

Fine Line

Creating a minimal setting for a large colored gemstone

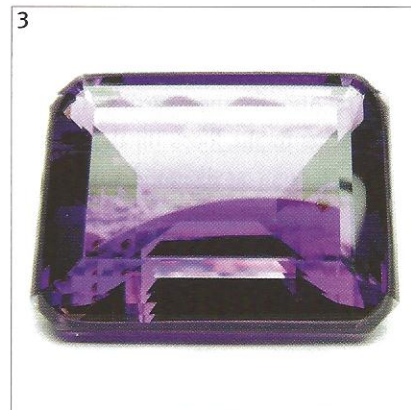
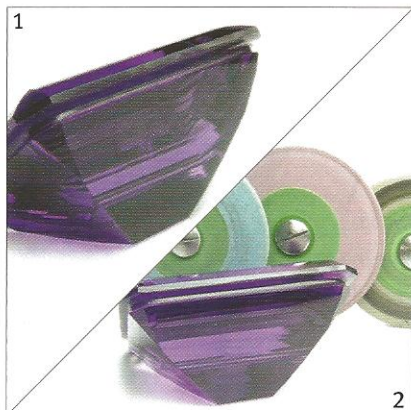
BY ROLAND AUER *Editor's Note:* This is the third in a three-part series on crafting unique settings. In this project and any other project where a laser welder is used near gems, there is always the potential risk of damaging a gemstone. Do not attempt to laser weld near expensive or irreplaceable gems if you are inexperienced. The author and MJSA do not assume responsibility for any damage that may occur when attempting the procedures outlined here.

When you look at this pair of amethyst earrings, you hardly notice the settings around the large purple gemstones. You see only a line on the side below the girdle of the stone. This technique involves removing material from the gemstones, which lowers their intrinsic value. If you are not experienced with cutting gemstones, it's best to have an expert cut the stones for you prior to attempting this project.

1. This setting method works best for gems that have good height and a strong girdle. The amethysts in these earrings measure 18 by 25 mm. The thicker the gem, the easier it is to hide the wire below the girdle.

2. Using a diamond abrasive wheel on a rubber base, cut a groove (1 mm wide by 1 mm deep) right beneath the girdle of the gem. This tool enables you to remove enough material while working smoothly and without vibration, which could damage the gem.

3. Although it is visible now from the top of the gem, the groove will be invisible after setting.



4. Bend a 1 mm diameter 18k white gold wire into the shape of the groove. At this point, the corners of the setting should be rounded to make fitting the gem easier. You can file the corners exactly to shape later.



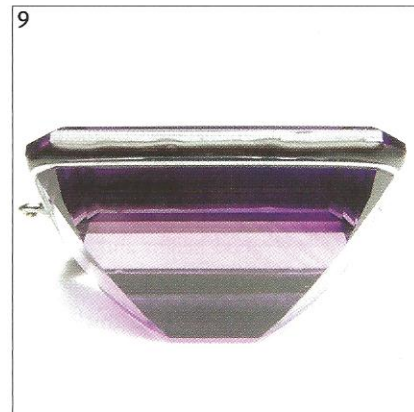
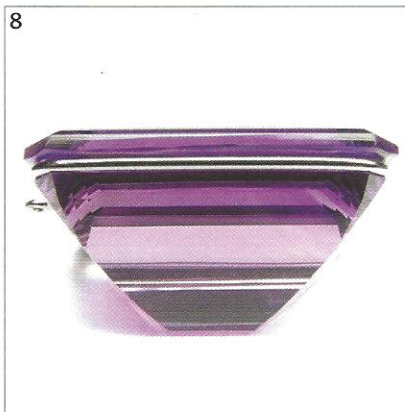
5. Place the wire in the groove. About $\frac{2}{3}$ of it should be inside the groove and $\frac{1}{3}$ should be sticking out.



6. After fitting the wire to the gem, you can prepare the ends by laser welding a small ring of wire to them and cutting it down the middle. It is important to plate the wire setting with black rhodium or the equivalent to darken the wire so that it is less visible in the gemstone.

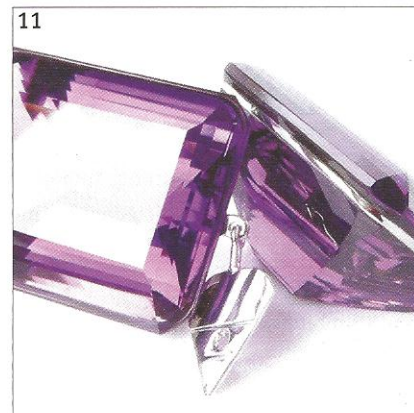
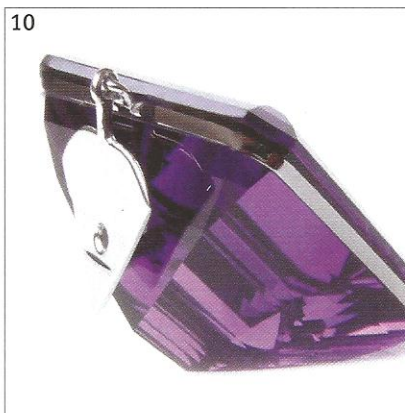


7. Put the wire back in place around the gemstone and laser weld the ends of the ring. This must be done carefully. Protect the stone from heat during welding, and ensure the welded connection is strong or you run the risk of the gemstone falling out down the road.



8. You can see that there is a small gap between the stone and the wire. To make the wire invisible from the front, you need to fill this gap so light won't reflect in it.

9. I use Colorit, a ceramic-reinforced composite material, to fill the gap. You can mix colors to match the exact color of the stone.



10. When the Colorit hardens, file and polish it. Also, for these earrings I added attachments to the loops on the settings that can be put on diamond studs. This enables the amethysts to be worn as drops.

11. You can see that the wire is almost invisible from the front of the gems, providing a unique setting for these large, vibrant gemstones. ♦