



AMTECH[®]
WORLD LEADER IN
ULTRASONIC METAL WELDING

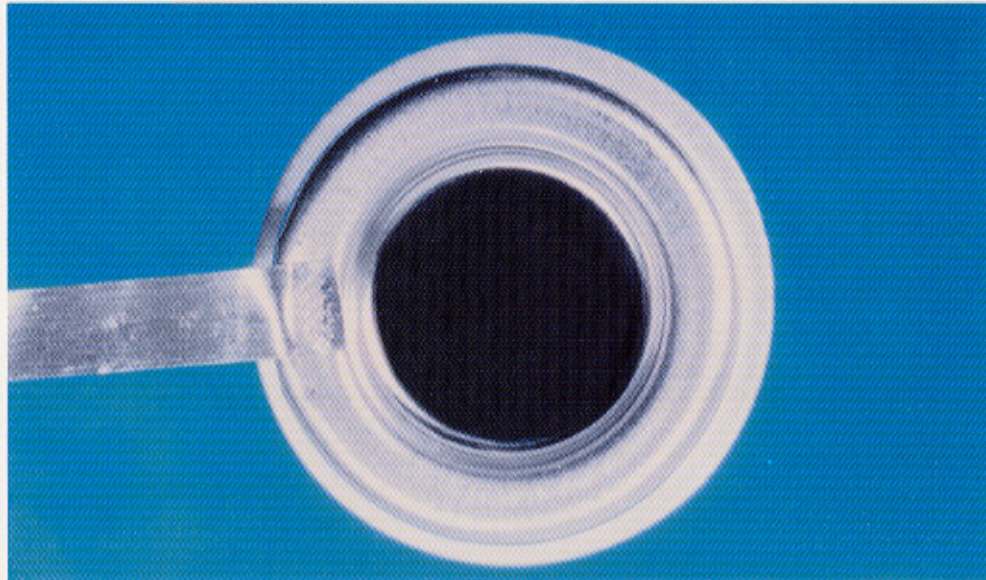
APPLICATIONS

APPLICATION BRIEF #19
BATTERY END CAP - 3/96

MAKE THE AMTECH CONNECTION

American Technology, Inc. has over fifteen years of experience helping battery manufacturers make the best, lowest cost electrical connections. The following application takes advantage of several inherent factors of ultrasonic metal welding: low temperature, mechanical process, long tool life, excellent process control and no surface preparation.

Terminating Tab Material to Caps and Burst Seals



View of Finished Weld Joining Tab Material to Cap

END USE: Pressure relief seals and caps for small cells and batteries.

MATERIALS: Aluminum, nickel or stainless steel tab material to aluminum, nickel and stainless steel burst seals and caps.

EQUIPMENT: AmTech Ultraweld[®] 20 or 40 ultrasonic metal welder suitably tooled for the specific material combination.

PROCEDURE: Cap or burst seal is placed in a fixture. Tab material is placed into position. The weld cycle is initiated producing a strong, low resistance bond.

ADVANTAGES: Ultrasonic welding is a mechanical process. No electrical current

passes through the workpiece and no melting occurs. The process, therefore, is ideal for welding very thin similar or dissimilar electrical grade alloys. The electrical and thermal properties of an ultrasonic weld are unrivaled by any other process. Compared to fusion methods for joining metals, ultrasonic metal welding provides the lowest cost per weld. This is achieved through lower power consumption (1/30th that of a comparable resistance welder), superior tool life and lower labor cost (because ultrasonic welders can be operated by unskilled labor). Finally, the welding variables can be precisely monitored and controlled providing consistent results and SPC capabilities.

AMERICAN TECHNOLOGY, INC.

25 Controls Drive, Shelton, CT 06484 USA Phone: (203) 926-2677 Fax: (203) 926-2678 Toll Free: 1-800-888-6089
e-mail: welders@amtechultrasonic.com <http://www.amtechultrasonic.com>