

SKS Welding Systems

introduces microMIG™ for low heat input robotic welding

SKS Welding Systems and MOTOMAN Robotec are currently launching a low heat-input system designed for welding seams in viewable areas, parts sensitive to distortion, and coated (eg, zinc coated) parts.

The microMIG process, launched at the Essen Welding and Cutting 2009 expo this month, is a process developed by SKS to minimise heat input by using a patented process for controlling droplet detachment. The process permits spatter-free material transfer with a reduced heat input, without sacrificing weld penetration.

The system is designed to be used in combination with the Frontpull Weld Package and advanced robot welding equipment such as synchroweld: "The Frontpull torch, which offers the highest precision during welding is used with microMIG to guarantee reliability," says Terry Rosenberg of Robotic Systems SA.

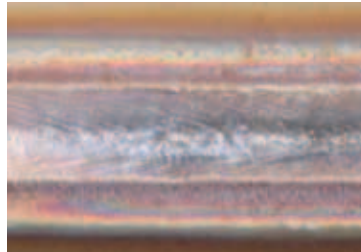
The microMIG process can be installed without the use of additional expensive equipment because it is fully compatible with the standard components of the SKS Frontpull Weld Package. It is, therefore, not only suitable for new plant, but enables existing equipment to be cost-effectively upgraded. "This technology can easily be integrated into the LSQ5/Q8p generation of SKS Welding Systems," adds Rosenberg. Advantages include:

- Minimum investment: Existing weld facilities can be updated quickly and easily as the new welding machines use standard SKS components.
- A cleaner weld process reduces maintenance work and produces better quality parts: The process is almost entirely spatter-free and produces weld seams with excellent appearance.
- The low heat input substantially reduces distortion on the part, which is particularly important on exposed seams on thin body panels in the automotive industry.

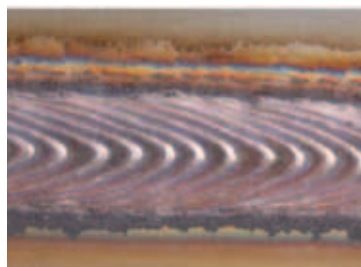
The microMIG process is ideal for the robotic welding of thin section materials like CrNi-steel, aluminium and aluminium-bronze in thicknesses of between 0,5 and 2,0 mm, especially the visible seams where cosmetics are paramount. Welding speeds are comparable to a conventional MIG welding process and penetration can be very accurately controlled.

The process expands the scope of MIG welding so that thinner materials can be successfully joined. Current processes are mostly used for material thicknesses greater than 2,0 mm, while microMIG has been proved to handle thickness down to 0,5 mm without adversely affecting weld speed. Heat input is minimised, weld spatter eliminated and weld penetration maintained. This leads to less distortion and cleaner components.

"Continuous integration of new technology trends allows SKS and Motoman systems to fulfill the high expectations of our customers for automated manufacturing processes," says Rosenberg.



A weld seam and a micrograph of lap joint in 0,8 mm CrNi-steel robot welded at 100 cm/min using the microMIG process. Wire: ER 307 Si 1,0 mm. Gas: 98% Ar 2% CO₂.



A weld seam and a micrograph of lap joint in 2,0 mm CrNi-steel robot welded at 100 cm/min using the microMIG process. Wire: ER 430 CB 1,0 mm. Gas: 98% Ar 2% CO₂.

eezi-vent

Portable Ventilators



- Ventilation of confined spaces
- Carpet drying applications
- Welding fume exhaust
- Underground manhole and pipe ventilation
- Equipment cooling
- Personnel cooling



LEADER IN FAN TECHNOLOGY

Johannesburg: +27 (0) 11 975 7605 Cape Town: +27 (0) 21 931 8331

www.cwfans.co.za