

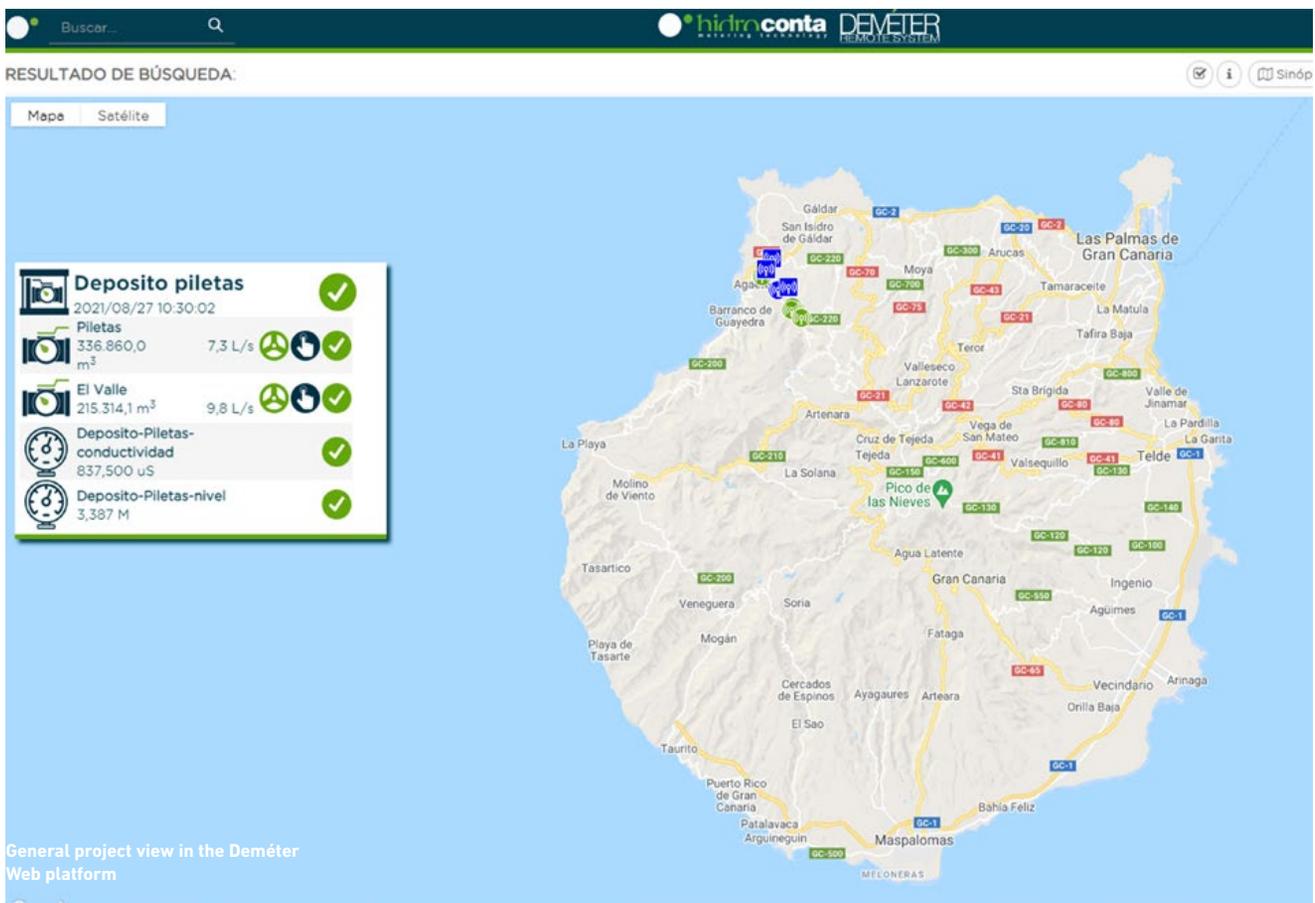
THE VILLA DE AGAETE IRRIGATION NETWORK GOES DIGITAL WITH HIDROCO

The Deméter system has been implemented in the Villa de Agaete Irrigation Association, in the Island of Gran Canaria. This association has chosen the Hidroconta System to remotely control their irrigation network, enabling access to all the data needed to control consumption, water status and pressure in the water distribution network.

Located in the Canary Islands, specifically in the island of Gran Canaria, the Villa de Agaete Irrigation Association has undertaken a digitalisation project to enable controlling remotely their raw water distribution network with Hidroconta's solution, Deméter. It is a highly versatile and flexible solution at

different levels; with it, and combining different pieces of equipment from the Deméter ecosystem itself, the Irrigation Association has met its needs concerning controlling different parameters in the entire system, including pressure, water flow rate, volume, conductivity, level and acidity (pH).

With a surface of more than 900 hectares growing a wide variety of crops: vegetables, citrus fruits, as well as tropical and coffee crops, the need to monitor and control the water used and its quality is obvious. "Controlling the system remotely allows making decisions on the behaviour of the network directly and immediately, from



IRRIGATION ASSOCIATION

CONTA EQUIPMENT (CANARY ISLANDS, SPAIN)

a distance", said Iker Uribesalgo, responsible for software development at Hidroconta, to Smart Water Magazine.

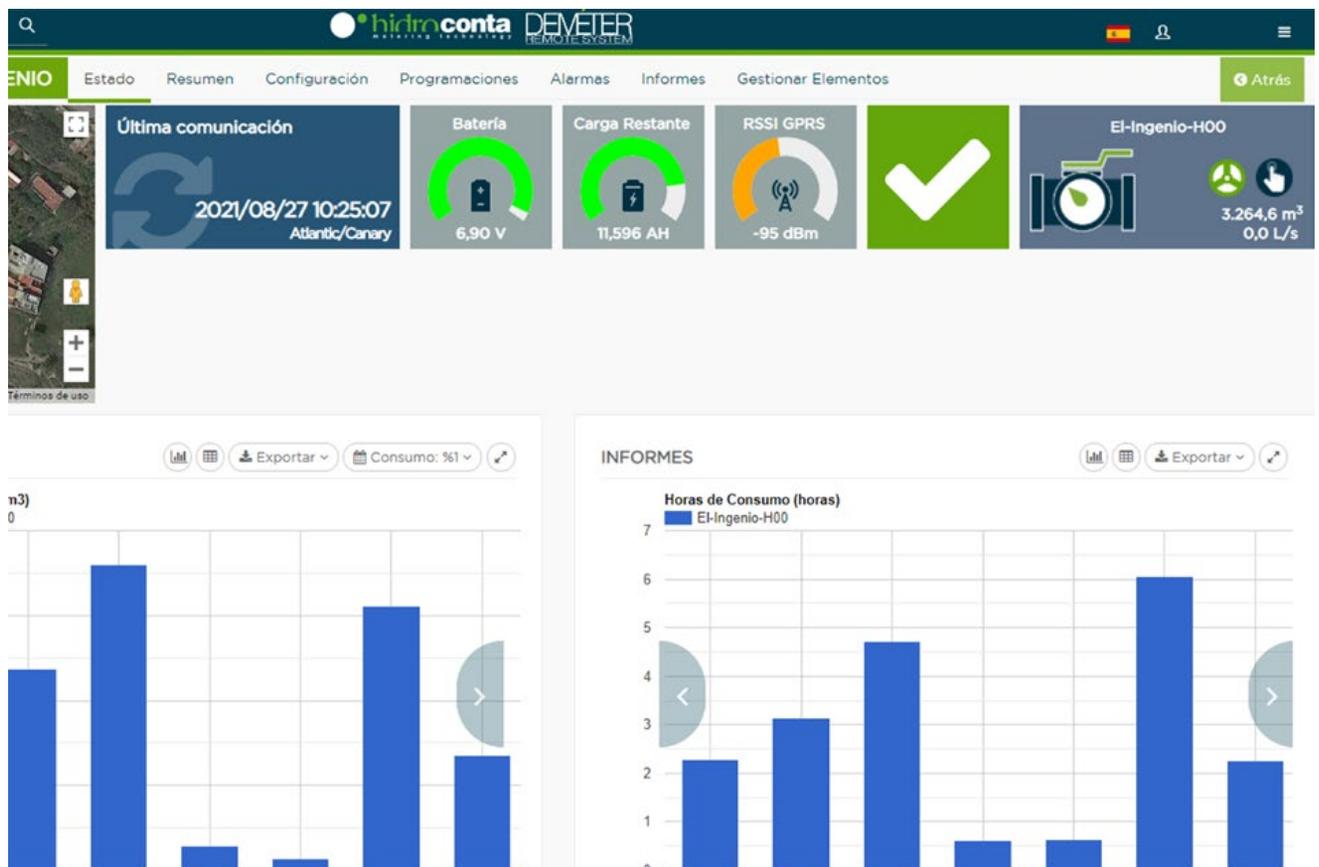
The Irrigation Association system includes two regulating tanks with two distribution lines branching out of each of them, that is, a total of four. The water used in the 900 hectares of land is a combination of desalinated water and reclaimed water that is mixed and controlled from the tanks located upstream in the distribution system.

To ensure optimal control of all necessary parameters, obtain quality water and be able to act swiftly to correct the parameters, Deméter 4H remote units were installed in all the upstream tanks, which can record up to 4 analogue entries, in this case pH, conductivity and the water levels in the tank, and also allow operating the valves directly.

On the other hand, at the distribution outlets, where they branch out, hydrants that combine hydraulic elec-

trovalves and Hidrowoltmann meters by Hidroconta fitted with Deméter 1H remote units were installed, a total of six, in order to control the volume at each of the meters.

The Hidrowoltmann is a large volume woltmann-type water meter with an internal turbine that rotates as water flows through it. The Hidrowoltmann meter has been designed for hydrodynamic compensation, preventing external pressure on the turbine's shaft. The Hidrow-



Data collected from the Hidrowoltmann meters by the Deméter 1H remote units

The Hidrowoltmann meter is an essential water meter in any installation in which accuracy and consumption control are a must

oltmann meter is an essential water meter in any installation in which accuracy and consumption control are a must. Management of irrigation, agricultural land, gardens and even swimming pools are some of the most common uses of this type of

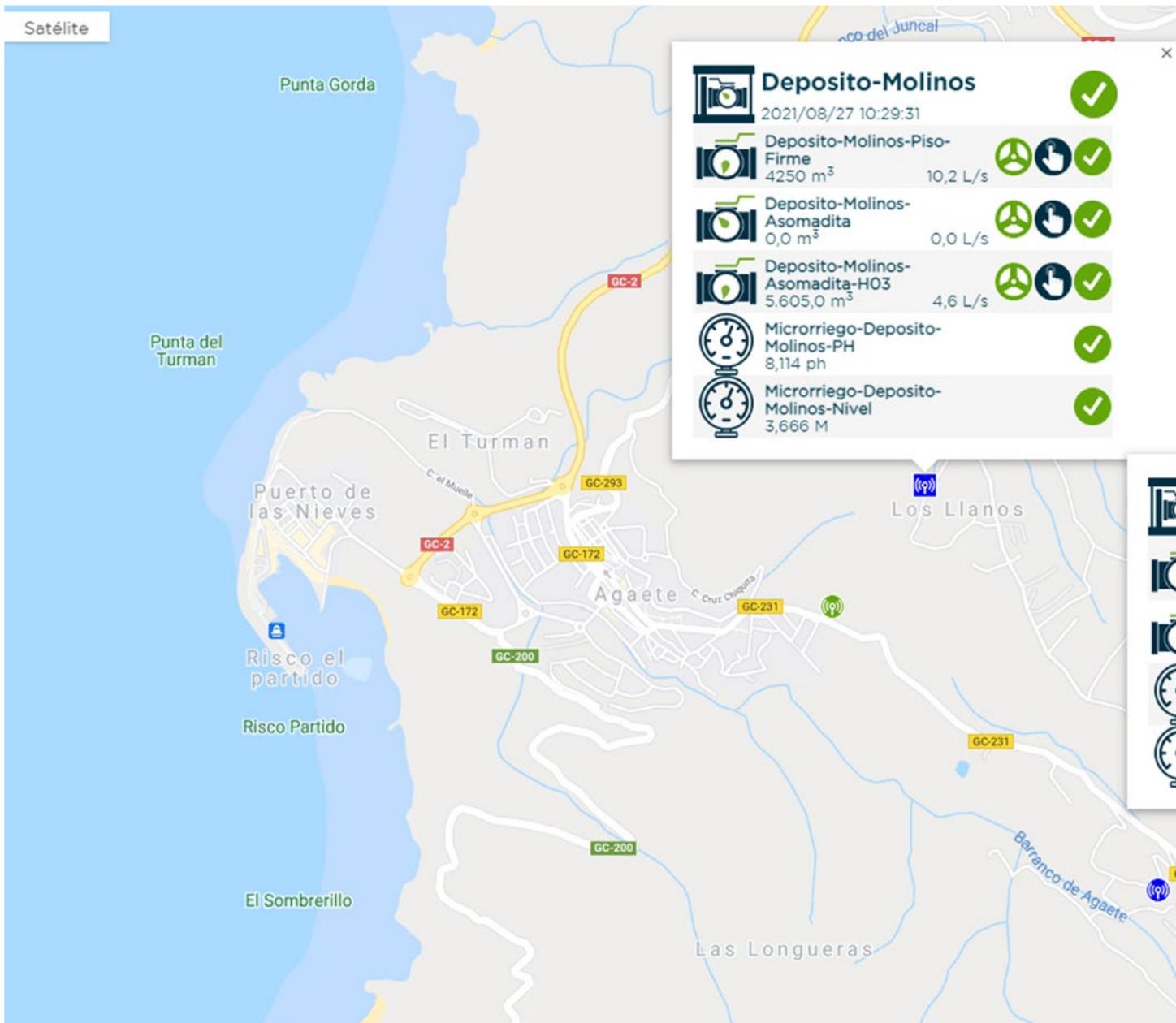
high-volume water meter. Its robust casing ensures durability and the technology used for metering ensures the reliability of the totalizer's results. Its operational characteristics include the following:

- ★ Metrology: R50 in a horizontal position.
- ★ Pressure loss class: Δp 10 (0.1 bar).
- ★ Cold water use: 0.1 – 30 °C.
- ★ The Hidrowoltmann meter can work with a pressure of up to 16 bars.
- ★ Type certification (Spanish Centre for Metrology, CEM): approved for use with irrigation water and water sourced from public waters.

As mentioned earlier, these water meters are fitted with communications

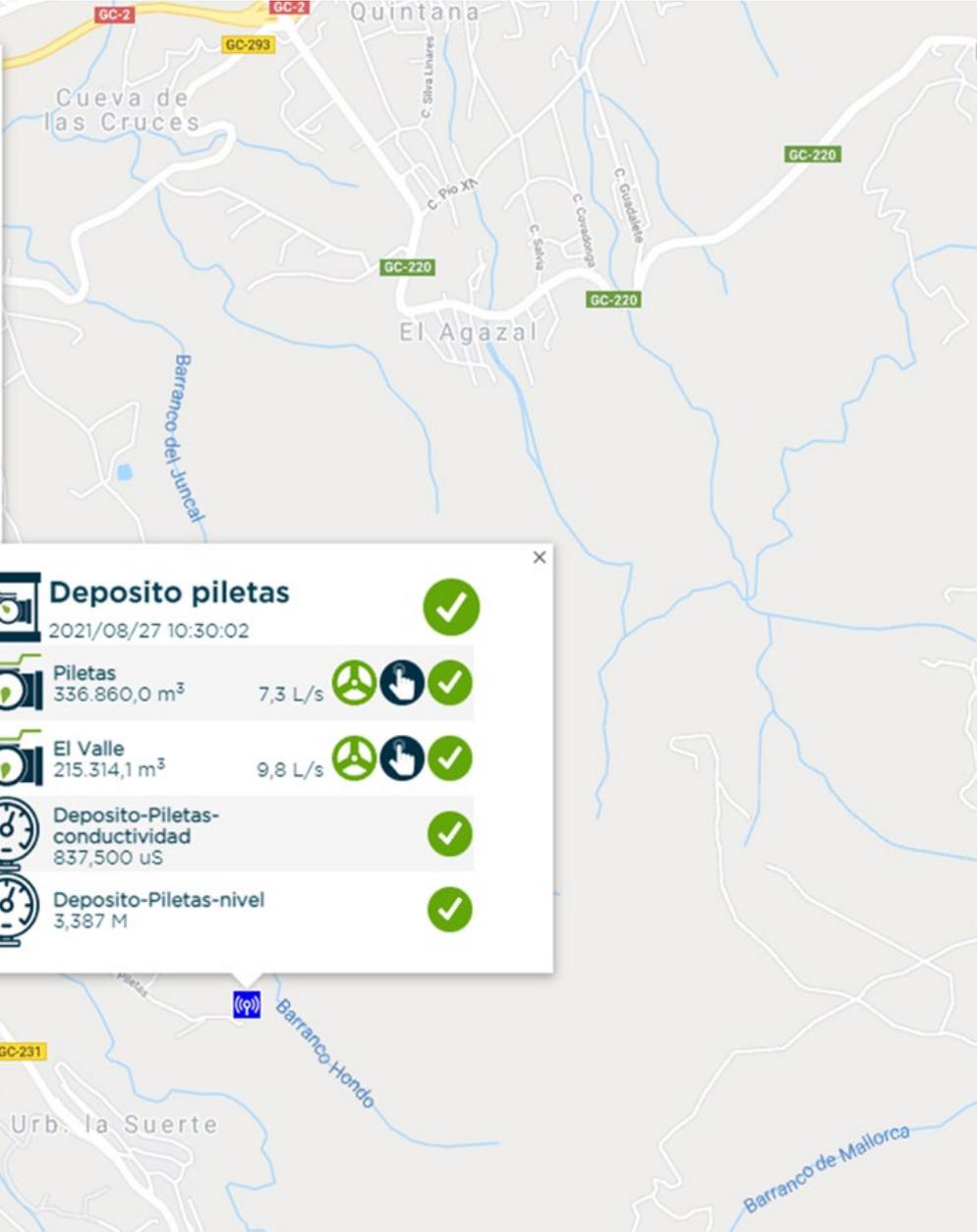
technology with a Deméter 1H remote unit, which sends the data collected to a server, which in turn displays them in an application.

From the application you can see the data records and the daily consumption of each of the water meters, as well as the timing of water use and the status of the 1H remote units, the battery in the equipment, charge, connectivity and the last time it communicated with the server. Also very important is the capability of the remote Deméter units to operate the valves. They can be opened and closed manually or they can be programmed, according





Deméter 4H remote units ensure optimal control of parameters, to obtain quality water and act swiftly to correct the parameters



to the volume of water or the schedule planned.

Finally, we should note the client chose to use the Deméter Web platform, where all the water system's data can be found, in order to achieve maximum optimisation, thanks to readings of the different parameters in real time, as we have already mentioned.

The Deméter Web platform has been developed to offer users an agile navigation in order to facilitate their management work. Thus, for example, from the control panel or dashboard we can see all the information related to an element and those that depend on it, as well as reports, graphs and alarms. In the dashboard we will find:

- ★ A map indicating the GPS position of the terminal from a Google Maps map.
- ★ Last communication: A time stamp indicates the last time a communication was received from that terminal.
- ★ Information about the battery, solar panel, RSSI GPRS. The platform has a graphical display with the values for battery voltage, solar panel voltage and GPRS coverage.
- ★ Widgets of the different elements or, what is the same, inputs and outputs, active for that terminal.

The easy installation of the Deméter ecosystem by Hidroconta has allowed the implementation of the equipment to be carried out autonomously and efficiently by Microrriego, a commercial company that operates in the Canary Islands and works in the sale, installation, automation and distribution of irrigation materials.

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