Transcript – Soldering a wire ring

We are going to be making a ring out of wire.

I have precut a piece of round copper wire.

The first stage is to **anneal the metal**.

I'm turning the torch on, and I am heating the metal lengthways **until it reaches a cherry red colour**.

Annealing is the name for the process of softening the metal with heat, so we can work with it more easily.

I'm now turning the torch off.

Using the steel tweezers I'm going to quench the wire,

You can also let the wire cool down to room temperature as the metal will be even more malleable then.

Once I have pickled the wire, washed it dried it.

I am **using the half round plyers to shape the ring**.

The round part of the plyers goes on the inside of the ring and the flat part on the outside.

I will then put the ring on a **ring mandrel and using a rawhide mallet will mallet it against the sandbag**.

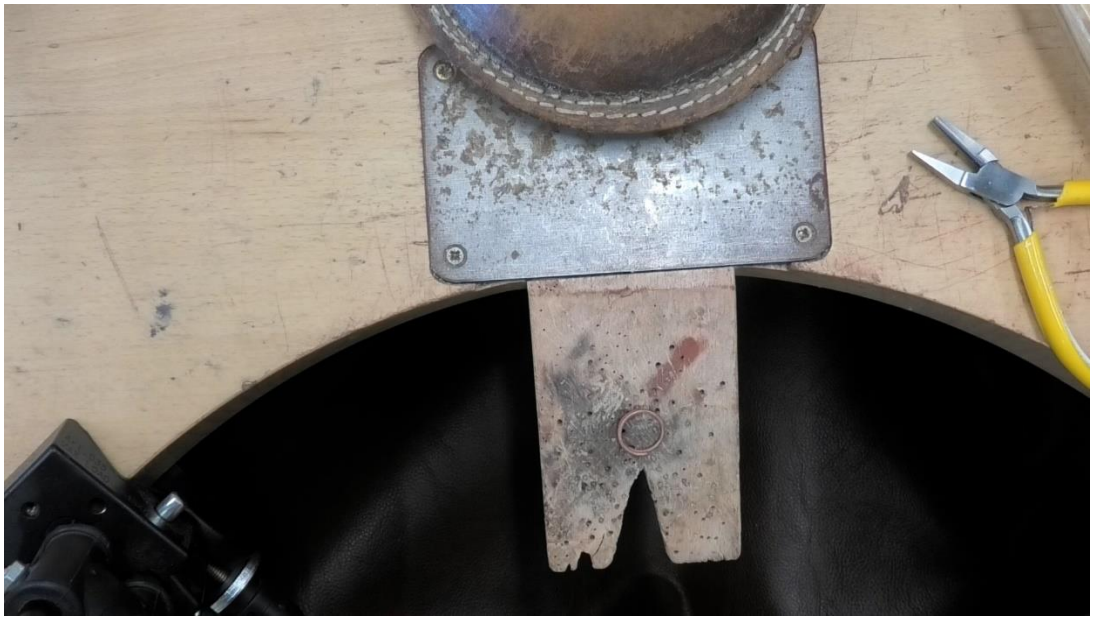
There are different ways of doing this using the hide mallet, which is in your toolkit.

I'm not showing you how round the ring is.

The next stage is to **mark the ring were I'm going to cut it**.

You can **use a sharpie or a scribe to mark**, I am going to cut through both pieces.

With my **piercing saw,** making sure my blade is tight.



I am going to **cut through the ring** now.

It is very important to mention that you never

put your fingers in front of the saw blade when cutting.

You can see here that I have put my index finger through the back of the saw blade and my middle finger is on the other side, holding down the ring either side of were im going to cut the join.

I am holding the ring down on the bench peg right at the top of the V cut.

I'm cutting through both pieces at the same time as this gives me a really nice join as I'm showing you here.

Now I'm going to use two **parallel pliers**.

And I'm going to put them **either side of the join squeeze them together whilst moving them in opposite directions**.

Now we have a neat join, we are going to solder the ring closed.

The first step is to **mix the borax into a cream, using a borax cone and some water**.

Then put the **borax paste on the join of the ring**.

In order to solder, we need to have good contact between the two pieces that are being soldered.

And we need to join the clean, the Borax absorbs the oxygen from the flame and stops the area that is being soldiering together from oxidising too quickly so the solder can run.

If you solder isn't running, there is either not enough heat, the join isn't close enough or the join area isn't clean of oxides enough to solder.

I have put the Borax on and now I'm c**utting the solder using some snips into little squares** and I am putting them in my Borax dish.

I'm heating around the Ring and then focus on the join until the solder melts.

I'm now quenching the ring in water and you can see there where it has soldered.

Now **I'm going to mallet the ring again around the ring mandril using the rawhide mallet**, this is just to make sure that it's nice and round.

I'm going to **turn it around and do it both ways.**

If you want to add some texture you could use something like this ball pin hammer here. And very carefully and gently, hammer it against the metal, not the mandrill, but the ring to create a subtle hammered texture.

If you do choose to do this, do bear in mind that this process tends to enlarge the ring. So, if your ring fits your perfectly and you then add some texture to it this way the ring may end up being bigger.