

# Waste Water Treatment Plant Ambarli / Istanbul

Turnkey erection and operation of large scale waste water treatment plant for 2,000,000 Population Equivalents



## AMIANITIT WATER MANAGEMENT

Project Information

Products and Services

Drinking Water

Process Water

Waste Water

ICA Technology

Operation and Finance

The Istanbul Metropolitan Municipality with its 18 Mio inhabitants is challenged to resolve its pollution problems in order to protect the Marmara Sea from further pollution. To resolve these problems a consortium led by PWT Wasser- und Abwassertechnik GmbH had been awarded the contract by the Istanbul Water and Sewerage Administration (ISKI) for turnkey erection of one of the largest and most modern waste water treatment plants in Europe.

The plant turnkey built by the consortium includes full biological treatment of the sewage with biological phosphorous removal and extended nitrogen removal.



Activated Sludge Tanks and Digesters

At the first stage the plant is sized for 2,000,000 Population Equivalents and treats 400,000 m<sup>3</sup> of sewage per day. A future extension has already been considered in the design of the plant.

The treated effluent is discharged to the Marmara Sea. Primary and surplus sludge is digested, mechanically dewatered and dried up to 95 %. Biogas from the sludge digestion is co-generated in turbines respectively used for heating purposes.

Since 2012 PWT Wasser- und Abwassertechnik GmbH has been operating the plant for a period of five years.

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Sludge Drying Units

### Technical Data

#### ■ Size of Plant

Population Equivalents	2,000,000 PE
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#### ■ Flow

Average Dry Weather Flow $Q_d$	400,000 m <sup>3</sup> /d
Peak Dry Weather Flow $Q_t$	21,700 m <sup>3</sup> /h
Peak Wet Weather Flow $Q_m$	46,800 m <sup>3</sup> /h

#### ■ Loads

BOD <sub>5</sub>	120 t/d
COD	240 t/d
TS	200 t/d
TKN	24 t/d
P <sub>tot</sub>	3.2 t/d

#### ■ Effluent Discharge Criteria

BOD <sub>5</sub>	25 mg/l
COD	125 mg/l
TS	35 mg/l
TN	10 mg/l
P <sub>tot</sub>	3 mg/l



**PWT Wasser- und Abwassertechnik GmbH**

Platanenallee 55  
64673 Zwingenberg  
Germany

Phone: +49 6251 980-0  
Fax: +49 6251 980-498

info@pwt.de  
www.pwt.de