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.

Contact tip burnback

Contact tip burnback — While burnback will occur from time to time even when there isn't anything wrong with your gun and consumables, it could also be caused by improper equipment set-up. Be sure to check the following factors if you experience an increase in your contact tip burn back rates. Improper tip recess and improper wire stick out can cause increased burnback frequency. In the case of incorrect tip recess (or stick out), you will need to install a nozzle and tip combination with a different recess. Similarly, adjusting the distance between the gun and the work piece (tip-to-work distance) will resolve burnback problems associated with wire stick out. A faulty work lead/ground is another possible cause of burnback. Check and possibly replace the electrical connections and cables to ensure a faulty work lead/ground will not cause any further burnback. Erratic wire feeding, a problem with several possible causes, is a frequent source of burnback. See the section below for information on correcting erratic wire feeding.

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