

Supporting sustainable fuel production

Sulzer is at the forefront of engineering excellence and quality, delivering best-in-class solutions to support companies in important growth industries, such as biobased, renewable energy production. Understanding precisely what customers need, as well as maintaining the highest standards in manufacturing and service has led to many significant project wins, not least the collaboration with Inpasa, Latin America's largest producer of corn ethanol. By the end of 2022, this partnership is anticipated to have grown to the delivery of almost 1'000 pieces of equipment, including pumps, sealing systems, agitators and static mixers across three production plants in Brazil.

With no spare equipment, Sulzer's pumps must deliver class-leading reliability



Sulzer's expertise and product range is helping to drive the green economy

Working towards a more sustainable future is an important goal for industry and a key milestone on this journey is making motor vehicles more sustainable. To drive this transition, the production of innovative fuels from plant-based materials, such as bioethanol, can greatly help to reduce greenhouse gas emissions while minimizing the use of non-renewable resources.

The process of bioethanol production has many benefits including zero water consumption and supporting net zero carbon emissions strategies. In effect, this activity reduces the release of carbon dioxide into the atmosphere by more than 70%, compared to fossil fuels.

The market is embracing the opportunities offered by biofuels, with global demand growing steadily every year over the last decade ¹. Production centers in the USA and Brazil, such as Inpasa's plants, are supporting this shift towards greener resources, delivering 80% of the world's supplies ².

¹ <https://www.iea.org/reports/transport-biofuels>

² <https://www.iea.org/data-and-statistics/charts/biofuel-production-by-country-region-and-fuel-type-2016-2022>

Essential reliability

One of the main aspects to consider in the production of biofuels is energy efficiency, as only operations with a limited environmental footprint can offer a sustainable alternative to conventional fuel. In the case of Inpasa's plants, they can also export excess energy to the grid and receive payment for it. The combination of a broad product range with excellent reliability and efficiency confirmed Sulzer as the best manufacturer to support the company's facilities.

In addition, due to the nature of the bioethanol manufacturing process, more than half of the equipment supplied by Sulzer to Inpasa will operate in potentially explosive atmospheres, adding to the complexity of the projects. However, the most significant feature of these ethanol plants is that all of the processes are designed with no spare equipment installed; Inpasa is wholly dependent on the reliability of Sulzer's designs to ensure unplanned downtime is avoided.



Sulzer has worked closely with Inpasa to identify the most suitable configuration for their processes



Using Sulzer's extensive industry knowledge has ensured Inpasa receives the most effective solutions

One-stop-shop

The decision by the plant's designers to minimize the number of pumps on site has saved a considerable amount of investment and focused the procurement team to deliver the highest quality equipment to support this choice. Sulzer's extensive product range also means that the vast majority of the pump requirements could be satisfied by a single supplier, making the whole process much easier and simpler for the customer.

To further advance the plant's proactive maintenance strategy, Sulzer Sense monitoring system is to be installed on certain assets. The automated measuring of temperature and vibration optimizes the plant's preventive maintenance routine and reduces the amount of time spent gathering this information.

Sulzer has built a trusting relationship with Inpasa where the company is seen as a partner rather than just a supplier. The range of expertise and knowledge within Sulzer means that Inpasa can benefit from extensive experience gained from similar applications, benefiting from the most effective solutions.

Inpasa is currently in the process of completing its third state-of-the-art ethanol plant in Brazil with support from Sulzer for all of the pumping requirements.

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