Krieg & Fischer Ingenieure has been successfully designing biogas plants for the past 30 years and is looking towards helping bioethanol facilities utilise this potential

Discovering biogas plants for the ethanol industry

Krieg & Fischer Ingenieure is an engineering company specialising in the design and engineering of biogas plants.

Torsten Fischer has been active in the biogas sector for more than 30 years. In 1999, together with Andreas Krieg, he founded Krieg & Fischer Ingenieure, an engineering company that provides tailor-made solutions for biogas plants for clients all over the world.

Most of the company's plants are located in Germany, but it has extensive experience in dealing with projects all over Europe, North and South America, and Asia. The company has more than 160 references worldwide.

Krieg & Fischer Ingenieure started from building simple farm-scale biogas plants for fermenting agricultural waste three decades ago and is now a leading firm in complex, multi-stage, industrial anaerobic fermentation technologies for organic waste and by-products from the industry, as well as in municipal waste biogas plants.

The firm's clients benefit from specific process know-how and independence from the concept stage to the final commissioning of the biogas plant.

The company carefully assesses the client´s needs and looks to different suppliers for each component needed for the plant in question.

For Krieg & Fischer Ingenieure's outstanding work on an integrated biogas and bioethanol production plant in Rio Cuarto Rio, Argentina, the company received the AD & Biogas industry Award 2020 at the World Biogas Association event.

The Rio Cuarto biogas plant

"For ethanol producers, biogas offers an opportunity to shift from fossil fuels, reduce carbon emissions and increase profitability"

The Rio Cuarto biogas plant demonstrates that biogas can successfully be included in the bioethanol value chain.

This project showed that AD offers a proven solution for thin stillage from corn-based ethanol production, commonly evaporated with high energy consumption.

For ethanol producers, biogas offers an opportunity to shift from fossil fuels, reduce carbon emissions and increase profitability.

In the case of the Argentinean bioethanol producer Bio4, consumption of natural gas for the evaporation of waste from ethanol production was about 580 Nm^3/h. In addition to the initial idea of finding a solution for thin stillage, the construction of the biogas plant provided an

opportunity to sell renewable electricity, as well as tackle the high demand for heat in the bioethanol process.

Finally, the digestate from the plant was used by corn producers and farmers who had invested in the bioethanol facility as a high-quality natural fertiliser. The plant has been in operation since 2018.

However, the design, construction, and operation of biogas plants based on thin stillage is not a simple task.

Processing thin stillage as feedstock in biogas plants requires technology that can deal with high temperatures, acidity, and inhibiting components.

The team at Krieg & Fischer Ingenieure has successfully solved these challenges on numerous occasions.

Following the example set with the Rio Cuarto biogas plant and the fact that this solution has been proven on an industrial scale, the firm is sure that more bioethanol plants will discover and utilise the great potential of biogas, helping to achieve the necessary climate goals.

The Rio Cuarto biogas plant

"Having been part of the biogas industry and managing director of Krieg & Fischer Ingenieure for this long, I can say that we have come a long way from simple farm-scale biogas plants for fermenting agricultural waste 30 years ago, to biogas plants for industrial bio-waste and large-scale co-fermentation biogas plants, from boilers and cogeneration units to biomethane and power to gas," said Fischer.

For more information:
Visit: kriegfischer.de