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 E71T-11 (Fabshield® 21B)
- **Shielding Gas:** N/A
- **Base Metal:** 1/4 in. Cold Rolled Carbon Steel
- **Transfer Mode:** FCAW/Spray
- **Travel Direction:** Backhand (Drag)
- **Nozzle Diameter:** N/A

**Voltage**

- **Baseline:** 15.7 V
- **Increased:** 23.6 V

**Wire Feed Speed**

- **Baseline:** 150 IPM
- **Increased:** 233 IPM

**Travel Speed**

- **Baseline:** 13 IPM
- **Increased:** 19 IPM

**Contact Tip To Work**

- **Baseline:** 3/8” (Flush Tip Recess)
- **Increased:** 3/4” (Flush Tip Recess)