

Waste Water Treatment Plant Eskişehir

Energy self-sufficiency and enhanced capacity
from expansion and modernisation



AMIAN TIT WATER MANAGEMENT

Project Information

Products and Services

Drinking Water

Process Water

Waste Water

ICA Technology

Operation and Finance

Waste Water Treatment Plant Eskişehir

The population of the city of Eskişehir is currently 520,000. The first stage of the municipal waste water treatment plant was completed in 1999 for a capacity of 234,000 Population Equivalents. It was therefore too small and designed only for the removal of BOD and suspended solids. Quite apart from its inadequate capacity, it therefore failed to meet the effluent discharge criteria of the EU Directive. Under the leadership of PWT Wasser- und Abwassertechnik GmbH, the PWT/Alke consortium extended and modernised the waste water treatment plant on behalf of the Eskişehir Water and Sewerage Administration (ESKI). After the extension was finished, the waste water treatment plant now has a



capacity of 650,000 Population Equivalents. The extension to the plant is designed for removal of nitrogen and phosphorus and fully meets the effluent discharge criteria of Directive 91/271/EEC. The contract of the consortium also included the turn-key construction of a complete sludge treatment by anaerobic digestion and cogeneration of the produced biogas. The electricity produced covers the complete electrical energy consumption of the whole waste water treatment plant. The extension and modernisation of the plant therefore represents not only a major step in the reduction of the discharge of pollutants into the water courses but also a significant improvement in the economics of the operation of the plant.

Technical Data

■ Size of Plant

Population Equivalents	650,000 PE
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■ Flow

Average Dry Weather Flow Q_d	105,000 m ³ /d
Peak Dry Weather Flow Q_t	8,000 m ³ /h
Peak Wet Weather Flow Q_m	11,000 m ³ /h

■ Loads

BOD ₅	40.5 t/d
COD	111.0 t/d
TS	47.0 t/d
TKN	6.2 t/d
P _{tot}	1.7 t/d

■ Effluent Discharge Criteria

BOD ₅	25 mg/l
COD	90 mg/l
TS	25 mg/l
TN	10 mg/l
P _{tot}	1 mg/l



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