

GMAW

Gas Metal Arc Welding

What is GMAW welding?



Gas metal arc welding (GMAW) is an electric arc welding process that uses a continuously fed wire electrode and shielding gas to join metals. The process is favored for its speed and versatility, making it ideal for various industries, including automotive, aerospace, energy, and manufacturing.

Step-by step guide to get started

- **Wire Feed Speed and Voltage Settings:** These need to be adjusted based on material thickness and type.
- **Proper Gun Angle:** Hold the welding gun at a 15-degree angle from vertical to create an effective arc.
- **Travel Speed:** Ensure consistent speed to prevent undercuts or excess spatter.

Specializing techniques for GMAW welding

For more advanced applications, such as welding aluminum, it's important to use a spool gun and adjust settings to control heat input. Low voltage short-circuiting is another technique used for welding thin materials, where the electrode makes contact with the base metal and briefly shorts, providing better control.

These techniques are essential for expanding your welding capabilities, whether you're working in manufacturing or aerospace.

Tony Jackson

<https://www.aws.org/magazines-and-media/welding-digest/2025/june/wd-june-2025-what-is-gmaw>