

Lindtner S., Schaar H., Kroiss H. (2007): Benchmarking of large municipal waste water treatment plants > 100,000 PE in Austria, 10th IWA Specialised Conference – Vienna, 12. September 2007

**Abstract:** During a six-year period the Austrian Benchmarking System was developed. The main objectives of this benchmarking system are the development of process indicators, identification of best performance and determination of cost reduction potentials. Since 2004 this system is operated via an internet platform and automated to a large extent. Every year twenty to thirty treatment plants use the web-based access to this benchmarking platform. The benchmarking procedure comprises data acquisition, data evaluation including reporting and organised exchange of experience for the treatment plant managers. The process benchmarking method links the real costs with four defined main processes and two support processes. For waste water treatment plants with a design capacity > 100,000 PE these processes are further split up into sub-processes. For each (sub-) process the operating costs are attributed to six cost elements. The specific total yearly costs and the yearly operating costs of all (sub-)processes are related to the measured mean yearly pollution load of the plant expressed in population equivalents ( $PE_{110}$ : 110 gCOD/d corresponding to 60gBOD<sub>5</sub>/d). The specific capital costs are related to the design capacity (PE). The paper shows the benchmarking results of 6 Austrian plants with a design capacity > 100,000 PE representing approximately 30 % of the Austrian municipal waste water treatment plant capacity.

**Key Words:** Process Benchmarking, Waste water treatment, Performance Indicators, Cost efficiency optimisation, full scale results