

## Fuel Cell Testing

This system is used to increase reliability, repeatability and speed of leak tests on Solid Oxide Fuel Cell (SOFC) membranes. The test is performed with helium gas.

The dual valve pressure controller (PCD) replaces the manual pressure regulator. With the automatic adjustments for line pressure changes, the PCD introduced precise pressure control that is highly repeatable between facilities.

The micro flow mass flow meter (MFM) was installed in place of a bubble meter. Using a MFM allows for automatic compensation for density effects due to line pressure and temperature changes which isn't possible with bubble meters. The fast 10ms response also allows for significant time savings over the bubble meter system for determining and isolating leak size.

Data communication for the PCD and MFM with a single PC allows for easy automation. This customer uses intuitive Flow Vision<sup>TM</sup> SC software to design automated set-point tests and to automatically store the test data for reference.

