

VPT Kompressoren GmbH, Germany

Safe delivery of biogas

Builders of biogas infeed plants must comply with strict security regulations and guarantee availability of 96%. Because this requires considerable experience, the market leader relies on Siemens' Totally Integrated Automation.

Biogas is gaining importance on the global energy market. By using organic waste instead of energy crops, the industry reduces the potential for competition with food crops and makes a valuable contribution to environmentally friendly waste-management methods that are capable of closing material cycles, at least in part. By fermenting biogenic material such as plant- or animal-based waste products from agriculture, biomethane can be produced and then converted to electricity or fed into the gas grid as a sub-

stitute for natural gas. Gas, as opposed to electricity, can be stored easily. This is important in ensuring security of supply and, in the context of the German Renewable Energies Act (EEG), it secures long-term high feed-in compensation for operators of grid-connected biogas plants.

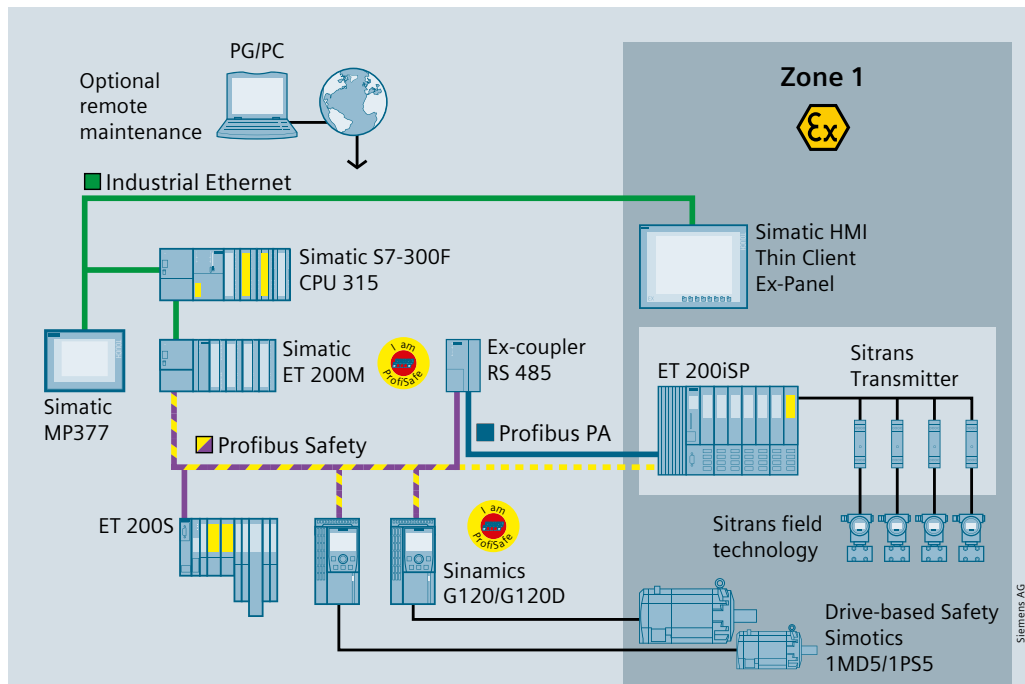
Strict statutory regulations

Processing, conditioning, and particularly compressing explosive biomethane down to the necessary feed-in

pressure requires a great deal of experience and involves strict statutory regulations. With its oil-injected screw compressors, VPT Kompressoren GmbH, headquartered in Remscheid, Germany, is the market leader on this field.

Carsten Kollenbach, CEO of VPT, describes the conditions for building and operating biogas plants: "In addition to safety-related certificates, plant availability of 96% is required by law. Falling short of this value entails high penalty payments for operators. The operators, our customers, also demand high

A fail-safe Simatic S7-315 F was chosen as the main control system. It controls the screw compressors' rotational speed based on the upcoming gas pressure. The Sinamics G120 inverters, which are connected to the control system with Profibus or Profinet/Profisafe, are also fail-safe and modular and immediately switch to a predefined operating mode if there is a disturbance. Components that meet the highest requirements for functional safety of machines and plants are denominated Safety Integrated



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