

Natural Gas Quality Control System Helps Assure Production Temperatures, Flawless Products

AT A GLANCE

Natural gas stabilization system:

- Monitors BTU levels of incoming natural gas
- Blends in air to even gas BTU content
- Reduces fluctuations in product quality

In today's increasingly competitive marketplace, quality control in the manufacturing processes is becoming even more critical. Maintaining a constant glass furnace temperature is critical to manufacturing glass television tubes and similar precision products, including cast aluminum parts, waxed milk cartons and float glass. Even slight temperature variations can cause product flaws and increase rejection rates.

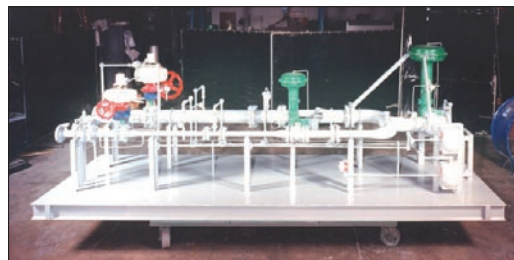
Some television tube manufacturers can experience product rejection rates as high as 60% when process temperatures fluctuate until the furnace achieves stability.

Maintaining temperatures with such exactness requires control of the calorific value of the fuel. In the case of natural gas, the quality of gas from the wellhead can vary from 950 to 1150 BTU/cu. ft.

To supply a more consistent level of thermal energy to gas customers with specific needs, Superior Energy Systems has developed a natural gas quality control system, call the ProAir Natural Gas Stabilization System.

Dennis Moraski, vice president of Product and Market Development for Superior Energy Systems, Columbia Station, OH, says natural gas quality variations are affected by the sources of the gas—whether it comes from local gas wells or through a pipeline from locations hundreds of miles away.

The company's ProAir Flowmeter Blender works by blending a small amount of air (typically 1-10%) to incoming natural gas in order to keep BTU levels constant. The system normally uses the lowest BTU rate as a baseline, and then mixes in air. The amount of added air, which depends on the quality of the incoming natural gas, is monitored by burning a small sample in a QualPro QA-1000 gas



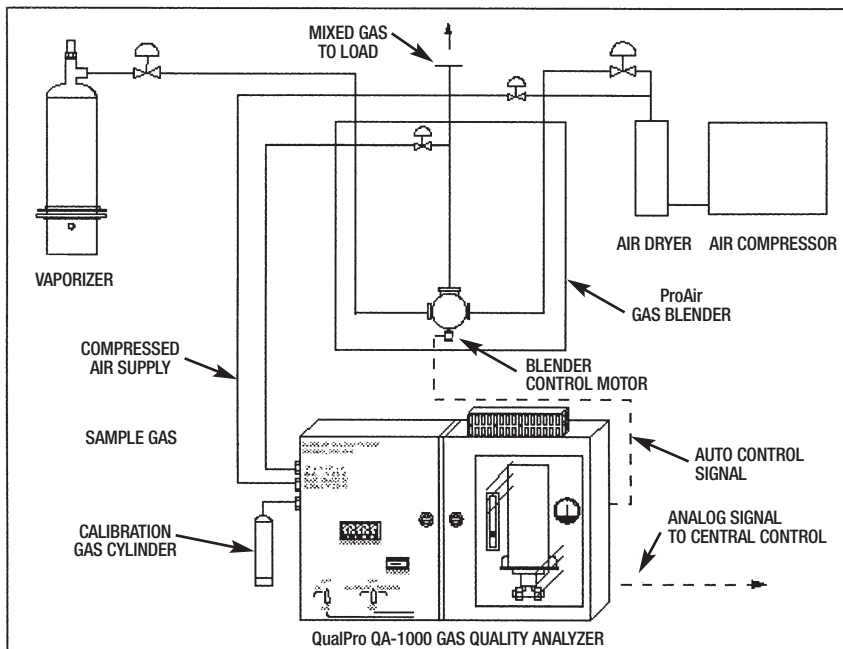
The mixing valve of the Superior Energy Systems' ProAir Natural Gas Stabilization System blends incoming air to keep gas quality consistent for precision manufacturing.

analyzer. This instrument signals the blending control system to constantly adjust levels of added air.

Without the ProAir Natural Gas Stabilization System, BTU levels in natural gas vary by as much as 5-15%, Moraski says. When used, the device keeps BTU variations at less than 1%.

The ProAir quality control devices range in size and price, from \$50,000 to \$400,000 for the largest models, Moraski adds.

To date, the company has successfully installed four gas quality control systems, including three at television factories in China.



The QualPro QA-1000 Gas Quality Analyzer accurately measures the burning characteristics of fuel gases and signals the ProAir Flowmeter Blender to adjust its air intake levels.

More information on the natural gas quality control system is available from:

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