McAlpine Process Systems is a specialized division which was set up in response to the requirements of the semi-conductor, pharmaceutical and food processing related industries. This division has successfully completed the design, fabrication and installation of £1.1 million of ultra high purity stainless steel pipework at the Fujitsu Microelectronics plant, and is now currently working on Phase II of a major research development for the T.S.L. Group at Wallsend.

To achieve an ultra high purity piping system, all tubing, fittings, valves and regulators were electropolished on the interior surface to a 15 micro-inch (RMS) finish to achieve a smooth, high luster surface which eliminated particulate contamination. All joints were welded, using the gas tungsten arc welding (GTAW) equipment from Arc Machines, Inc. These compact portable microprocessor-controlled power units have a +/− 1% accuracy of the power supply which makes it possible to obtain consistently repeatable high quality welds.

Operator training was initially carried out by Arc Machines Inc. but full training in the cutting, facing, welding, cleaning and bagging methods was carried out in a facility with a Class 100 Clean Room.

On completion of construction each system was tested and validated to the specification. A helium leak test was used to check the integrity of the system and then tests for contaminants such as particles, oxygen and moisture were carried out. The result was a non-contaminated gas piping system that passed all the required tests.

For further information, call AMI at 1-818-896-9556 or e-mail sales@arcmachines.com

To read the full story, visit www.arcmachines.com
**M207 Power Supply**

**Input Power**
- 100 - 240 VAC service
- single-phase
- 50/60 Hz

**Weld Current**
- 100 - 150 A DC
- 100% Duty Cycle

**I/O Device**
- M-207EMM

**Memory Capacity**
- 100 weld schedules maximum,
- 100 levels per schedule maximum

**Water Cooler**
- Optional

**Dimensions**
- 11” x 22.75” x 18.75”
- (279 mm x 578 mm x 476 mm)

**Weight**
- 79 lbs.
- (36kg)

**M9E Series Weld Heads**

**OD Range**
- 0.25” - 6.625”
- (6.3 mm - 168.3 mm)

**Travel Motor**
- D.C., P.M., D.C., Tachometer

**Head Weight**
- 11 lbs. - 35 lbs.
- (4.9 kg - 15.9 kg)

**Electrode Size**
- 0.040”, 1/16”, 3/32”
- (1 mm, 1.6 mm, 2.3 mm)

- Removable tube clamps
- Pre-plumbed for water-cooling
- Compatible with all AMI Power Supplies