

PRIZES

The northeast Tenerife WWTP (Valle de Guerra), Agustín de Betancourt Award for the best Canary Island Civil Engineering Work

• The award acknowledges a project with specialized and modern technology, which offers quality water for agricultural use and has a significant impact on social and environmental welfare



The project of the Urban Wastewater Treatment Plant (WWTP) of Valle de Guerra in Tenerife, carried out by Sacyr Sadyt and Sacyr Engineering and Infrastructures, has won the Agustín de Betancourt Award for the best Civil Engineering Work (2014-2018) of the Canary Islands. The award is granted by the School of Civil Engineers of Tenerife.

This project fully complies with the criteria for assessing the award as it is a **technological innovation**, efficiency and new management model in terms of purification. It offers regenerated quality water adapted to the different crops; it is integrated into the environment and is environmentally friendly, as it does not generate noise or odors. Furthermore, the infrastructure has become a showroom for the society of the Island where the future of water reuse is shown. The WWTP establishes a benchmark in the change of the model of the comprehensive water cycle in the industrial production of reclaimed water.

This award acknowledges the promoter and the director of the Work (Government of the Canary Islands) and the designer and contractor (Sacyr Engineering and Infrastructure-Sacyr Sadyt).

In addition, Sacyr Water was awarded the operation of the plant for a period of four years after recently winning the award.

The purification is carried out through an **activated sludge process** in prolonged oxidation with ultrafiltration membranes (MBR) preceded by a compact pre-treatment. Additionally, as tertiary treatment, part of the purified water is passed through a reversible electro dialysis (EDR) installation to reduce its salinity. The project includes two tanks of 2,000 m³ of unitary capacity of processed water, one for the water regenerated at the outflow of the MBR and the second to store regenerated-desalinated water at the outflow of the EDR.

Water for agricultural purposes

The treatment plant, which currently treats around 5,000 m³/day, is designed for a maximum flow of 7,000 m³/day and civil works up to 9,500 m³/day. Today it treats 100% of the incoming water and has a production capacity of 4,000 m³/day of reclaimed water for agricultural purposes.

The **water** obtained in these facilities, whose quality exceeds by far the limits required for agricultural use by law, is directly sent to the network and made available to farmers in the Northeast Region, managing to generate on demand water for the different types of crops in the area.

