

Reference

Iris® Diaphragm Control Valve

Head Office

Emile Egger & Cie SA
Route de Neuchâtel 36
2088 Cressier NE (Switzerland)
Phone +41 (0)32 758 71 11
Fax +41 (0)32 757 22 90
info@eggerpumps.com
www.eggerpumps.com

Aeration air flow control on WWTP Chemnitz

Energy cost savings with Iris® diaphragm control valves

As part of an energy optimization at the WWTP Chemnitz, a total of 30 control valves were replaced by Iris® Diaphragm flow control valves.



With the planned renovation of the process control system, a sliding pressure control system with a further energy savings potential is already in prospect.

Another energy saving measure is the exchange of blowers with modern turbo compressors in 2016.

Design data Iris® Flow Control Valves

- Valve Type / Size: 30 BS DN125 EAC
- Blower pressure: 650 – 750 mbar (over pressure)
9.4 – 10.9 psi
- Flow rate: 120 – 1200 Nm³/h
70 – 700 scfm
- Disk flushing: 5200 Nm³/h at 750 mbar
3060 scfm at 10.9 psi
- Immersion depth: about 5.80 m (19 ft)



By using the Egger Iris® Diaphragm Control Valves, the oxygen concentration accuracy in the aeration tanks could substantially be improved (± 0.1 mg O₂), which resulted in considerable energy savings.

Thanks to the high flow control precision over the entire control range of the Iris® valve and thanks to the replacement of disk diffusers, the compressor pressure was reduced by about 20 mbar.

An additional sliding pressure control is not yet possible with the existing process control system of the treatment plant.

Reference Company

Entsorgungsbetrieb der Stadt Chemnitz
Betreiber: eins energie in sachsen GmbH & Co. KG
Zentralkläranlage - Heinersdorfer - Str. 42
DE-09114 Chemnitz (Germany)

Author

Emile Egger & Co. GmbH, Mannheim / Roland Müller
r.mueller@eggerpumps.com