WELDING ISSUES & POSSIBLE SOLUTIONS

A Guide to Troubleshooting Common GMAW Gun and Consumable Problems

Making a high-quality MIG weld is no easy task. But making a high-quality MIG weld when your gun and consumables aren't functioning properly is just about impossible. Porosity, excessive spatter, undercut and burn back are just a few of the problems that can occur when something's not right with these components. Troubleshooting weld defects can be a difficult task, since any single problem can be caused by a variety of factors. It is often easier to avoid weld defects from occurring by conducting a thorough check of your MIG gun and consumables prior to welding than it is to troubleshoot an existing issue. Problems will inevitably occur, however, and being able to quickly and accurately identify their source will save you both money and frustration. The following is a guide to solving many of the most common consumables and gun-related problems associated with MIG welding.

Short contact tip life

Short contact tip life — Although quality plays a critical role in contact tip service life, tip life can vary dramatically from application to application, and it is difficult to give an average longevity to expect from your tips. If you notice a change in your contact tip life from their normal life spans, however, check and replace the following factors as necessary. Using the wrong size contact tip, exposure to excessive heat or erosion caused by the wire are all contributing causes to premature contact tip degradation. If your contact tip is melting due to excessive heat, it is likely a result of exceeding the product's rated amperage or duty cycle, in which case you should replace either the tip or the tip and the MIG gun with heavy-duty equipment. If the wire is prematurely wearing out the contact tip, the drive rolls may be creating small burrs on the wire that can erode the inside of the contact tip. Setting the drive roll tension too high can also create deformities in the wire that cause it to mechanically wear out the tip, which is especially common with knurled drive rolls. If this is the case, the drive rolls will need to be properly tensioned or replaced. The wire can also cause premature contact tip failure if it is rusty, dirty or simply a low quality wire with excessive imperfections. If this is the case, the wire needs to be replaced.

WeldWire Company, Inc. **103 Queens Drive** **King of Prussia, PA 19406**

Phone: (610) 265-3555 **Toll free: (800) 523-1266** **Fax: (610) 265-7806**