



FCAW-G (GAS-SHIELDED FLUX CORE)

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: 0.052 E71T-1 (ExcelArc 71)

Shielding Gas: 75% Argon / 25% Carbon Dioxide

Base Metal: 1/4 in. Cold Rolled Carbon Steel

Transfer Mode: FCAW/Spray

Travel Direction: Backhand (Drag)

Nozzle Diameter: 5/8 in.

275

A

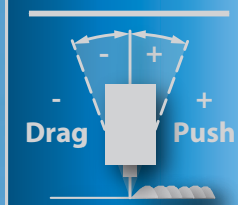
381



20



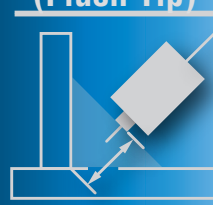
-20°



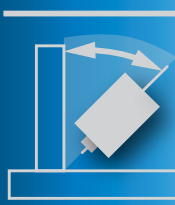
35



7/8"

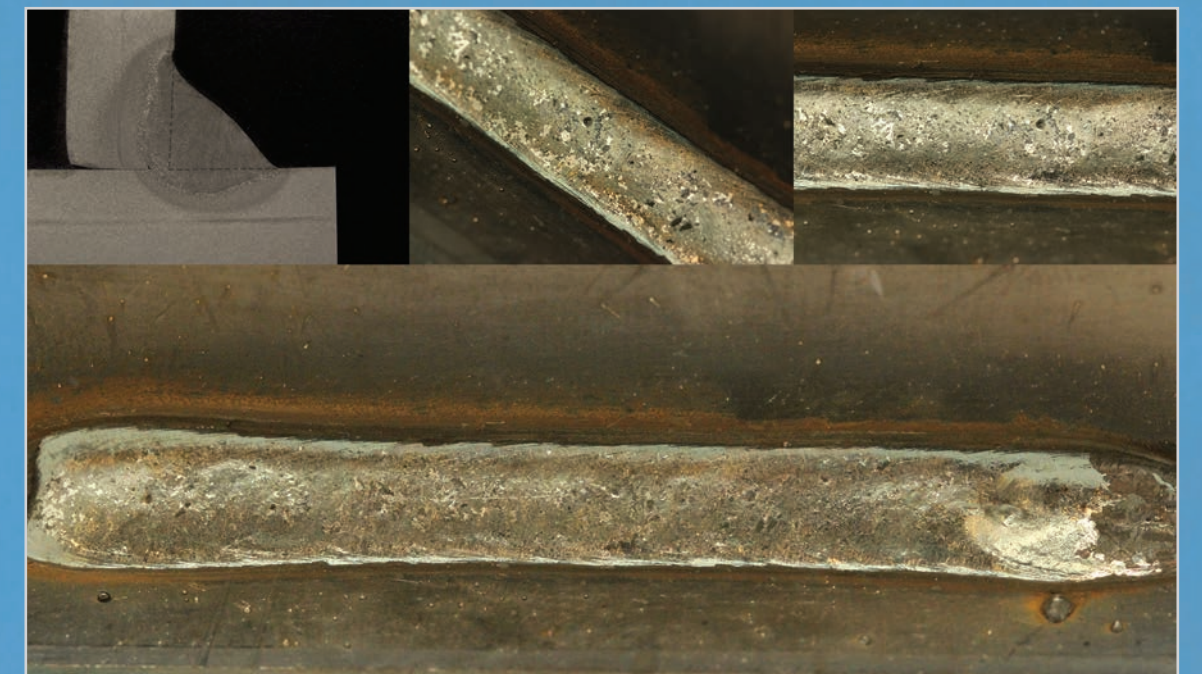


45°



28.0

V



Voltage

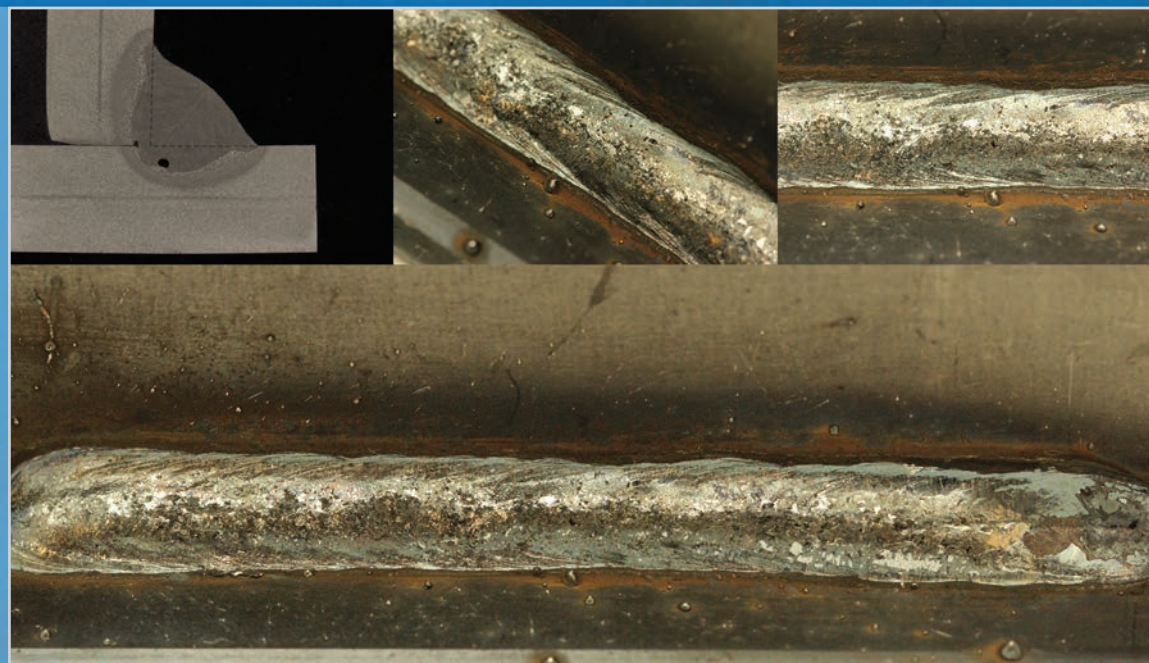
Decreased

24.1

V

267

A



Increased

32.1

V

294

A

Wire Feed Speed

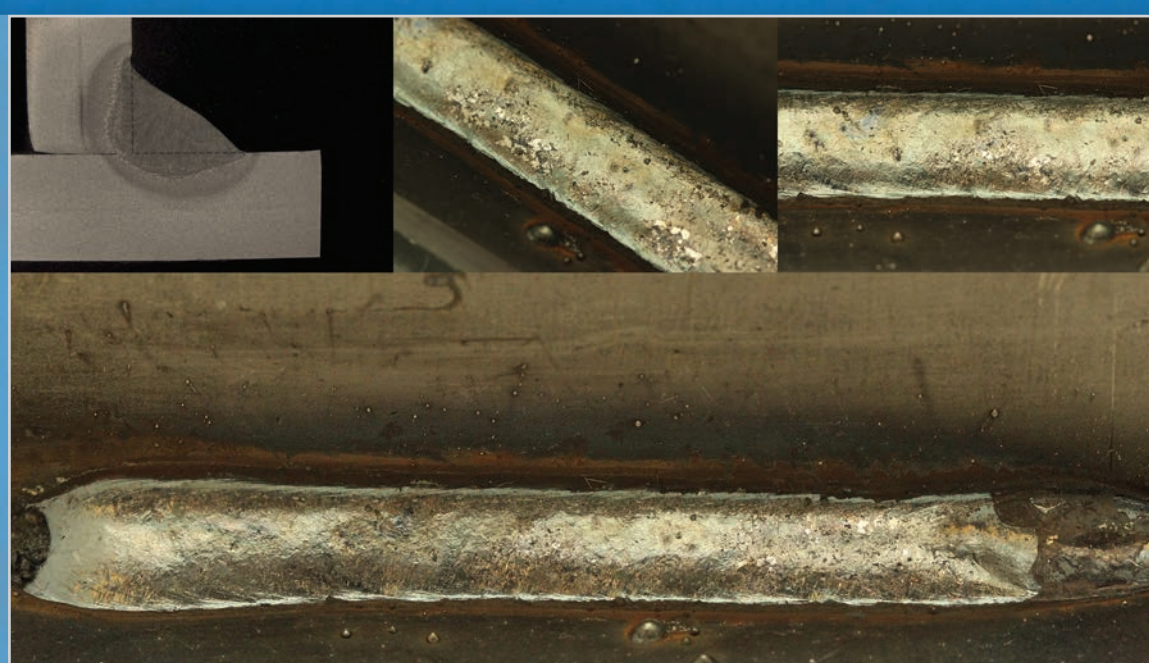
Decreased

321

IPM

251

A



Increased

442

IPM

303

A

Travel Speed

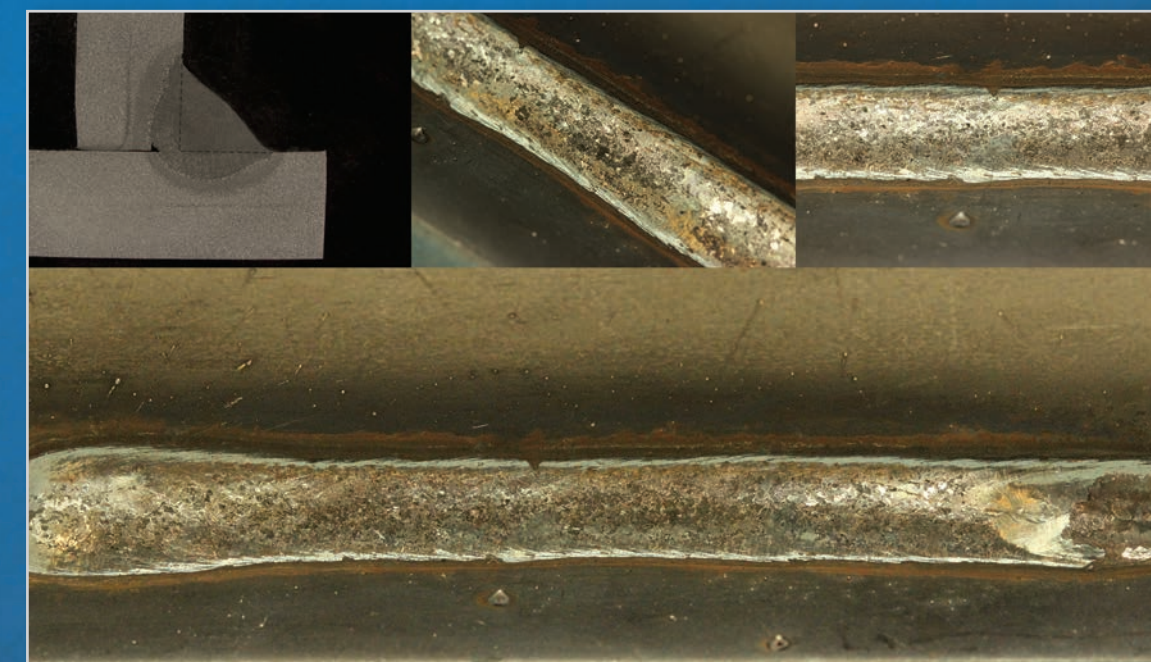
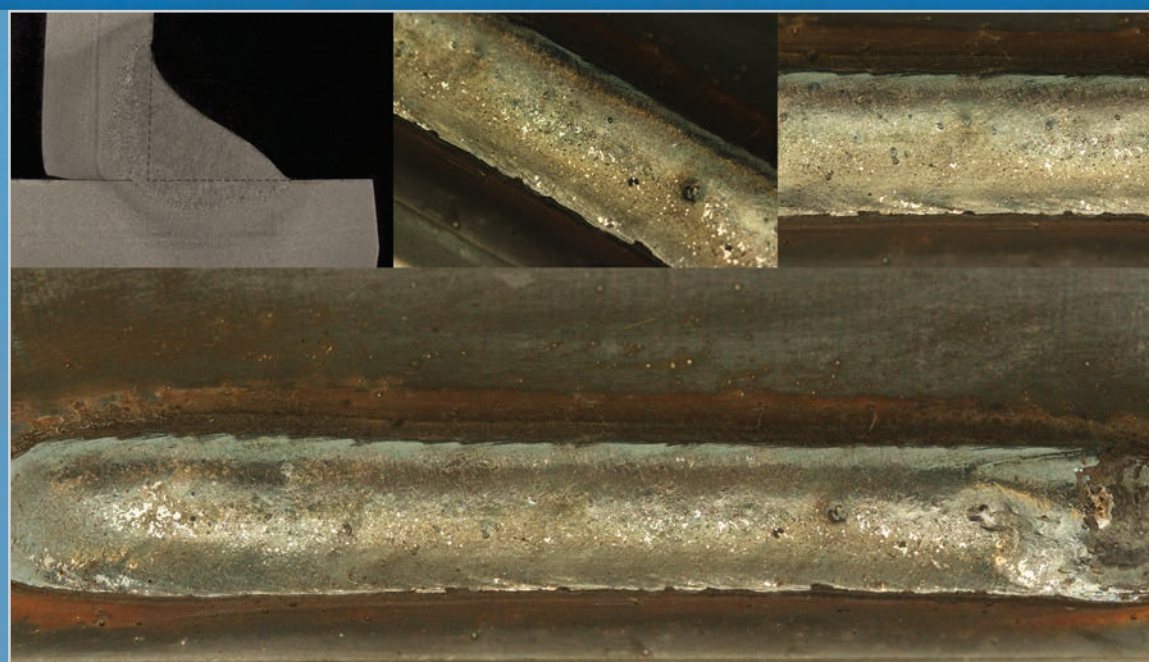
Decreased

16

IPM

281

A



Increased

24

IPM

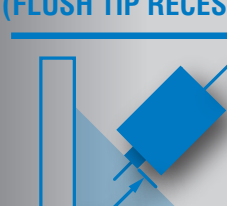
276

A

Contact Tip To Work

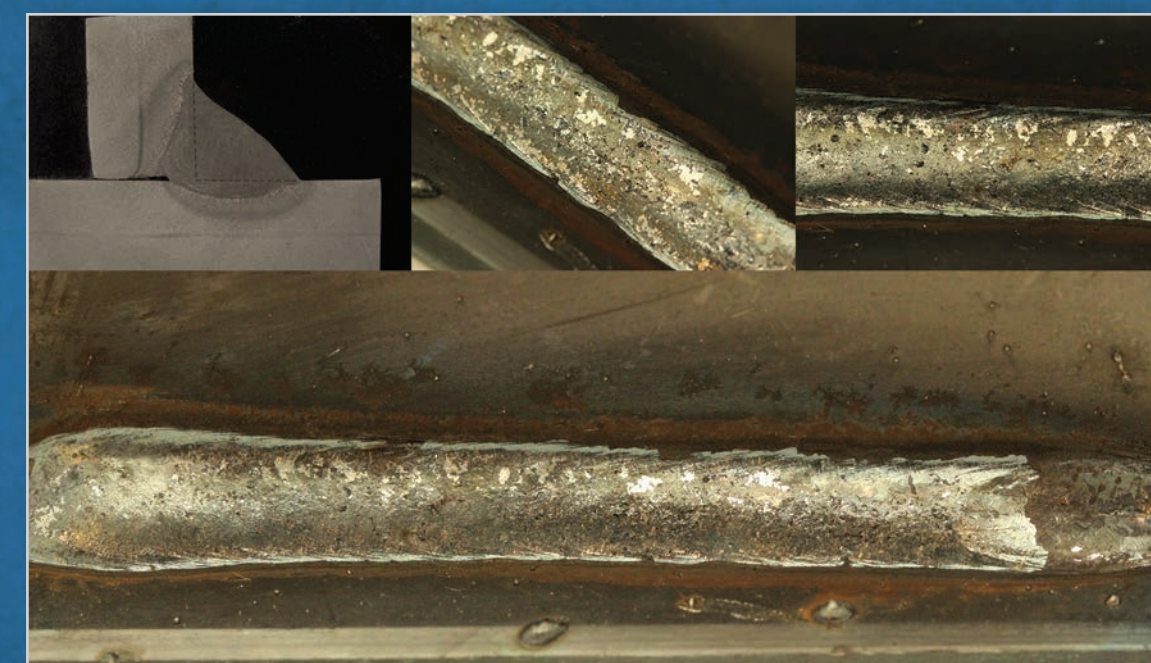
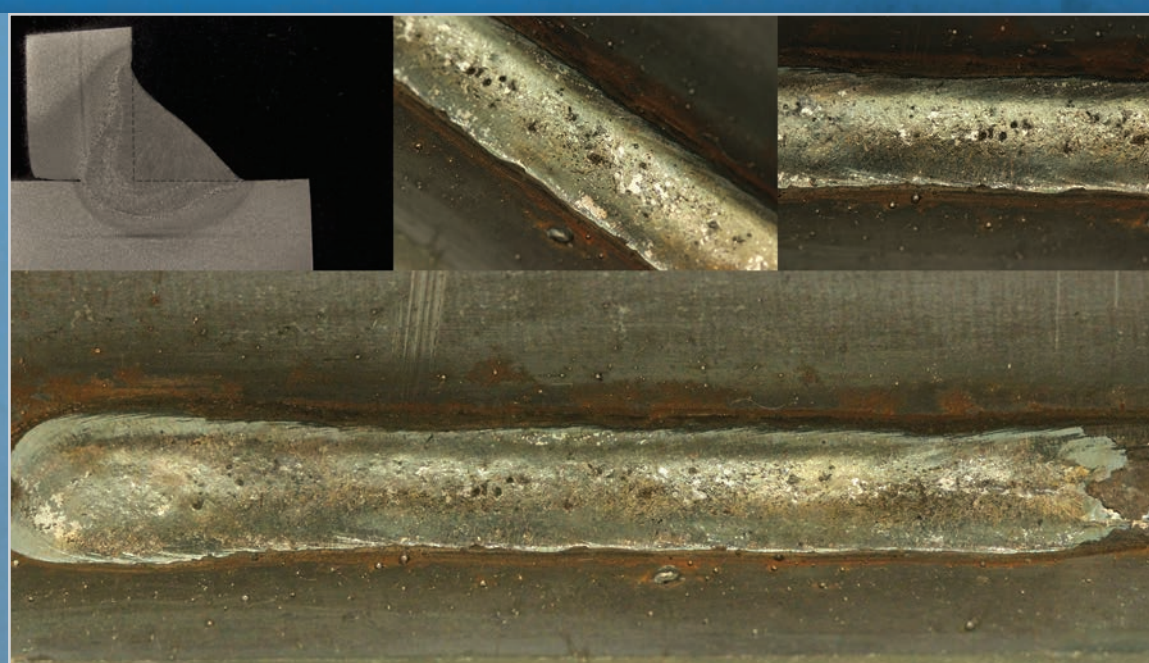
Decreased

5/8"



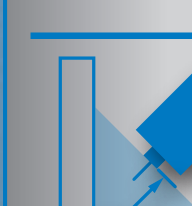
314

A



Increased

1-1/8"



247

A