

TEDAGUA

WATER, WATER, EVERYWHERE



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Tedagua is a significant player in Spain's bid to lead the global desalination market: as its domestic market contracts the company is concentrating its efforts overseas

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Tertiary Treatment of
the WWTP of Altona
(Melbourne, Australia)

The Ancient Mariner complained about the lack of drinking water on his ship in 1798 but fails to mention (perhaps Coleridge didn't know) that Samuel Pepys had requested one of his naval captains to carry out "... an Experiment of producing fresh water (at Sea) out of Salt" as early as 1684. The outcome of that is not known, but it can't have been that successful as onboard desalination doesn't seem to have progressed much until the invention of the multi-stage flash (MSV) distillation process in 1955.

The desalination industry has grown exponentially: so has the water treatment industry, particularly in emerging markets

But the technology and the market are constantly changing. One of the most agile players in this market since it was founded in the Canaries 1983 is Tedagua (Técnicas de Desalinización de Aguas SA). It started out as a small company but was acquired in 2001 by the leading Spanish infrastructure group ACS and was incorporated into the Cobra Group, which operates in the field of green energy. Tedagua was established due to the need for drinking water in the Canary Islands. Thanks to the support of Cobra, Tedagua has had the opportunity to grow substantially and is now one of the biggest and most respected water companies in Spain, and globally. The company now has permanent locations in all 5 continents, and is an international leader in the design, construction, operation, maintenance and engineering of desalination plants, systems for producing drinking water from brackish feedwater, and plants for recycling water



Installation of the submarine infall of the WWTP of Taboada (Lima, Peru)

from sewerage feedwater. The company is also a leader in the design and construction of plants for treating and reusing urban and industrial waste for electricity generation. It has delivered more than 150 water treatment plants with a global capacity of 2,400,000 cubic metres per day.

One of the main reasons for the company's success is the support it has received from its collaboration with Cobra Group, as it has been

awarded projects it would not have been able to handle before the collaboration. An example of such a project is the water treatment plant in Lima, Peru, which we discuss below. Today Tedagua has the capacity to act as a global player, says its CEO Miguel Ángel Fernández. "This is why today, whenever the opportunity arises to bid for a new contract, in a new country, we rarely turn it down. And once we have worked in a new territory we like to

set down a permanent base there." Because of different legislation and regulations it is always difficult to start a project in a new country, he adds, but the culture of Tedagua is to be very proactive rather than risk-averse when it comes to expansion.

The success of this strategy is largely down to the company's greatest asset, its people, who show great personal commitment in Mr Fernández's opinion. "I think our excellent technicians are a really important element in giving us an edge over our competitors." The can-do culture that they demonstrate has gone a long way to establish Tedagua as a truly global company, operating in

1983

Year Tedagua was founded

innumerable cities and countries across the world – to name only a few it has installed plants in Australia, Brazil, Mexico, Peru, Panama, Costa Rica, Central America, the Caribbean and Africa.

One really important current project is to build

the largest wastewater treatment plant in South America in Lima, Peru. Lima claims to be the world's second biggest desert city after Cairo. Operations began at he Taboada WWPT in February this year, and the plant will boost the treatment of sewage water in Lima and the neighbouring city of Callao. Until now, most of the sewage water from Lima and Callao, with a population of over

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nine million, has been sent out to sea without any prior treatment or filtering — 20 cubic meters of raw sewage per second. The new plant will deal with an average flow of 14, and peaks of 20 cubic metres per second. No chemicals or disinfectants are used in the treatment process, and after several stages of treatment, the water will be sent out to sea along a 3.5 kilometre underground pipeline.

This year the company has also signed a contract to improve the drinking water systems in Dhaka, the capital of Bangladesh. These three projects alone demonstrate the global scale of the company, but this has been built up over a period of time with many small desalination plants executed for hotel complexes or small farms in the Canary Islands, the large sea water

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Beni Saf Desalination Plant (Algerie)



WWTP of the city of Escatrón (Spain) with the Combined Cycle constructed by Cobra Group at the end

desalination plants of Escombreras in Spain or Skikda and Beni Saf in Algeria and tertiary treatment plants such as the RWTP in Altona, a suburb of Melbourne, Australia or the WWTP at Taboada in Lima (Peru), the largest in South America.

North African countries like Algeria have never had enough water for their people. The World Health Organization considers Algeria to be “water stressed” and desalination is a significant part of its water solution. The Beni Saf desalination plant went into operation in 2010, a facility designed to produce 200,000 cubic metres of quality water to cover the

needs of a population of 750,000 from the region of Oran and neighbouring areas. Tedagua was the main contractor for the design and construction stages of the plant and subsequently assumed responsibility for its current task of management and maintenance of the facility over a 25-year period.

So the first decade of this century has been good for Tedagua, says Fernández. But the emphasis is now moving away from the domestic market. “From our point of view the AGUA programme has effectively come to an end, and the opportunities that arise in

2,400,000

Cubic metres of water delivered by
Tedagua treatment plants per day

our own backyard are more directed towards residential, service and industrial markets. Our big focus is now on the international market. India, China, Australia, Arab Emirates, America and North Africa, for example, are all investing in desalination and inviting tenders for large desalination plants.” Spanish companies, he adds, are very active in these international markets, and Tedagua itself has installed capacity in many of them.

The forward strategy for Tedagua is to grow, and to be the strongest and most recognised company in its sector, says Miguel Ángel Fernández. “More specifically, we would like to grow within the industrial sector. For example, we have signed a very important industrial contract with a Colombian petroleum company – a plant of 80,000 cubic metres a day. The company will, however, also focus on other areas, such as food and mining. The mining sector, especially in countries such as Australia, Peru and Chile, has considerable requirements in the field of water management.” **BE**

Construction of
one of the seven sand
removals of the WWTP
of Taboada (Lima, Peru)

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