

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.

Erratic wire feeding

Erratic wire feeding — Erratic wire feeding simply means that the wire is not feeding from the gun at a consistent rate. This problem is usually caused by the liner, the drive rolls or the contact tip. A worn out or kinked liner, or build-up of debris, filings, dirt and other foreign material inside the liner, the wrong size liner and gaps at the liner junctions caused by an improperly trimmed liner can all cause the wire to feed erratically. In each case, the liner will likely need to be replaced and properly trimmed so that it fits as tight as possible to the other components. Improper drive roll size, worn out drive rolls and improper drive roll tension are also potential causes of erratic wire feeding. Replace worn out drive rolls or those of the wrong size with correctly sized and tensioned drive rolls. Another common cause of erratic wire feeding is a contact tip that is worn out or the wrong size for the wire being used. If you suspect the contact tip is causing the wire to feed erratically, it is best to replace the tip.