

4/2006

New laser-welded ultrasonic submersible transducer

Greater precision and cleanness for ultrasonic cleaning

The new SONOSUB submersible transducer by Weber Ultrasonics GmbH is designed to further improve the quality of component cleaning. The company achieves this by using state-of-the-art production techniques such as laser welding. This process enables the production of submersible ultrasonic transducers from many materials while minimizing distortion and offering dimensional accuracy previously unheard of. The automated and reproducible robotic welding process also guarantees a significantly higher level of quality in the welded joint itself.

Geared to the strictest residual contamination requirements

With zero error tolerances and increasingly strict requirements regarding residual soiling, the equipment for component cleaning systems must be of the highest possible precision. This simply cannot be achieved with conventionally welded ultrasonic submersible transducers. Even with „thorough“ post-processing, standard welded joints have a certain surface roughness that can store fine dirt particles and lead to contamination of the wash chemistry, the rinse water and/or the parts being processed. Laser-welded ultrasonic submersible transducers eliminate this risk due to their extremely smooth and uninterrupted weld joints.

Wide range of applications

Weber Ultrasonics produces laser-welded SONOSUB submersible transducers in standard and custom sizes. Standard frequencies (25, 30, 40, 80 and 120 to 150 kHz) together with process-based frequencies cover a wide range of applications in precision parts cleaning and degreasing, electroplating, electronics, PCB technology, optics and maintenance. Optimized Piezoelectric transducer elements also ensure maximum sonic yield for shortest possible processing times. For tasks requiring several frequencies, SONOSUB submersible transducers are available as multifrequency devices operating at 40, 80 and 120 kHz. Weber Ultrasonics also offers the multifrequency module generator 'SONIC DIGITAL MULTI' to compliment these transducers.



Caption – (on the left: conventional welded ultrasonic submersible transducer, on the right: laser-welded SONOSUB)

With laser-welding, the innovative SONOSUB submersible transducer by Weber Ultrasonics GmbH offers previously unheard of precision in terms of dimensional accuracy and freedom from warping. The smooth, continuous welded joints prevent dirt particles from being deposited. This makes the SONOSUB the ideal submersible transducer for applications that must comply with zero defect tolerances and strict residual soiling requirements. Optimized Piezoelectric transducer elements also ensure a maximum sonic yield, and thereby the shortest possible processing times.

About Weber Ultrasonics

Weber Ultrasonics GmbH was founded in 1998 by Dieter Weber and is based in Germany. Thanks to its high-quality, innovative products for ultrasonic cleaning, ultrasonic welding and special applications, Weber Ultrasonics has become one of the world's technological leaders in just eight years. Alongside its standard products, Weber Ultrasonics also develops and produces customer-specific ultrasonic solutions. Weber Ultrasonics is certified in accordance with DIN EN ISO 9001:2000 and serves small, medium-sized and large customers from many sectors, including the automotive industry, sanitary engineering, clock-making, electrical engineering and electronics, precision mechanics and optics, surface and cleaning technology, metal processing and PCB manufacture.