



**CSI**

2700 N Partnership Blvd, Springfield, MO 65803

# **CSI AL6XN Welding Samples**

**For ASME BPE and other High Purity applications**

**Photos #1- #6: Acceptable Welds**

**Photos #7- #12: Unacceptable Welds**

Tom O'Connor, CWI  
CSI Quality Control Manager  
11 Mar 2016



-P25 Ferrule to -P7 Tube



-7 Ferrule to -P25 Tube



-P7 Tube to -P7 Tube



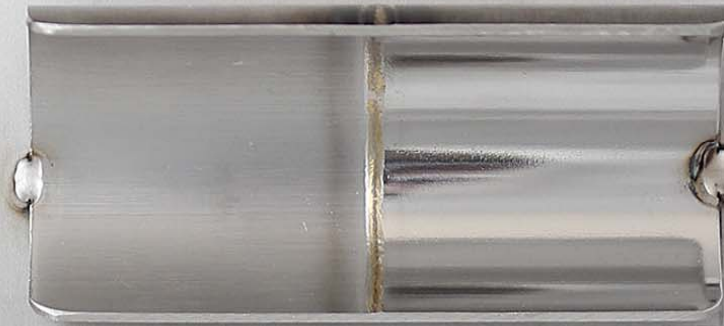
-P25 Tube to -P25 Tube



Acceptable  
AL6XN Welds  
Sample Board



-P25 Tube to -P25 Tube



-P7 Tube to -P25 Tube

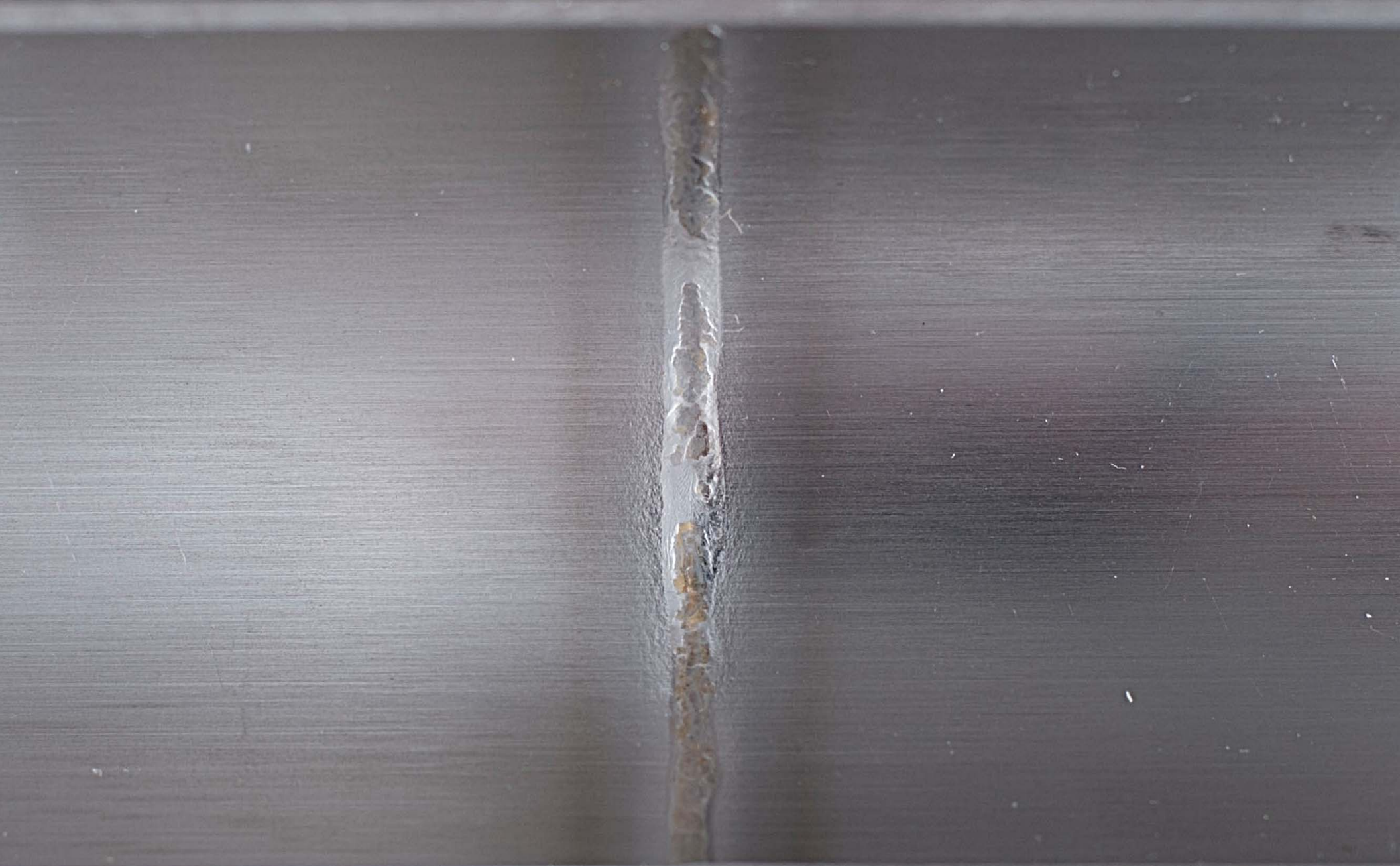
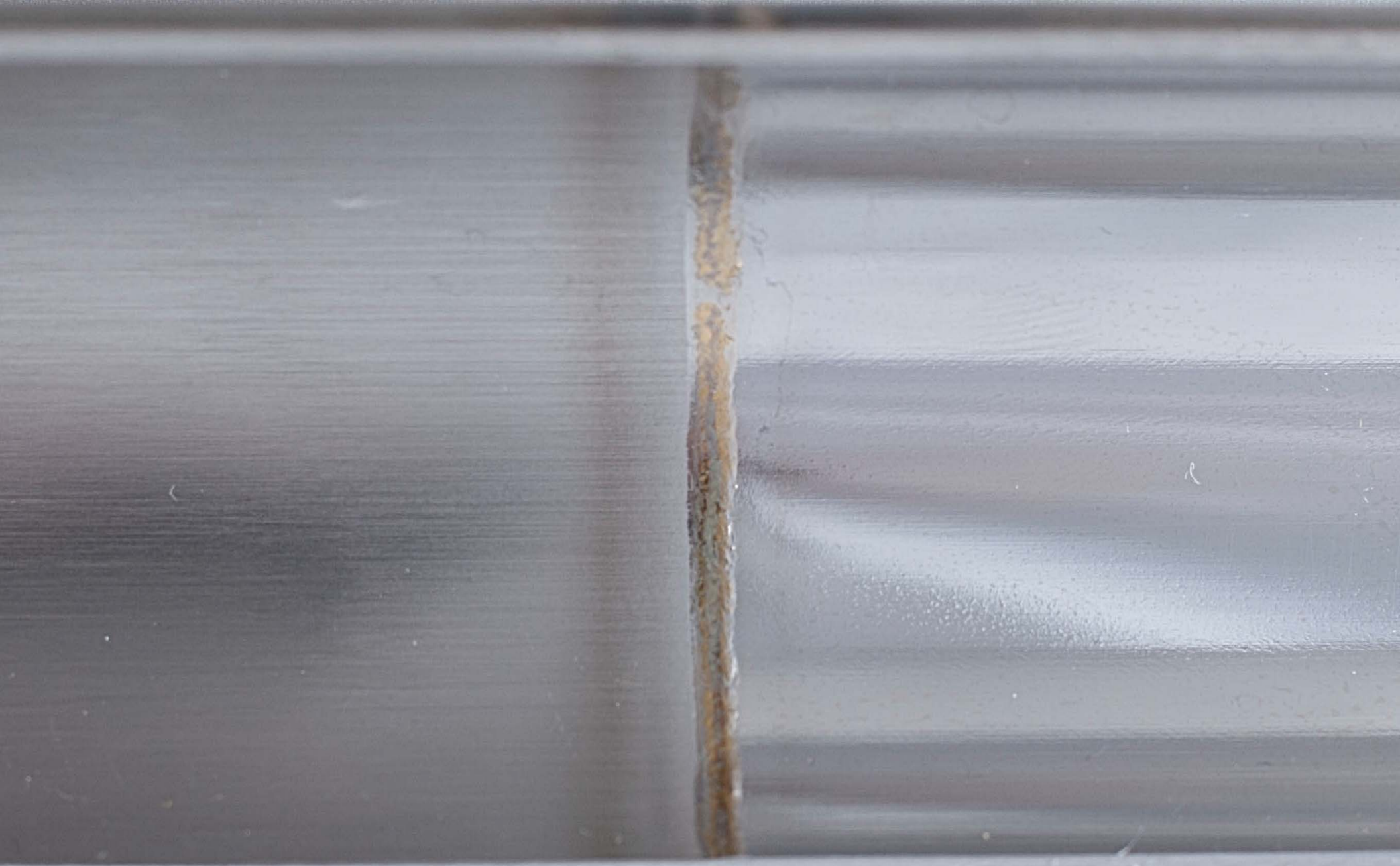
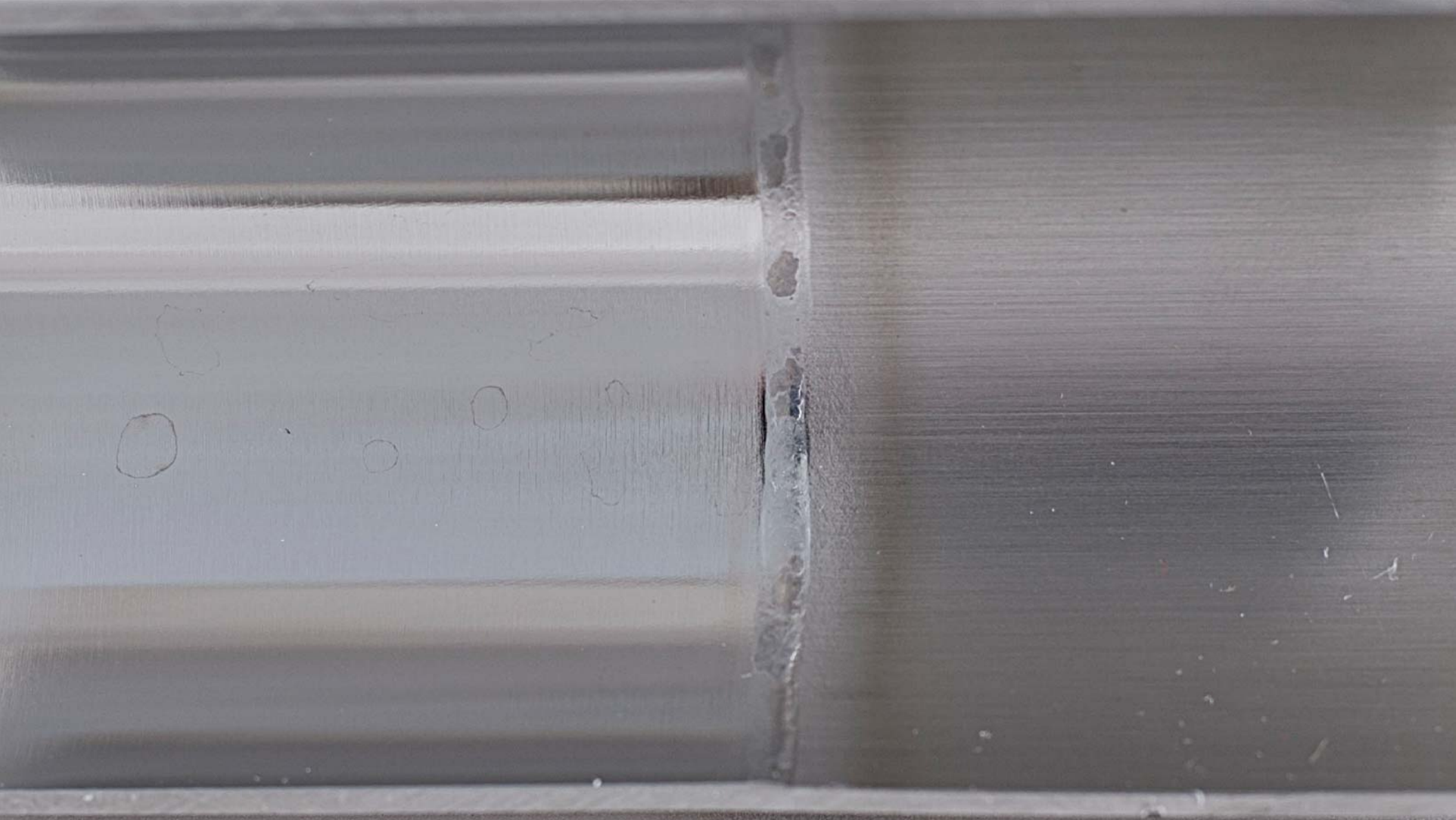


Photo #1 -P7 Tube to -P7 Tube



-P7 Tube to -P25 Tube



-P25 Ferrule to -P7 Tube

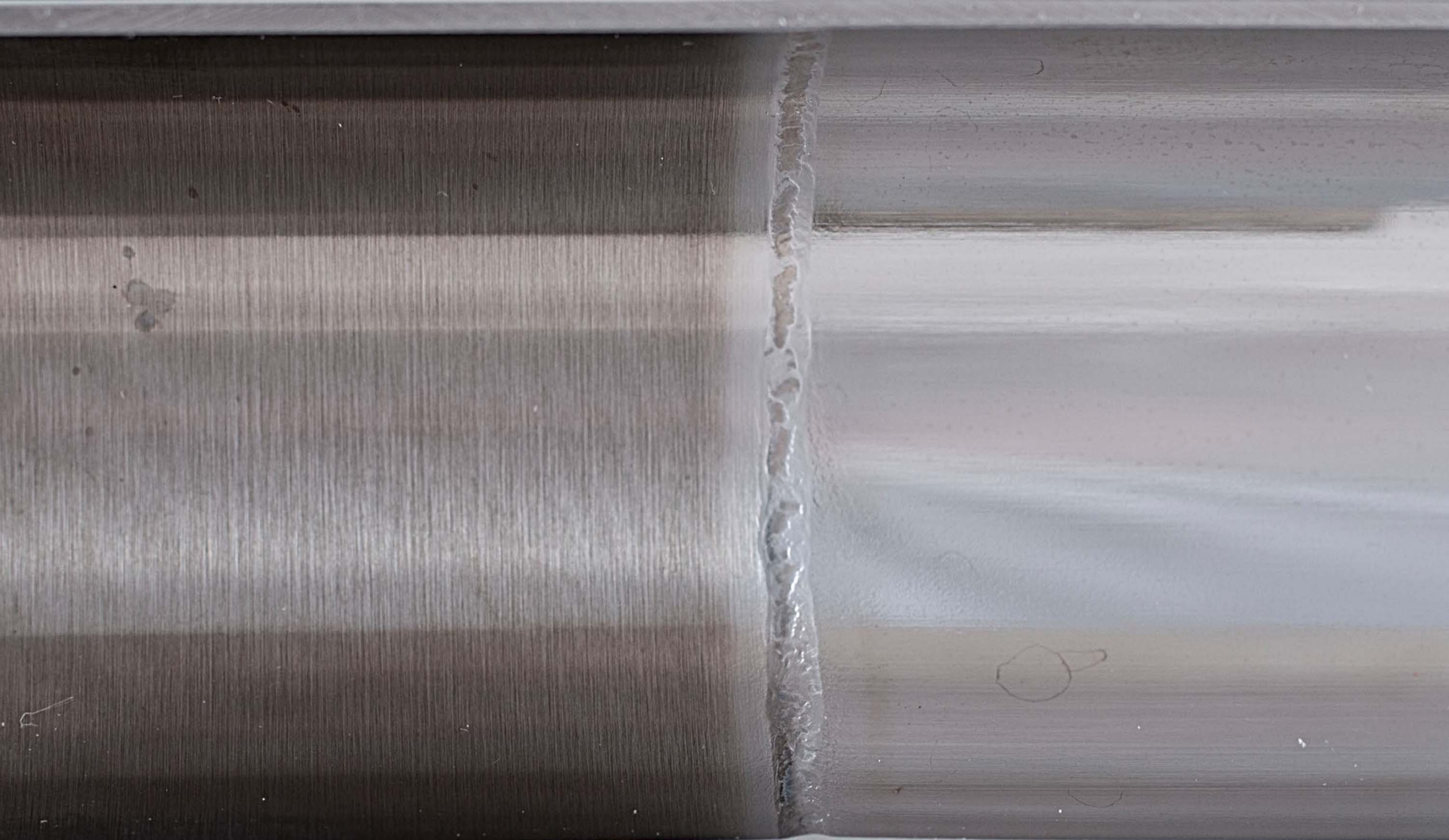
A close-up photograph of a metal surface, likely a pipe or tube, showing a vertical weld seam. The weld is a dark, textured line running down the center of the frame. The metal surface has a fine, horizontal grain. The lighting is even, highlighting the texture of the metal and the weld.

-P25 Tube to -P25 Tube

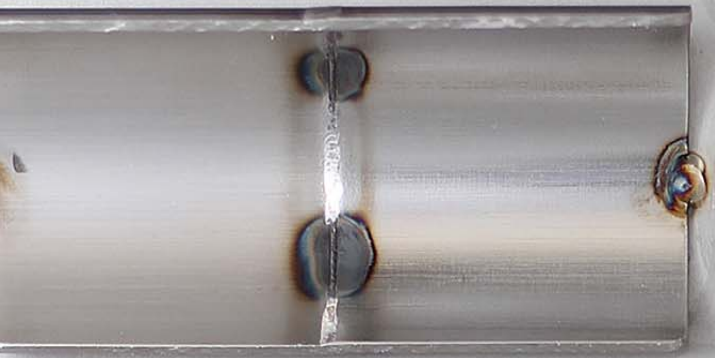
Photo #4



-P25 Tube to -P25 Tube



-7 Ferrule to -P25 Tube



Incomplete Penetration  
Oxidized Tack Weld  
Discoloration HAZ



Tack Weld Unconsumed  
Oxidized Tack Weld  
Discoloration HAZ



Welded Without  
Alloy Insert Ring



Metal Shaving In Weld  
Undeburred Tube Cut



Unacceptable  
AL6XN Welds  
Sample Board



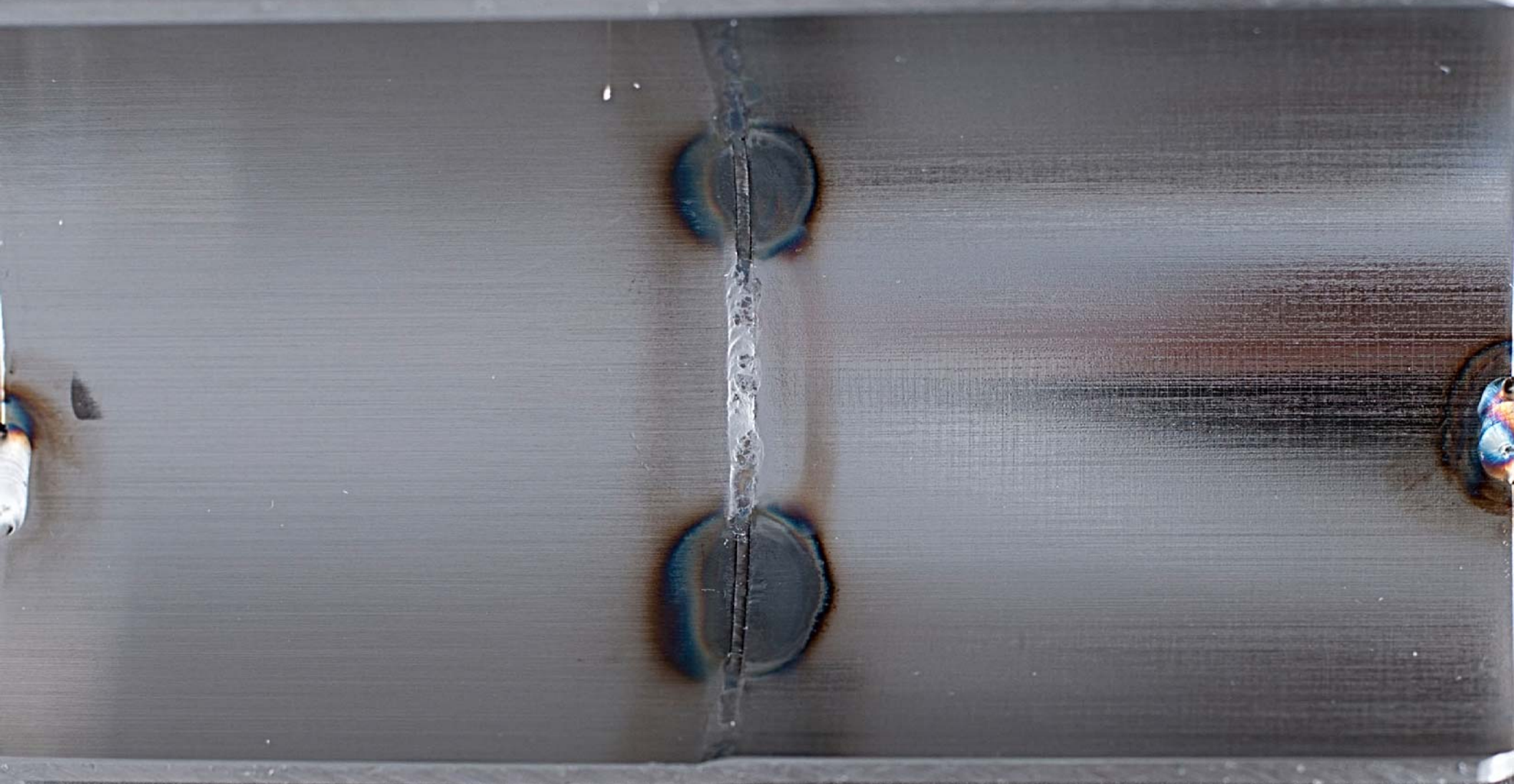
Discoloration HAZ



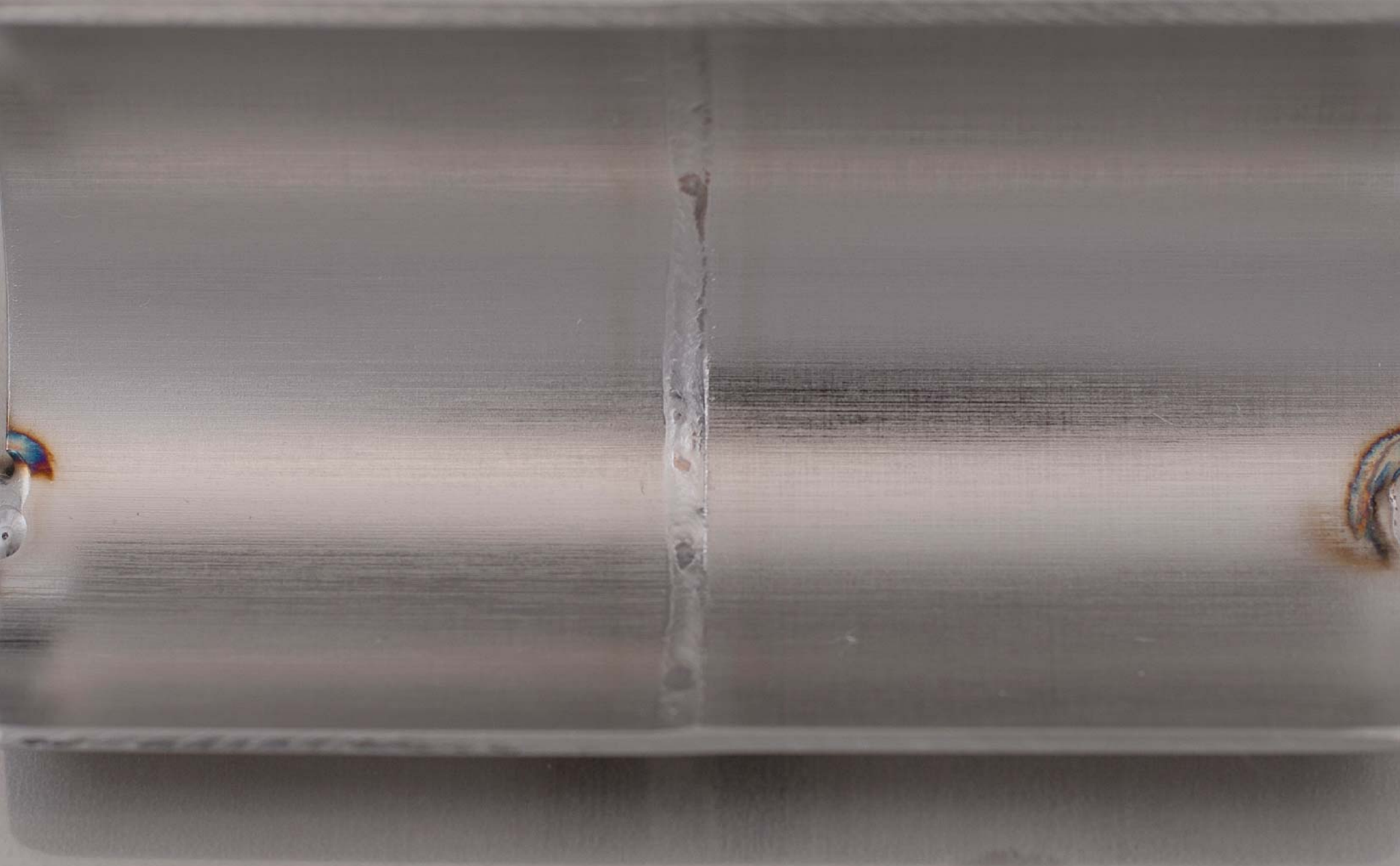
Lack of Fusion



Discoloration HAZ



Incomplete Penetration  
Oxidized Tack Weld  
Discoloration HAZ



Lack of Fusion

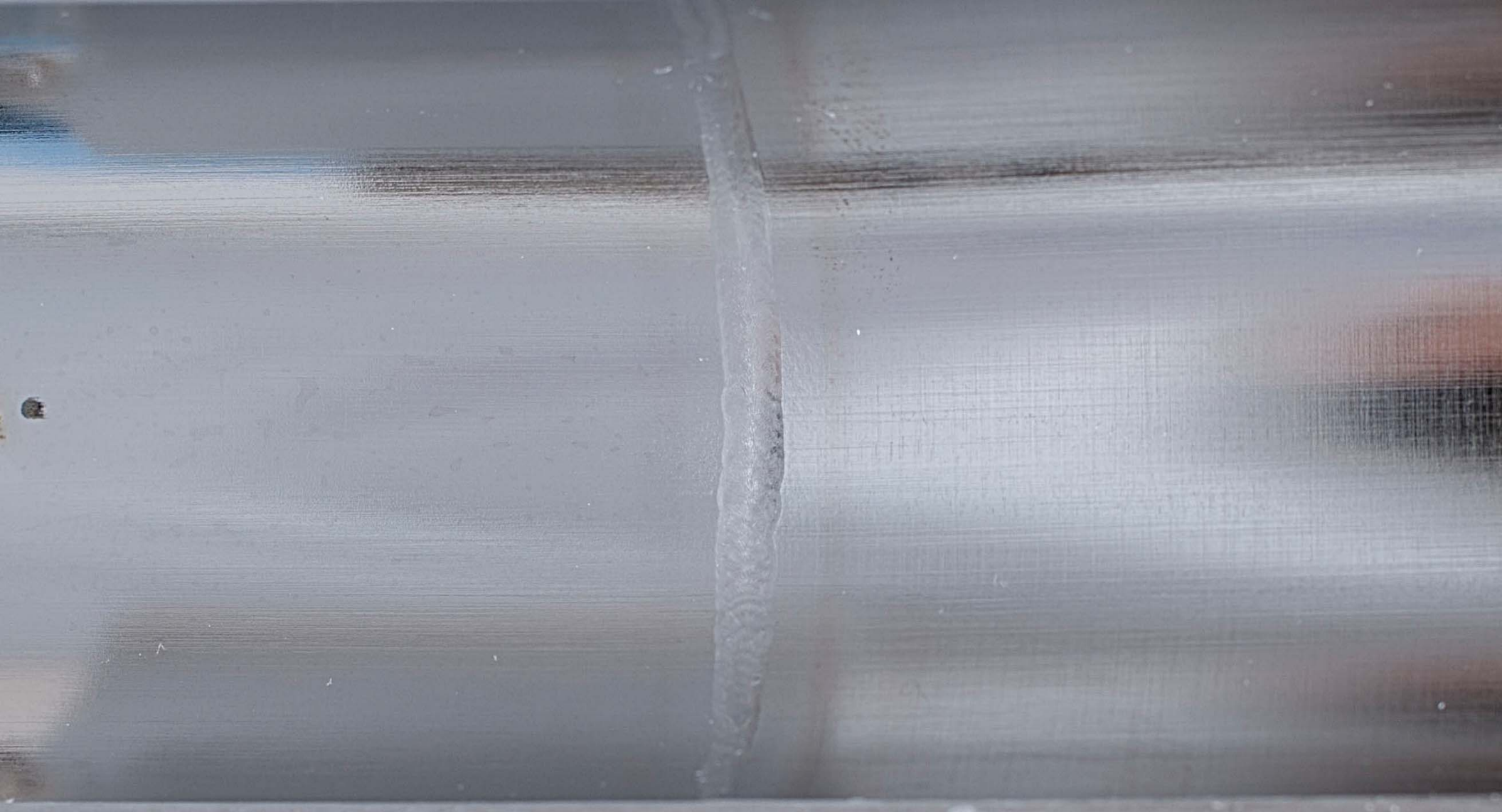
Photo #9



Metal Shaving In Weld  
Undeburred Tube Cut



Tack Weld Unconsumed  
Oxidized Tack Weld  
Discoloration HAZ



Welded Without  
Alloy Insert Ring