



BIO-SULFURIX™ System

Biological biogas scrubber for hydrogen sulfide removal

Key features & benefits

- No chemical additives required
- No adsorbent media required (but a carrier instead)
- Simple operation
- Very high removal efficiencies
- Suitable for new systems and retrofits
- Small blow down
- Suitable for CHP and boilers with economizer
- Prevents boiler and engine corrosion

How we create value

- System design focused on minimal maintenance & operational requirements
- Automated design
- GWE employs highly experienced technologists and technicians able to provide solutions for any wastewater related problem
- 24/7 reachable, worldwide, fast reacting, after sales service department
- Lab and pilot testing facilities





The recovery of renewable energy in the form of biogas, produced by anaerobic digestion processes, is increasingly used as an effective way to cut the costs of industrial wastewater treatment. Biogas recovery is the core of many organic waste-to-energy systems.

However, biogas must first be desulfurized for use in engines, CHP (Combined Heat and Power) units and boilers:

1. to meet exhaust standards in terms of SO_2
2. in case the boiler has an economizer.

There are several means by which biogas can be scrubbed, including absorbent media and chemical systems. GWE's BIO-SULFURIX™ wet biogas scrubber provides the perfect blend of high performance and simple, efficient operation, placing it far ahead of other, competing technologies.

The BIO-SULFURIX™ process needs no chemical additions (except a small amount of nutrients) or costly media replacement, making it a cost-effective solution for gas scrubbing.

How it Works

The scrubber consists of a BIO-SULFURIX™ scrubber tower, a non-clogging inlet distribution system and a layer of non-clogging random packed media.

In the BIO-SULFURIX™ tower, the biogas is passing through a layer of carrier material for the sulfur oxidizing bacteria to grow upon. A small amount of air is injected in the biogas for the bacteria to convert H_2S into sulfuric acid. The carrier is continuously wetted by a recirculating liquid containing the diluted sulfuric acid. A regular blow down maintains the optimal conditions for the bacteria. No waste products are produced, as the sulfur is

ultimately returned to the aerobic treatment as sulfate.

The BIO-SULFURIX™ can be retrofitted within an existing installation as well.

As pressure loss through the scrubber is minimal, no biogas blower is required. However, a blower can be used to bring the biogas up to the required pressure for use (such as in a factory steam boiler), if required.

Besides those used for air flow control, no active controls are required. Scrubbing occurs at a constant rate at all times, for all flows and H_2S concentrations.

The H_2S concentration in the biogas leaving the BIO-SULFURIX™ is lower than 100-200 ppm, depending on the H_2S load.



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