

Case Study: ITT Lowara delivers Vogel pumps for Dutch demineralization plant



A vast 1,400mc/h demineralised water plant (DWP) has been constructed for Evides Industrie Water in Holland's Rotterdam harbour, with Vogel pumps delivered by ITT Lowara at its heart.

The facility, one of the largest in western Europe, was constructed to process and supply demineralised water to 18 (petro-) chemical industries.

The plant is being built in two phases, the first was the construction of the complete demin plant, which processes mains drinking water. The second contains a pre-treatment plant for purifying surface water directly from Lake Brielle.

Reliability and maximum control

Logisticon Water Treatment was appointed for process design, mechanical & electrical engineering work, construction and commissioning of this high quality plant. Together with the client Evides Industrie Water the engineers of Logisticon specified Vogel LS series centrifugal pumps for a variety of tasks within the DWP plant. Decisive for Logisticon Water Treatment (in close consultation with Evides Industriewater) to give the order to ITT Lowara for delivering the Vogel pumps was besides the high controllability (20-50Hz) the proven reliability. The pumps are controlled by frequency converters to regulate the motor speed and to optimize the efficiency of the pumps. Extensive testing of the pumps at the ITT manufacturing facility in Austria (witnessed by the client) prior to installation and commissioning ensured that the pumps met the exacting standards of efficiency, safety and water quality required.

27 Vogel pumps were installed as part of a frequency controlled system, varying motor speed of the pumps for maximum efficiency. Among these are three large stainless steel (AISI 316) LS end-suction pumps which regulate the main distribution of water. They have a total distribution capacity of between 200 and 1,600m³/h and a head of 60 meters. In addition to this there are multiple LSN and LSB series pumps used, which are extremely compact, perfect for confined spaces and require very little maintenance. These pumps are an extremely popular choices in food and beverage, hot water and heating, filtration and water treatment systems, and perfectly at home managing various tasks within the DWP facility. The pumps are fitted with Siemens

motors, all EFF 1 quality mark certified and compliant with the strictest performance requirements and offering optimum efficiency.

Ahead of schedule, meeting strict demands

Collaboration between the parties enabled the first phase of the DWP installation to be completed ahead of schedule in December 2009. The second phase started in January 2010. The ultra-reliable Vogel pumps will contribute to the plant's delivery 24 hours a day, 365 days a year (with built-in redundancy and security), ensuring the finished plant can continuously supply demineralised water to up to 18 separate (petro)chemical companies.