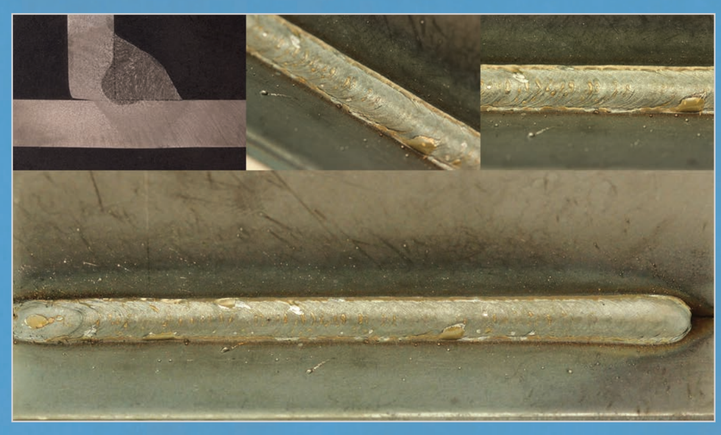
GMAW-S DRAG (SHORT CIRCUIT MIG)

A baseline weld was made using automated welding equipment. Voltage, Wire Feed Speed, Travel Speed and Contact-Tip-to-Work Distance were then adjusted individually from baseline weld settings to illustrate how each parameter affects a fillet weld when raised and lowered. Icons in grey indicate the specific parameter adjusted; in the case of amperage, the icon represents the value measured.

Baseline Weld Variables

Wire Type:	0.035 ER70S-6 (Quantum Arc 6)	**Transfer Mode:**	Short Circuit (SCMT)
Shielding Gas:	75% Argon / 25% Carbon Dioxide	**Travel Direction:**	Backhand (Drag)
Base Metal:	1/8 in. Cold Rolled Carbon Steel	**Nozzle Diameter:**	5/8 in.

130 A

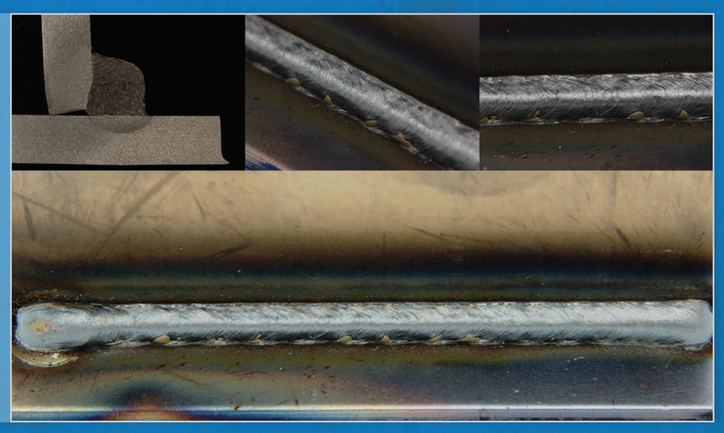


220 IPM | 10.5 IPM | -10° (Drag / Push) | 35 CFH | 3/8” (Flush Tip) | 45° | 18.0 V

Voltage

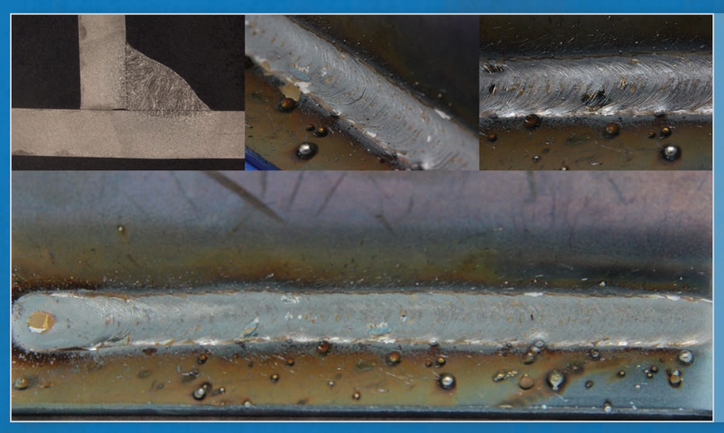
Decreased

15.3 V — 125 A



Increased

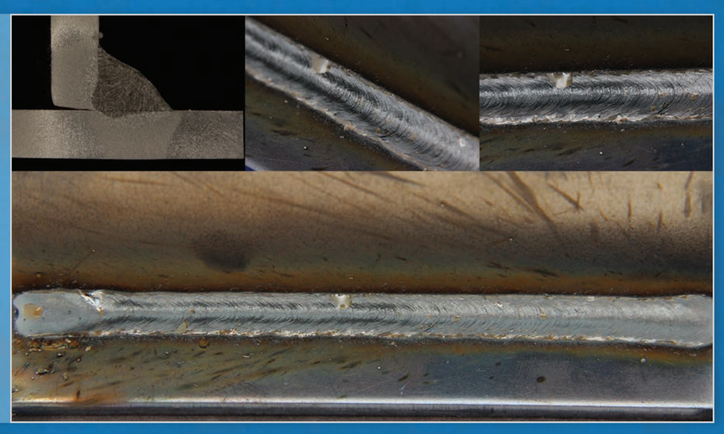
20.7 V — 136 A



Wire Feed Speed

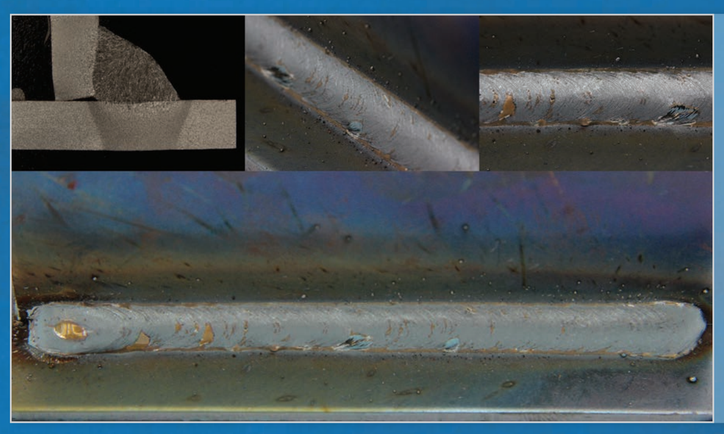
Decreased

187 IPM — 115 A



Increased

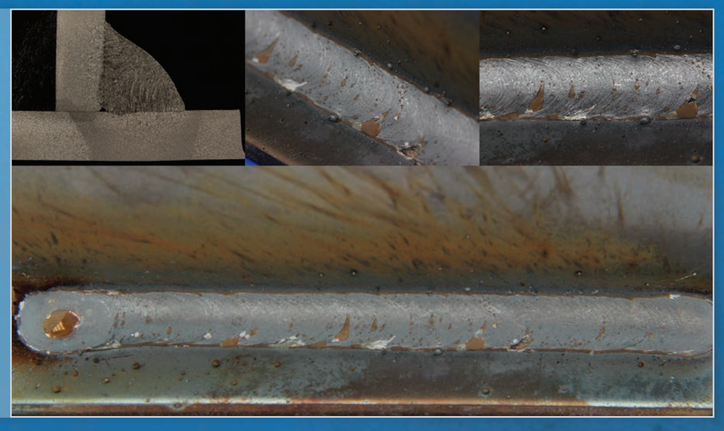
253 IPM — 146 A



Travel Speed

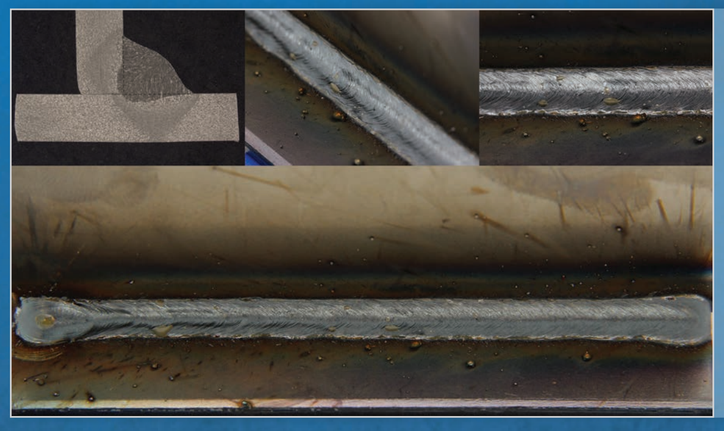
Decreased

8 IPM — 131 A



Increased

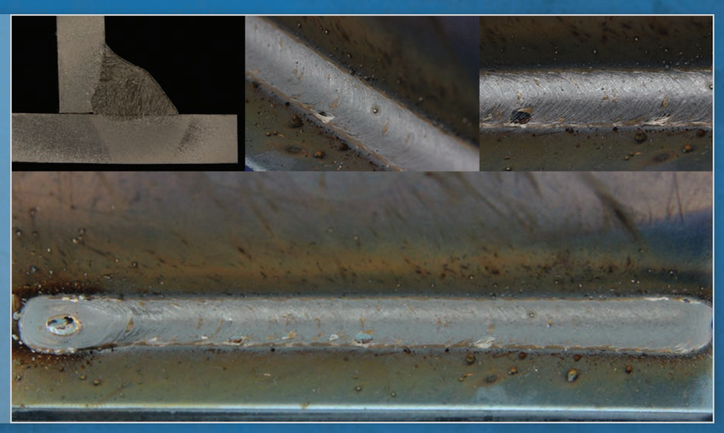
13.5 IPM — 132 A



Contact Tip To Work

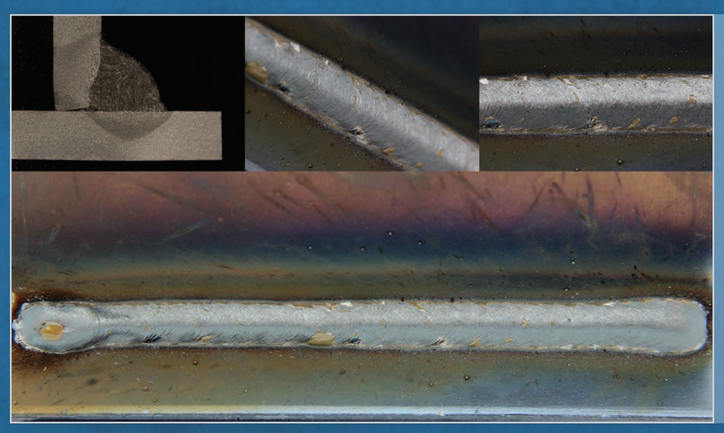
Decreased

1/4” (FLUSH TIP RECESS) — 137 A



Increased

1/2” — 123 A



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