



GMAW (GAS METAL ARC SPRAY TRANSFER)

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: 0.045 ER70S-6 (Quantum Arc 6) Transfer Mode: Spray
 Shielding Gas: 90% Argon / 10% Carbon Dioxide Travel Direction: Forehand (Push)
 Base Metal: 1/4 in. Cold Rolled Carbon Steel Nozzle Diameter: 5/8 in.

235

A

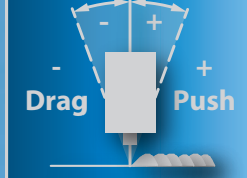
300



16



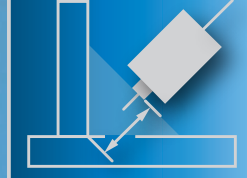
+10°



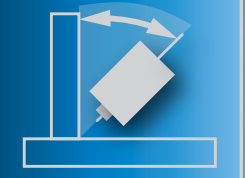
35



3/4" (Flush Tip)



45°



26.5

V



Voltage

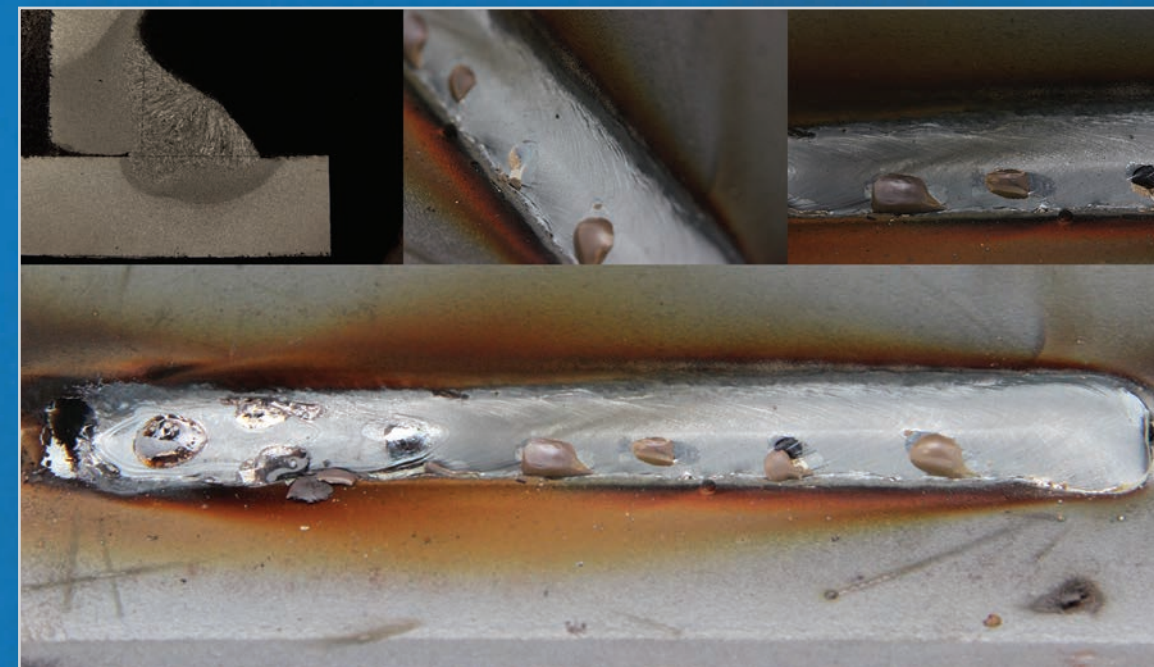
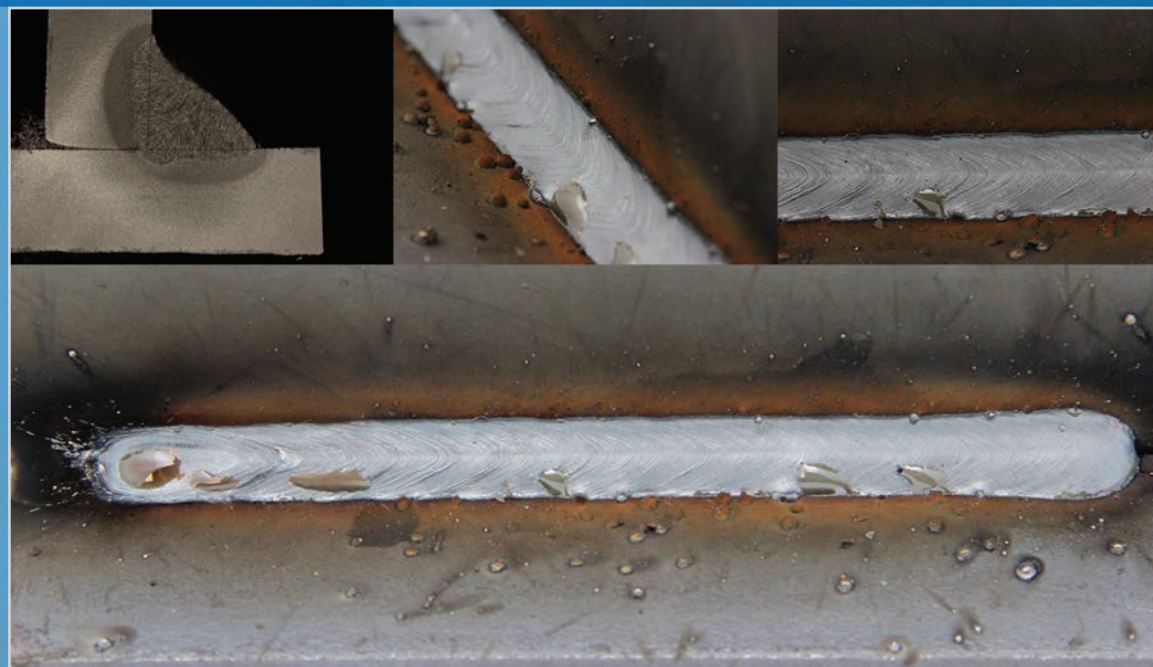
Decreased

22.5



212

A



Increased

30.5



247

A

Wire Feed Speed

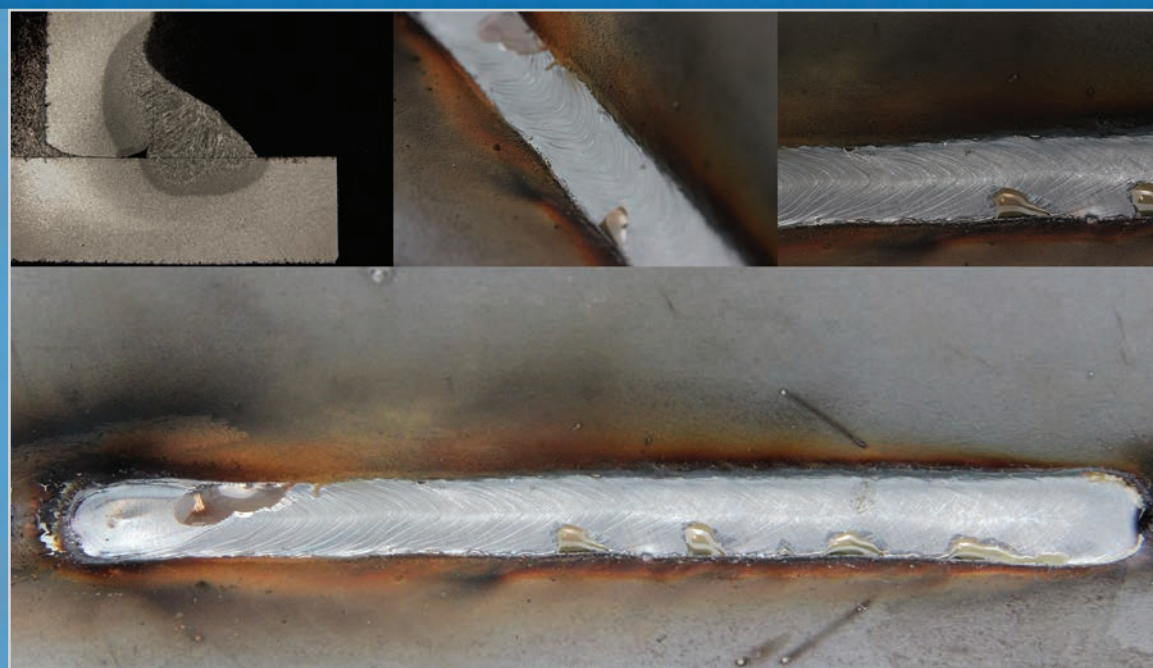
Decreased

250



253

A



Increased

350



210

A

Travel Speed

Decreased

12



241

A



Increased

20



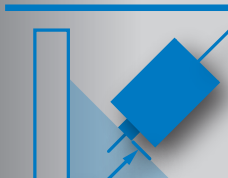
237

A

Contact Tip To Work

Decreased

5/8" (FLUSH TIP RECESS)



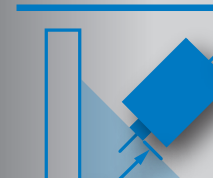
282

A



Increased

1"



213

A



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