

MUĞLA BODRUM KONACIK MUNICIPALITY TREATMENT PLANT



Bank of Municipality`s (İllerbank) first membrane treatment plant tender.

Description

- The first flat sheet membrane treatment plant for a municipality in Turkey.
- Totally enclosed plant located in hillside for minimal environmental impact.
- Effluent quality achieved meets the most stringent reuse requirements.
- The contract agreement provided for the process design, supply and delivery of 8 x EK400 membrane units
- Additional services are provided in the nature of detailed design assistance, inspections during installation, assistance to start-up, commissioning and membrane maintenance advice.

Status as at March 09:	Started commissioning
Client:	Konacik Municipality
Commissioned:	Started February 2009
Discharge Consent:	BOD < 5 mg/l, N total <10 mg/l, 0 pcu/100ml
Performance:	All discharge parameters achieved
Brief Description:	Prestige totally enclosed plant to produce effluent for reuse

MBR Atıksu Arıtma Sistemleri Ltd.

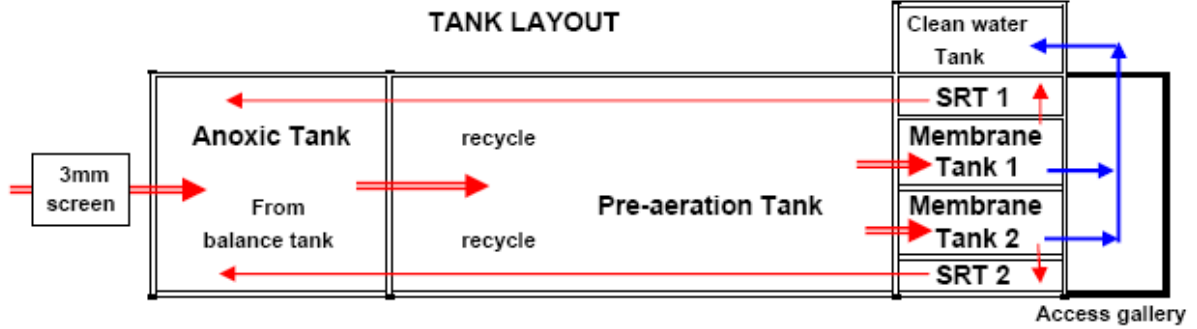
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Process Description

Tanks are of concrete construction, partially below ground and fully enclosed in buildings.

Balance tank feeds process via fine 3mm bi-directional screen.

The single stream treatment process has an aeration tank and two membrane tanks.

Treated effluent flows by gravity to the clean water storage tank for reuse.

Screenings and inlet areas odour controlled.

Plant designed to operate automatically with minimal supervision.

Design Requirements

Influent average concentrations:

BOD	375 mg/l
COD	800 mg/l
Total N	50 mg/l
NH ₃ – N	40 mg/l
SS	300 mg/l
TDS	5,000 mg/l

Effluent standards

BOD	5 mg/l
Total N	10 mg/l
Total P	1 mg/l
NH ₃ – N	2 mg/l
SS	5 mg/l
Parasites	0 pcu/100ml

Plant Data

Maximum daily flow	3,200 m ³ /d
Average Daily flow	1,600 m ³ /d
Peak flow	34.7 l/sec
MLSS membrane tank	12,500 mg/l
MLSS aeration tank	4,170 mg/l
Membrane units	8 x EK400
Membrane surface area	2,5600 m ²
Sludge age	25 days
Max. sludge produced	323kg/d

Current performance during start up

BOD	<100 mg/l
COD	<5 mg/l
Ammonia	<5 mg/l
TKN	<7 mg/l

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