



Analytical Products and Solutions

# The Sample Conditioning System (SCS)

Improve Analytical System Reliability with SCS

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A process typical analyzer analytical system consists of the following components:

- Sample probe
- Transfer and return lines
- Sample conditioning system
- Process analyzer
- Data communication

But when you invest in a process analyzer, what are you buying exactly? Is it the hardware, performance, support, return on investment? Those advantages are important for any professional, but the most critical issue is analytical system reliability (ASR).

A system with high ASR returns an accurate and repeatable measurement with consistent frequency, and it achieves this performance with only occasional manual interventions.

# Why SCS is the "Heart" of ASR

ASR is the percent of time the analytical value continuously represents the process in a particular reporting time period. In equation form, we could express ASR as

 $R_{sys}$  (System Reliability) = (Total Time Valid Data) \* 100 / (Total Time).

Among the system components, the sample conditioning system (SCS) actually plays the biggest role in determining ASR. In fact, the SCS can represent up to 80% of ASR. If the SCS fails, the heartbeat of analytical information from the process analyzer stops.

We can improve ASR by properly selecting, designing, installing, and maintaining an analyzer system. Defining the correct analyzer with the properly designed SCS, we can transition ASR from a "Buzzword" to a "Reality."







#### The Accuracy of the Analysis Begins in the Process

Delivering successful process analyzer systems requires the knowledge of the process conditions, sample extraction, sample transport, analytical techniques, networking, electrical connectivity, and an understanding of your plant's requirements.

Siemens, a pioneer in the on-line sample system design technology, engages with you to understand your needs and requirements. Siemens is unmatched in process experience, sample system design capability, and analytical expertise. With literally centuries of combined experience, our team knows how to assess your process and recommend the right analytical solutions.

#### Trust Siemens to Apply New Technology to Your Applications Modular

Siemens designs systems using traditional components but also works closely with SP76 modular components manufacturers to bring a new dimension to the applied sample conditioning system design. Industry publications have quoted users of modular sample systems stating maintenance costs have been reduced by up to 30-50% as compared to the traditional systems replaced.

### Why Siemens?

Siemens provides sample conditioning systems to meet your application employing traditional and modular design concepts.

- · Leads the market in innovative process analysis
- Employs a broad range of experienced designers to address your specific needs
- Provides flexible, seamless integration with any analyzer
- · Supports your product before and after the sale with qualified service technicians

## Siemens - Improving Your Path to Analytical Success

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