

Launch of the first chemical plant globally to develop the technology for the production of biodegradable detergent raw materials

Cepsa boosts innovation in the Chemical Business Unit with revolutionary Detal technology

- **Innovative technological development improves on safety, optimizes the efficient use of raw materials, while reducing emissions and waste generation**
- **Reduces water consumption by up to 80,000 m³ per year, and improves the quality and versatility of Linear Alkylbenzene (LAB), the raw material for biodegradable detergents**
- **Investing 117 million euros to strengthen Cepsa's global leadership in the manufacture of LAB, which will enable it to increase production to meet the growing demand generated by the COVID-19 pandemic**
- **Project recognized by the Ministry for Ecological Transition (MITECO) in the Spanish Section of the 2020 European Business Awards for the Environment, and also received an award from the Association of Industrial Engineers of Western Andalusia.**

Cepsa has intensified its commitment to innovation, safety and sustainability by launching operations at the first European chemical plant to use Detal technology in San Roque (Cádiz). It is also the first Linear Alkylbenzene (LAB) plant in the world to replace hydrofluoric acid (HF) technology with Detal technology, a safer, more efficient and sustainable process which optimizes the efficient use of raw materials and electricity and reduces emissions and waste generation (1,100 tons per year). Additionally, this technological improvement will reduce water consumption by 80,000m³ per year and improve the quality and versatility of Linear Alkylbenzene (LAB), the raw material used in the plant for the production of biodegradable detergents.

After nearly two years of development, the technology has been successfully applied and the transformation of the plant completed, making it a global pioneer. The application of this technology, whose patent has been developed by Cepsa in collaboration with UOP (Universal Oil Products), has led to the creation of 250 jobs in the Campo de Gibraltar, reaching 600 in some phases of the process, with more than 800,000 hours invested in engineering and construction and the support of fifty auxiliary companies, most of them from the province. In addition, 700 tons of steel, 3,180 m³ of concrete, 40 km of piping and 60 km of cabling were used. Since 2019, the Puente Mayorga Chemical Plant has been using 100% renewable electric power supplied by Cepsa's Gas and Electricity business.

An investment of 117 million euros in this technological improvement will allow Cepsa to increase the plant's production and respond to the growing demand for biodegradable detergents. With this development, Cepsa will consolidate its position as a global leader in LAB manufacturing, also improving its offering to African markets where demand is expected to increase in the coming years.

Paloma Alonso, Cepsa's Chemicals Director, said: "This investment allows us to remain at the forefront of innovation in the field of biodegradable detergents, a key element in guaranteeing hygiene and health, especially during the pandemic. Additionally, this new technology not only makes us more efficient, but also maximizes the sustainability of our processes, in line with our commitment to environmental protection."

The Detal project fulfills three of the SDGs set out in the 2030 Agenda for Sustainable Development: Goal 9, build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation; Goal 12, ensure sustainable consumption and production patterns; and Goal 13, take urgent action to combat climate change and its impacts.

The innovation and quality of Cepsa's Detal project was recognized by the Ministry of Ecological Transition (MITECO) in the Spanish section of the 2020 European Business Awards for the Environment (Process category), on behalf of His Majesty the King. It also won awards from the Association of Industrial Engineers of Western Andalusia, in the category 'Andalusia Award for the Development of Industry', and in the 'ICIS Surfactants Awards', an international recognition of excellence and innovation in different areas of the chemical sector, in the category of technological innovation.

Safety and energy efficiency improvements

The transformation process at the San Roque plant has not only improved the quality and variety of LAB but has also increased process safety and energy efficiency in the industrial asset. During the shutdown, maintenance and inspection tasks were undertaken at other units, aiming to increase their efficiency, sustainability and safety. This involved a total investment of 26 million euros, which included the transfer to the new Ágora control room as part of Cepsa's digitalization project in the industrial plants of Andalusia.

In addition, digital transformation programs designed by the company have been installed, including the YET (Yield, Energy and Throughput) system, an artificial intelligence program; and Industry 4.0 technologies (involving machine learning, big data and advanced analytics), which optimize processes and improve the plant's energy efficiency.

Chemicals at Cepsa

Cepsa is the global leader in the production of Linear Alkylbenzene (LAB), the world's most widely used biodegradable surfactant in laundry detergents, and the company is

also the number one manufacturer of cumene, which is used to manufacture phenol and other products in our everyday lives. It operates in 8 countries and sells its products to customers worldwide.

The raw materials produced by Cepsa facilitate the manufacture of multiple products, many of them used to improve hygiene, such as hydroalcoholic gels, and protective equipment, such as safety goggles and transparent barriers. Cepsa's products are essential for the personal and home care, pharmaceutical, automotive, and construction sectors, among many others. In the past year, despite the difficult circumstances arising from the COVID-19 pandemic, the company operated at full capacity to meet the demand for many of these essential products.

Cepsa's Chemicals business achieved a record result with an increase in EBITDA of 45% over the previous year.

Cepsa is a global energy and chemical company operating at every stage of the oil and gas value chain. Cepsa also manufactures products from plant-based raw materials and operates in the renewable energy sector. Cepsa has 90 years of experience and a team of over 10,000 employees, who combine technical excellence with adaptability. Cepsa operates on five continents.

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