ERRATA SHEET

AWS B2.1-4-220:1999, Standard Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding (Consumable Insert Root) of Chromium-Molybdenum Steel (M-4/P-4, Group 1 or 2), 1/8 through 1/2 in. Thick, As-Welded Condition, 1/8 through 3/4 in. Thick, PWHT Condition, IN515 and ER80S-B2, Primarily Pipe Applications

The following Errata have been identified and incorporated into the current reprint of this document.

Pages 5-6 – Figure 1, Joints 1 thru 4 – Incorrect illustrations. Replace joint figures with correct joints illustrations below:
GROOVE WELDS: For pipe and tubular products, see Joints 1 through 13. In addition, joints having groove designs resulting from end preparations conforming with ASME B16.25, *Buttwelding Ends*, are also allowable for application with this SWPS.

**JOINT 1**

![Diagram of Joint 1]

**CLASS 1 INSERT**

- \( a = 22-1/2^\circ \pm 2-1/2^\circ \)
- \( f = 1/16 \text{ in.} \pm 1/32 \text{ in.} \)
- \( r = 1/8 \text{ in.} \) TO 3/16 in. RADIUS
- \( R = 1/32 \text{ in.} \) max
- I.D. MISMATCH = 1/32 in. max

**JOINT 2**

![Diagram of Joint 2]

**CLASS 1 INSERT**

- \( a = 37-1/2^\circ \pm 2-1/2^\circ \)
- \( f = 1/32 \text{ in.} \pm 1/32 \text{ in.} \)
- \( R = 1/32 \text{ in.} \) max
- I.D. MISMATCH = 1/32 in. max

Figure 1—Allowable Joint Designs
Figure 1 (Continued)—Allowable Joint Designs

**CLASS 1 INSERT**

- \( a = 22\frac{1}{2}^\circ \pm 2\frac{1}{2}^\circ \)
- \( b = 37\frac{1}{2}^\circ \pm 2\frac{1}{2}^\circ \)
- \( f = 1/16 \text{ in.} \pm 1/32 \text{ in.} \)
- \( r = 1/8 \text{ in.} \text{ TO 3/16 in. RADIUS} \)
- \( R = 1/32 \text{ in. max} \)
- I.D. MISMATCH = 1/32 in. max

**JOINT 3**

**CLASS 2 INSERT**

- \( a = 22\frac{1}{2}^\circ \pm 2\frac{1}{2}^\circ \)
- \( f = 1/16 \text{ in.} \pm 1/32 \text{ in.} \)
- \( r = 1/8 \text{ in.} \text{ TO 3/16 in. RADIUS} \)
- \( R = 1/32 \text{ in. max} \)
- I.D. MISMATCH = 1/16 in. max

**JOINT 4**
ERRATA SHEET

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