

The SRS UGA in the real world

Surfacecoat, Alter NRG and Westinghouse Plasma Corp.

Dr. Kosta Tzatzov of Surfacecoat, Inc. uses the UGA 300 system at the Westinghouse Plasma Corporation (WPC) Plasma Center Commercial Demonstration facility. This 48 ton-per-day commercial demonstration facility is located in Madison, PA.

Alter NRG and WPC have developed a plasma gasification simulation program which is used as the template for the design and



performance modeling of commercial plasma gasification systems. The demonstration plant is available to test customer's feed materials and validate the modeling assumptions required to support project financing and permits.

The UGA 300 system is attached through a sampling system to the plant's gasification reactor to monitor the syngas composition at the reactor output. The mass spectra recorded by the UGA are exported as Excel files into customer designed software for matrix inversion to obtain quantitative analysis of the syngas composition.

17 gases (Ar, N₂, H₂, O₂, CO, CO₂, SO₂, H₂O, COS, H₂S, CH₄, HCl, NH₃, Cyclohexane, Dioxane, Benzene, and Furan) are continuously monitored. After using calibration gases and comparing the UGA readings with lab analysis of collected gas bomb samples, an average cumulative error better than 5% is achieved.

Dr. Tzatzov writes, *"my experience with the UGA 300 system has been excellent. It has proved to be very reliable and easy to maintain."* Based on their initial success, WPC purchased a second UGA to be installed on the output pipeline after the scrubber. The Multi-UGA software allows both UGA systems to be controlled from one computer.

"Since September 2009 both UGA systems are being used continuously at WPC's Commercial Demonstration facility and have performed very well so far!"

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