KOHLER | SDMO

CUSTOMER: ANCENIS WATER TREATMENT PLANT

POWER PLANT: 1 X 900 kVA

LOCATION: ANCENIS, FRANCE

KOHLER–SDMO PROVIDES BACKUP ELECTRICITY FOR THE DRINKING WATER SUPPLY

WATER AND WASTE TREATMENT

The French consume an average of 150 litres of water each day in their domestic consumption. Being able to get drinking water straight out of the tap is a miracle that is too frequently overlooked. The UN estimates that 2.4 billion people worldwide do not have direct access to drinking water. Climate change, urbanisation and industrialisation are just some of the factors that make fresh water an increasingly scarce commodity, which is spread out very unequally among different countries. The issue is exacerbated by the problem of water pollution, with over half of humanity only able to access water of poor quality. In France, 99.99% of the population has access to the mains water supply.

But it has not always been this way: pipes, taps and drainage only really became widespread in the 19th century, accompanying the processes of urban industrialisation, rural exodus and increased population density. It was in 1850 that Napoléon III charged Haussmann with an immense project: to modernise Paris. He then dreamt up a system of circuits to route water from source to a modern drainage network. Three years later the work began to bring water to the entire French population. Today, with some 900,000km of piping, France has one of the most effective networks in the world. However, before being distributed to our taps, water must pass through a treatment plant to make it drinkable. A new feat that calls on every aspect of human ingenuity.

EXPRESSION OF NEED: TO GUARANTEE THE WATER SUPPLY IN ALL CIRCUMSTANCES

The water treatment plant in the town of Ancenis is operated by the company Véolia Eau and is financed by the local drinking water company, SIAEP, which also owns the site. The plant supplies drinking water to 78,000 inhabitants in the Ancenis region, covering 27 municipalities.

Located on the banks of the Loire, the plant routes river water through a covered canal and discharges it into basins. The process of making water drinkable is carried out in 4 successive steps:

1. Clarification: This is achieved via flotation. Air injected in the form of small bubbles created an emulsion with the unwanted substances (material in mineral and organic suspension). The lighter sludge created as a result floats to the surface and is collected, and then removed to the purification plant.

2. Refining: Once clarified, the water is passed through a bed of active carbon which is maintained in suspension in a homogeneous state via pulses. Around 90% of the unwanted substances (residual organic material, pesticides, micropollutants, etc.) and odours are removed.

3. Filtration: Sand is used in this third step to eliminate material still in suspension. This material is retained in the spaces between the grains approx.1 millimetre in diameter.

From sourcing to distribution, the Ancenis water treatment plant needs electricity to operate its pumps and treatment basins. Following the bad weather last winter (heavy rain and violent winds), the site experienced a power cut which affected its supply of water to all the municipalities in the Ancenis area.

To avoid a similar occurrence in the future, the Ancenis water treatment plant decided to acquire a KOHLER-SDMO generating set

PROJECT IMPLEMENTATION: SELECTION OF A 900 kVA KOHLER-SDMO GENERATING SET FROM THE KD SERIES

KOHLER-SDMO was able to win the public tender issued by the town of Ancenis by proposing a 900 kVA generating set with enclosure.

The client made their selection from the brand new KD Series range of generating sets, which have been on the market since last October after 6 years in development. One of the particular features of this range is that it incorporates its own KOHLER engines manufactured in Europe.

Pic. 1: The brand new KOHLER K135 engine powers the generating sets of the KD Series range from between 800 and 1800 kVA.

Excellent technical performance and value for money are the main reasons KOHLER-SDMO was able to win the tender. The KOHLER diesel engines notably offer the best combination of power, compactness and fuel consumption on the market, guaranteeing the client optimum performance at reduced operating cost. This efficiency results from the perfect match of the injection system and the engine control unit (ECU).

The Ancenis water treatment plant was also able to count on the expertise of the KOHLER-SDMO engineering teams, who selected the most appropriate generating set for the power of the pumps requiring backup, using the calculation notes and specialist tools for dimensioning the machine.

Pic. 2: The KD900 generating set in enclosure version at the Ancenis water treatment plant.

KOHLER
SDMO
SDMO Industries
Headquarters: 270 rue de Kerervern - 29490 Guipavas - France
SDMO Industries - CS 40047 - 29801 Brest cedex 9 - France
Tel. +33 (0) 2 98 41 41 41 - www.kohlersdmo.com

KOHLER-SDMO SOLUTION: A TURNKEY SOLUTION, PEACE OF MIND RESTORED

The generating set was positioned on a slab outside the building. It is fitted with an enclosure coated in C4 formula paint to avoid corrosion. The system includes a tank with fuel capacity of 5,000 litres.

Installation was organised by KOHLER-SDMO, including an electrical subcontractor to connect the generating set with the rest of the site. A company specialising in heavy lifting was also engaged to transport this genset weighing in at over 8 tonnes.

As a result, the joint efforts provided by the Sales Department, Engineering Department and our partnerships with subcontractors now enable the Ancenis water treatment plant to supply drinking water, whatever the circumstances.

Pic. 3: The KD900 genset being lifted into position on site

Pic. 4: The KD900 genset during installation on site

KOHLER SDMO

SDMO Industries
Headquarters: 270 rue de Kerervern - 29490 Guipavas - France
SDMO Industries - CS 40047 - 29801 Brest cedex 9 - France
Tel. +33 (0) 2 98 41 41 41 - www.kohlersdmo.com