

## Sulzer Pumps

### Case Study

## Sulzer Vertical Pumps Provide Water for the City of Phoenix



Vertical pumps at the 91st Avenue WWTP pump station

#### The Sulzer Difference

Sulzer Pumps tendering and application engineers worked towards finding the best hydraulic fit to exceed performance expectations on this project. We are applying our hydraulic and mechanical experience and knowledge to find the most reliable and cost effective solutions. Continuous improvements and special designs for special needs make the range of vertical pumps ideal for water applications.

#### The Project

The city of Phoenix, Arizona (U.S.) has operated the 91st Avenue Waste Water Treatment Plant (WWTP) since 1962. Over the years, many upgrades and expansions have been done on the plant to serve the increasing needs of five Arizona cities. The most recent of these upgrades, the Unified Plant 2005 (UP05) Project A, expanded the capacity of the plant from 204 to 230 million gallons per day (mgd). In addition, the UP05 project addressed the requirement to discharge a mandated amount of effluent water to the Tres Rios Wetlands Project and the Arizona Nuclear Power Project (ANPP) transmission line.

Expansion involved construction of the Unified Plant Effluent Pump Station and the associated electrical building, along with all equipment and systems necessary for the increased capacity. Sulzer Pumps provided large mixed flow turbine pumps and five formed suction inlets.

#### The Challenge

Meet the exacting specifications for pumps to ensure the new installation would achieve the customer's goals for increased efficiency, reduced energy costs and lower maintenance costs.

#### The Solution

Sulzer Pumps worked closely with the customer to find the best hydraulic fit for the application. Vertical mixed flow pumps type SJM exceed performance expectations and continue to help the customer keep energy costs low. Our experienced sales and tendering team was able to support the customer in every step of the tendering phase. On site, Sulzer Pumps worked closely with the project contractor to provide all specified equipment and services, and meet installation deadlines.

#### Customer Benefits

With its broad hydraulic range, the SJM type pump was the best fit for the expansion requirements. Pump efficiency at lower operating speeds extends pump life and material upgrades (e.g. stainless steel) give the customer a more maintenance-free operation.

#### Pump Data

Product Type	SJM 30MS and 50MS / 1 stage
Material	different materials available
Capacity	up to 17,000 m <sup>3</sup> /h (up to 76,000 USgpm)
Head	up to 29 m (up to 95 ft)



Installation of pumps and motors at the UP05 Project A expansion

#### Contact

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#### Applicable Markets

Water and Wastewater

#### Applicable Products

SJM