

6.1 Wires and Prongs

Demonstrated on a round wire 14ct 0,8mm diameter



fig. 6.2

- 2 Always keep the electrode well sharpened, so that the tip can contact the joint precisely.

(fig.6.2)

Please note! When using a freshly sharpened electrode, you will notice that the first weld that is made with it, is more powerful than all those that follow. After the first weld is placed, the subsequent welds become more consistent. With smaller dimensioned applications, it is therefore advisable to "work in" a newly sharpened electrode. Before re-starting with welding on the work piece, simply place the first weld on a spare piece of metal and then continue to work as normal.



fig. 6.1

- 1 Before trying to weld broken prongs back on, a few preliminary exercises should be made using a round wire (e.g. 14ct).

File the ends of the wire flat. The burr that is produced while straightening the ends can be used as extra material when welding.

(fig.6.1)



fig. 6.3



fig. 6.4

- 3 Hold the wire in such a way that the ends touch. Making sure that the electrode is held vertical to the join, place the electrode tip on the join, and trigger a weld here using a low to medium power, and a short impulse time.

(fig.6.3 & fig.6.4)

- 4 To improve the durability of the weld, the two ends can be lightly pressed together during welding. This will result in a joint which is slightly thicker and thus more stable.

(fig.6.4)

Make sure that the welding power chosen is not too low. The weld should penetrate at least half way into the wire. ($> 1/2$ wire $\varnothing$).



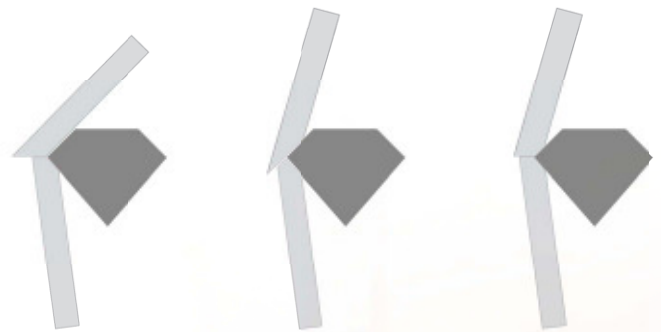
fig. 6.5

6.2 Extending prongs adjacent to stones



- 1 Take a wire of the same alloy and thickness as the work piece and file it into the correct shape. Depending on where the prong has broken off, the required shape can be very different. Any burrs that are formed during filing, can be left on, these will act as extra material when welding.

Some of the possible variations:



- 2 Always try to file the wire so that it extends a short way over the stone, this way it will need a lot less "bending into shape" later. The wire used, should be soft (annealed), this will make it easier to adjust the setting. File down the broken prong until it is in the appropriate form.

- 3 Remember that, there where you want to weld, the wire is now substantially thinner. Take this into consideration when choosing the welding power.

If you cover the stone with some adhesive tape, you can avoid dirt and soiling. (pic.)

To minimise the risk of damage to the stone during welding, it is essential to weld with the shortest impulse time possible. Always begin your work on a low power setting, and then increase the power gradually step-by-step, if necessary. Consider that using too much power can permanently damage the stone.

- 4 Always try to work from the outside of the setting. This means that the electrode must not be allowed to move towards the stone during welding.

Using your finger, check the temperature of the welding area, after each weld; if necessary, leave the work piece to cool before continuing.

Clean the ring and then finish setting the stone.

