

May 2021

The next-generation of biogas upgrading and carbon capture plants are ready

Biogas is playing an important role in the future energy supply and expectations as well as requirements regarding efficient utilization of this resource are expected to increase. Airco Process Technology has the team and the technology ready to support the green transition.

In 2020 Airco Process Technology A/S was a reality and today the new offices and production facilities are in operation in Fredericia, Denmark. Airco Process Technology originates from Airco Diet A/S, who is looking back at 35 successful years and is located right beside the new company. Managing Director Asbjørn Schwert has hired a number of experienced engineers and technicians and he shares his thoughts behind the new venture with us; "Since 1986 we have designed and installed plants for CO₂-based tobacco expansion all over the world. We will leverage the synergy from our invaluable project experience as well as the many super-skilled employees in Airco Diet to support the new company, we are well prepared for the future journey.

It is our clear mission to design technologies that contribute to future carbon capture projects and to deliver high-efficient biogas upgrading plants with maximum resource utilization and plant availability. We are developing next-generation technologies for efficient and environmentally friendly upgrading of biogas. As technology suppliers, we will actively support the green industry in becoming competitive and ultimately independent of subsidies. And Airco Process Technology has raised the bar to new heights."

The patented technology SlipRec significantly reduces methane slip

Airco Process Technology has already a patent pending for the first technology, Airco SlipRec* which will be implemented in the future water-based upgrading plants from Airco Process Technology.

Airco SlipRec maximizes recovery of the biomethane and hence minimizes the critical methane slip. Where existing water scrubber solutions today register a methane slip of up to 3%, the Airco SlipRec technology ensures a loss below 0,1%, leading significantly more methane into the gas grid instead of the atmosphere.

Rasmus Find, Lead Process Engineer, is the technology architect and he explains: "Depending on which time perspective you are looking at, the potential Global Warming Potential (GWP) of methane is 20 to 120 times higher than that of CO₂, and it is crucial to reduce methane emission from the upgrading plants and utilize the biomethane in the best possible way.

The current alternative to minimize the environmental impact from methane emission is to burn the methane, which is not sustainable," concludes Rasmus Find.

Airco SlipRec can also be retrofitted into existing water-based biogas upgrading plants, along with online measuring equipment if required, which makes it possible to document the actual reduced methane slip.

In addition to the significantly improved efficiency in biomethane recovery utilization when using the Airco SlipRec technology it can also add to plant capacity on existing water scrubber plants. The power consumption per Nm³ biomethane is reduced and the plant overall becomes more robust and resistant to fluctuations in the raw gas.

First upgrading plant in the order book

Airco Process Technology got off to a good start being selected by Bigadan A/S to design, deliver and install our Airco amine biogas upgrading plant to the SBS-Klipleve project near Aabenraa.

The Kliplev plant will be among the largest biogas plants in Denmark and the upgrading plant for Bigadan A/S is based on their specific requirements and our in-house process knowledge, ensuring the system is both highly efficient and very reliable.

“We are, of course, very proud of being awarded the project as a supplier for the upgrading plant – and it is an important step forward for us in developing next-generation technologies to the green industry. We are also active partners in the local endeavor to become the production center for green fuels. Seven municipalities and several energy companies in the area have joined forces in becoming leaders within Power-to-X where bio CO₂ will play an important role,” Asbjørn Schwert continues.

*SlipRec is the synonym for Airco Slip Recovery Unit.

Learn more on <https://aircoprocess.com>

Airco Process Technology A/S
Prins Georgs Kvarter 1
DK-7000 Fredericia

Tel: +45 7620 0700

Contact@aircoprocess.com