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# Grundfos pumps improve the quality of life in China

DEYANG, CHINA: Until the 1980s, the wastewater management infrastructure in Chinese cities was virtually neglected. In the 1980s, about 20 small-scale wastewater treatment plants were constructed, providing low levels of treatment.

Despite significant wastewater investments in the 1990s, about two thirds of all urban effluents are still discharged into surface waters without treatment. Consequently, the lack of wastewater treatment in urban areas results in significant risks for human health and the environment.

The odour of sewage is common in Chinese cities, and many rivers and lakes are excessively polluted. This generates water borne diseases, decreases the quality of life, and undermines the attractiveness of the cities.

## THE SITUATION

When the World Bank decided to finance a multi-city Urban Environment Project in the Sichuan province, a new wastewater treatment plant in Deyang City was among the top priorities.

Sichuan Province is the home of more than 80 million people and the fast-growing area is facing several severe environmental challenges. Deyang city is home to several chemical, agricultural, and heavy industrial companies, and apart from enormous quantities of domestic wastewater, these industries have contributed to the excessive pollution of the Min and Tuo Rivers, and their tributaries.

## THE GRUNDFOS SOLUTION

Based on an elaborate Life Cycle Cost calculation (LCC) and a reliable and innovative range of pumps, Grundfos won the project. The calculation made it clear that the Grundfos solution over a

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TOPIC:  
Life cycle cost

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LOCATION:  
Deyang, China

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COMPANY:

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period of 15 years was the most sustainable and economical and therefore the right choice for Deyang City.

To ensure a sufficient capacity of 100,000m<sup>3</sup>/day, Grundfos supplied a total of 59 pumps and mixers for the new wastewater treatment plant. These comprised lifting pumps, submersible pumps for return activated sludge, pumps for surplus sludge, return water pumps, feed pressure pumps, and mixers.

Each of the four oxidation ditches was equipped with eight sets of submersible mixers to create the mixing and oxygen required for the micro organisms to decompose the remaining organic material and nutrients.

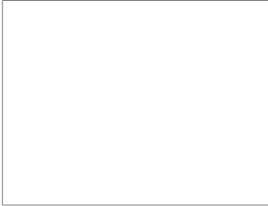
#### THE OUTCOME

At first glance Grundfos was not able to compete on the initial purchase price, which was an important factor for the contractor as well as the City of Deyang. However, the LCC calculation proved that Grundfos was in fact the most economical offer, when the initial purchase price was seen in relation to energy-efficiency, installation and maintenance costs, etc.

The new wastewater treatment plant in Deyang has proven extremely efficient and the customer is very satisfied with the Grundfos solution. With the one-stop solution provided by Grundfos, the plant achieved not only efficient and trouble-free operation of all pump systems, the logistics and the training of staff members have also been greatly simplified.

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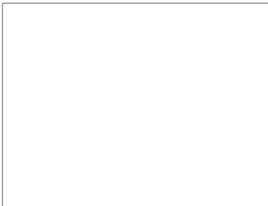
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