

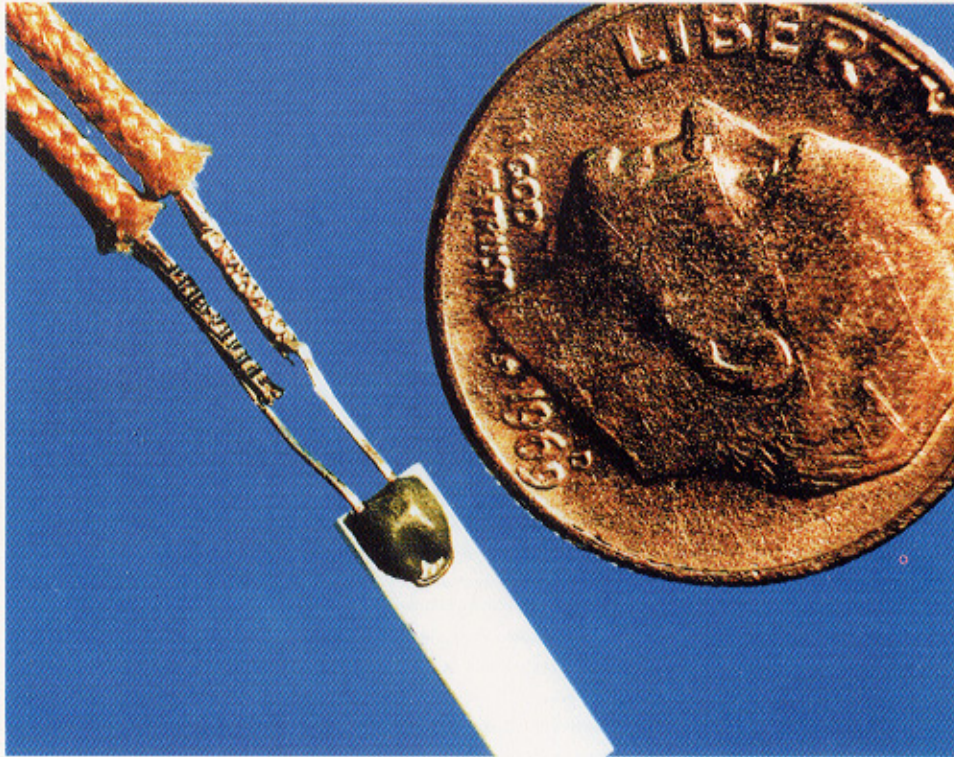


**AMTECH**<sup>®</sup>  
WORLD LEADER IN  
ULTRASONIC METAL WELDING

## APPLICATIONS

APPLICATION BRIEF #22  
TEMP SENSOR - 2/95

### *Simultaneous Termination of 2 Nickel Plated 28 Gauge Lead Wires to the Platinum Leads of an RTD (Resistive Temperature Device)*



*View of Finished Welds Joining 28 AWG Wire to Platinum RTD Leads*

**END USE:** Temperature sensing in appliance, automotive, and industrial applications.

**MATERIALS:** 28 gauge nickel plated copper lead wires to the .013 x .007 platinum RTD lead wire. (Tooling also available for 24 gauge applications)

**EQUIPMENT:** Model Ultraweld<sup>®</sup> 40 with 700 watt, 947M microprocessor controlled power supply.

**PROCEDURE:** RTD and two lead wires are placed in the nest. Dual anti-tie down safety switches are actuated to start the weld

cycle. Both lead wires are welded in under 0.2 seconds. A stripper mechanism is automatically retracted to release the finished assembly for easy removal from the fixture.

**ADVANTAGES:** Ultrasonic welding produces an extremely reliable connection to the RTD. The welded connection is capable of withstanding high temperature environments. Due to the true metallurgical bond created by ultrasonically welding this assembly, a "no resistance" connection is made producing the highest integrity connection possible.

**AMERICAN TECHNOLOGY, INC.**