

**Standard Welding Procedure  
Specification (SWPS) for**

**Argon Plus 25% Carbon  
Dioxide Shielded Gas Metal  
Arc Welding (Short Circuiting  
Transfer Mode) followed by  
Argon Plus 25% Carbon  
Dioxide Shielded Flux Cored  
Arc Welding of Carbon Steel  
(M-1/P-1/S-1, Groups 1 and 2),  
1/8 through 1-1/2 inch Thick,  
ER70S-3 and E7XT-X,  
As-Welded or PWHT  
Condition, Primarily Pipe  
Applications**

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**An American National Standard**

**Approved by the**  
**American National Standards Institute**  
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**Standard Welding Procedure Specification (SWPS) for  
Argon Plus 25% Carbon Dioxide Shielded Gas Metal  
Arc Welding (Short Circuiting Transfer Mode) followed  
by Argon Plus 25% Carbon Dioxide Shielded Flux  
Cored Arc Welding of Carbon Steel (M-1/P-1/S-1,  
Groups 1 and 2), 1/8 through 1-1/2 inch Thick,  
ER70S-3 and E7XT-X, As-Welded or PWHT  
Condition, Primarily Pipe Applications**

Prepared by the  
American Welding Society (AWS) B2 Committee on Welding Procedure and Performance Qualification

Under the Direction of the  
AWS Technical Activities Committee

Approved by the  
AWS Board of Directors

## **Abstract**

This standard contains the essential welding variables for carbon steel in the thickness range of 1/8 through 1-1/2 inch, using gas metal arc welding (short circuiting transfer mode) with Argon plus 25% Carbon Dioxide shielding for the root followed by flux cored arc welding (globular transfer mode) with Argon plus 25% Carbon Dioxide shielding for the balance. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for groove welds. This WPS was developed primarily for pipe application.



**American Welding Society**

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