

British American Tobacco – (BAT) Wastewater Treatment Plant Tire



Plant is at Tire, Izmir.

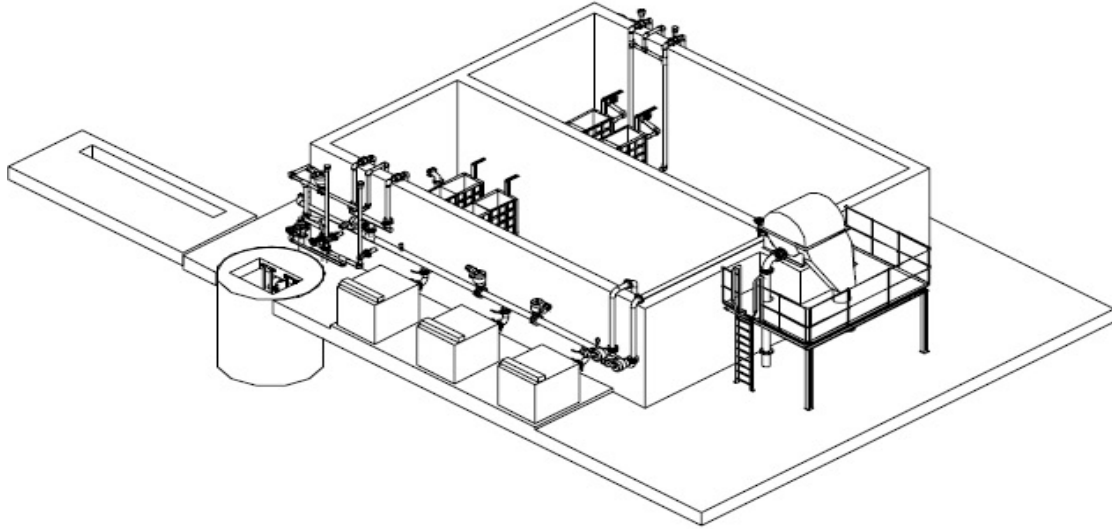
Plant Description:

- The first submerged membrane biological treatment plant in Turkey.
- Wastewater is %40 domestic, %60 industrial.
- Effluent quality achieved meets the most stringent requirements.
- The MBR contract agreement provided for the process design, specification and supply of flat sheet membrane units.
- Additional services provided were M&E design assistance, inspections during installation, assistance to start-up, commissioning and membrane maintenance advice plus operator and management training.

Status	Plant commissioned in October 2002, suspended when main treatment plant of the organised zone is commissioned.
Client	British American Tobacco (BAT)
Commissioned	October 2002
Required discharge quality	BOD < 20 mg/l, SS < 30 mg/l
Performance:	BOD < 5mg/l, SS < 5 mg/l , Ammonia < 5 mg/l
Brief description:	4 x J200 membrane units in 2 membrane tanks and one nitrification tank

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Process Description:

Tanks are partially underground, made of concrete and fully covered.
Balance tank feeds process via fine 3mm bi-directional screen to mixing tank.
Single stream treatment process, has one aeration and two membrane tanks.
Treated effluent flows by gravity to the Clean Water Tank for re-use.
Plant designed to operate automatically with minimal supervision.

Design Requirements

Influent average loadings:

BOD	192 kg/d
COD	624 kg/d
TKN	45mg/l
NH3 –N	40mg/l
SS	300mg/l
TDS	5,000mg/l

Plant Data

Maximum daily flow	680 m ³ /d
Average daily flow	4340m ³ /d
Peak flow	20m ³ /hr
MLSS aeration tank	12,000 mg/l
Membrane units	4 x J200
Membrane area	640 m ²
Sludge age	25 days

Performance

BOD	<5 mg/l
COD	<80 mg/l
Ammonia	<2 mg/l
TKN	<7 mg/l