack weld bezel onto base plate about every  $\frac{1}{4}$  to  $\frac{1}{2}$  inch; remove stone.
6. Solder and finish jewelry object.



**Tack Welding Multiple Parts Together Before Soldering Using Small Amounts of Glue onto Sheet Metal Connected to a Positive Electrical Lead.**

If using glue, remember that the glue will act as an electrical resist, so leave spots of bare metal touching bare metal. Use as little glue as possible. Also remember that the glue will burn, so only use this technique with adequate ventilation.

1. Cut and align parts onto sheet metal.
2. Partially glue them into place. If using Super Glue™ or similar glue, use a broken jeweler's saw blade to apply a tiny amount of glue.
3. Connect positive lead to the metal plate.
4. Weld all parts in one or two places.
5. Break the object free from the metal plate.
6. Solder all components together in one soldering operation.





### **Enameling**

1. Assemble your object with precision pulse arc welding instead of IT solder before enameling.
2. If your object is already enameled and you need to attach a finding like an earring post, grind off the enamel to expose bare metal in two spots (one for the finding, the other for the positive electrical lead), then weld. It shouldn't hurt the enamel.

### **Welding a Ring for Sizing or Similar Joint**

1. File a small V-shape into the joint about two-thirds through the thickness.
2. Weld and fill with same metal wire. A good thickness for fill wire is 28 ga. (For sterling silver, some people prefer using fine silver, palladium silver, or argentium for fill wire.)
3. File a small V-shape into the joint about two-thirds through the thickness on the other side of the joint.
4. Weld and fill with same metal wire.
5. File, sand, burnish, polish as necessary.

### **Tack Welding, Aligning, and Soldering**

This works for many different components, from aligning settings and bails to making a hinge. Remember, you're welding, so the tack weld will be at a higher melting temperature than any solder, including IT solder.

1. Tack weld object in one point. That point will act like a hinge to move the part into perfect alignment. Weld again in two or more more spots to secure.
2. Solder with minimal or no clamping.

### **Welding to set a rivet**

1. Practice first, figure out settings & length of wire poking out of rivet hole.
2. Have the rivet wire poke out a small hole in paper or masking tape to protect the base plate from discoloration.
3. Touch electrode to the end of the wire to create a ball.
4. With practice you can ball up wire right up to something that's heat sensitive, like plastic, stone, enamel, and patinated metal.

