

Water supplier decided for "state of the art" WEDECO Ozone system

One of the largest water supply companies in Germany decided for a WEDECO PDO ozone system as compensation for an old system. Especially, its ease of operation, minimum need for maintenance and demonstrated reliability were the main reasons to decide for Xylem's WEDECO brand.

The „Landeswasserversorgung“ – a water-supply company which is rich in tradition and today one of the largest in Germany. Founded in the year 1912, the enterprise began operating its first installations in 1917. Numbered among the current 109 members of the company are cities, communities and other water companies in Baden-Württemberg and Bavaria.

Today the Landeswasserversorgung is the guarantor of a safe and reliable drinking-water supply for over 250 cities and communities, including the cities of Aalen, Esslingen, Göppingen, Heidenheim, Ludwigsburg, Schwäbisch Gmünd, Stuttgart and Ulm, to name but a few. The annual output exceeds 90 Million cubic metres drinking water of the highest quality.

Project Motive

The drinking water treatment plant Langenau treats river water by using a complex combination of flocculation, ozonation and multi layer filtration.

In 2005 one of the existing ozone systems from DEMAG should be replaced by a high efficient "state of the art" ozone system.

Project Details

As a result of a tendering process, Xylem was considered as the right partner for design, delivery, installation and start up of a complete ozone system at the drinking water treatment plant in Langenau.



The ozone system consists of an ozone generator type WEDECO PDO 2500 with a maximum ozone production capacity of 21.600 g/h from LOX at a concentration of 12wt %.

A maximum raw water flow of 7.200 m³/h can be treated with an ozone dosage of 3,00 g/m³ for disinfection, odour removal and improvement of taste.

The drinking water treatment plant Langenau treats a maximum river water flow of 2.300 l/s coming from the Danube river by using a combination of several treatment methods.

The ozone system consists of an ozone generator type WEDECO PDO 2500 with a maximum ozone production capacity of 21.600 g/h from LOX @ a concentration of 12wt %.

Ozone is injected by complex system of injectors followed by several static mixers, covering a large range of flow conditions and providing stand by capacities.

In 2006 the ozone system was successfully integrated into the existing process and totally meets the customers' requirements. Especially, its ease of operation, minimum need for maintenance and demonstrated reliability are highly appreciated by the operators. Nowadays, a maximum raw water flow of 7.200 m³/h can be treated with an ozone dosage of 3,00 g/m³ for disinfection, odour removal and improvement of taste.



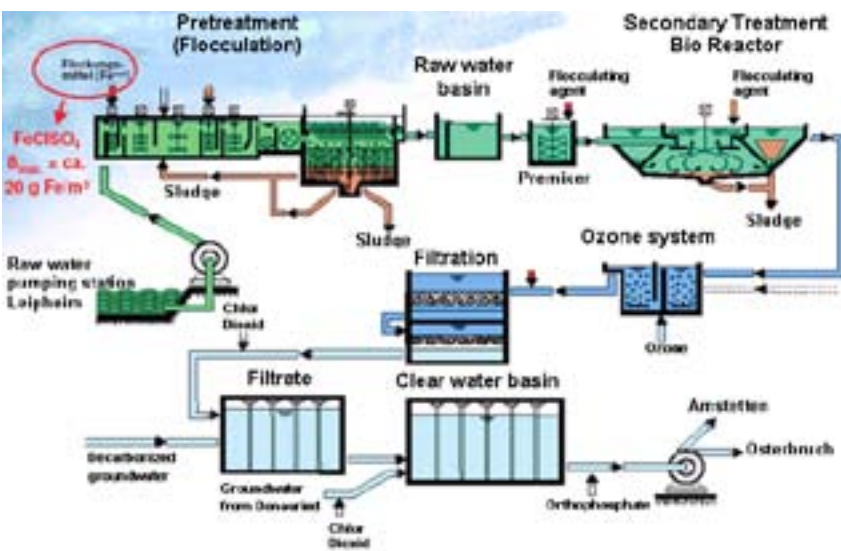
Ozone Generator Type WEDECO PDO 2500



Catalytic ozone destructors



Ozone injection system during installation



The whole treatment process mainly consists of the following steps:

- » Pretreatment (compact flocculation system) for removal of humic substances and turbidity
- » Bio reactor for ammonium removal
- » Ozone system for disinfection and improvement of odour and taste
- » Flocculation filtration (multi layer) for removal of particulates
- » Activated carbon filtration for removal of organic compounds
- » Final disinfection

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