

Iraq ENI Basrah Wastewater Re-use Treatment Plant



Plant Description:

- Containerised wastewater re-use plant for a permanent camp.
- Plants are fully covered and isolated for ambient temperature and are environmental friendly.
- Treated water meets discharge requirements.
- Contract involves process design, documenting, engineering, supply, commissioning and operator training.

Client:	Dore A.Ő.
Commissioned:	2012
Capacity:	70 m ³ /d (350PE)
Discharge consent:	BOD < 10 mg/l, N total <10 mg/l, zero parasites
Brief description:	A container re-use membrane submerged bioreactor plant.

MBR Atıksu Arıtma Sistemleri Ltd.

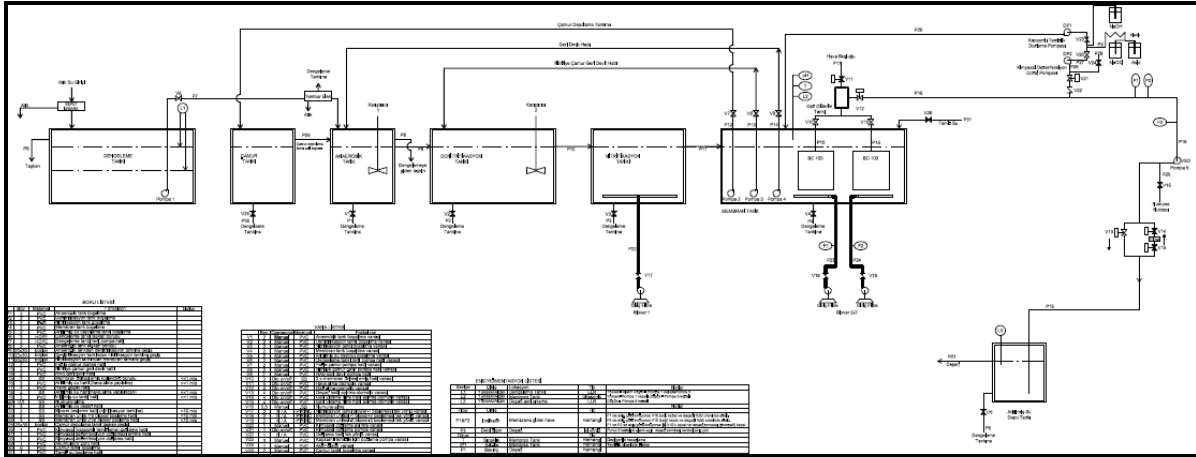
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Process Flowsheet

Process Description:

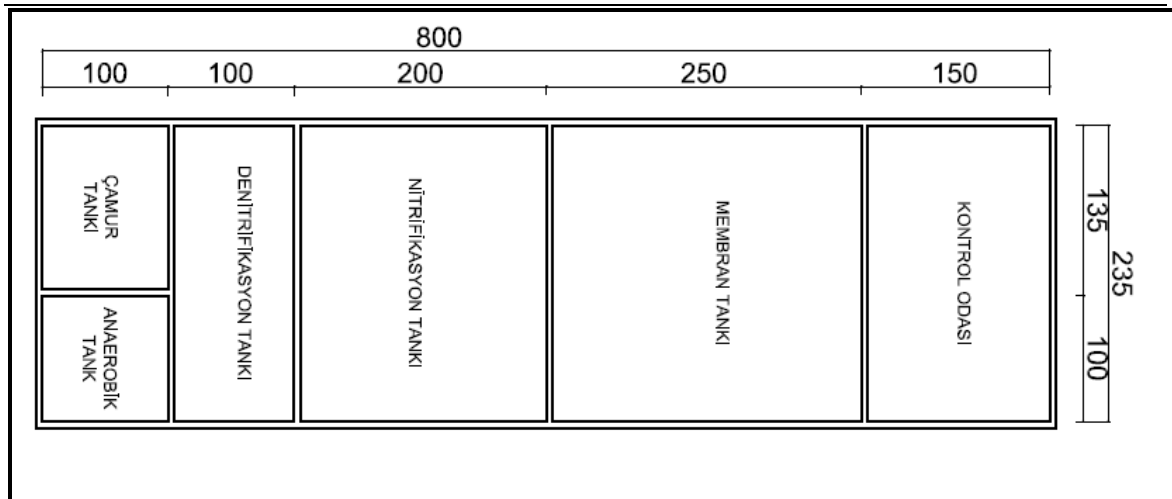
Plant is completely covered and sensitive to the environment and landscape.

Balance tank feeds process via fine 1 mm bi-directional screen to the plant, flow passes anaerobic, anoxic and aerobic membrane stages where nitrogen and phosphorous are also treated and further is fed to re-use.

Treated effluent is stored at the Clean Water Tank for re-use.

There is odour control at screening and inlet structures.

Plant designed to operate automatically with minimal supervision.



Layout

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Design Data

Flow: 70 m³/d

Influent Parameters:

BOD	300 mg/l
COD	600 mg/l
Total P	5 mg/l
Total N	42 mg/l
Oil&Grease	30 mg/l
SS	250 mg/l
TDS	5,000 mg/l

Plant Data

Maximum daily flow	100 m ³ /day
Average daily flow	70 m ³ /day
Peak flow	1 l/sec
MLSS membrane tank	12,500 mg/l
Membrane surface area	200 m ²
Sludge age	27 days
Sludge volume	8 kg/d

Discharge Consent

BOD	10 mg/l
COD	80 mg/l
Total N	10 mg/l
Total P	2 mg/l
SS	5 mg/l
FOG	5 mg/l
Nitrate	5 mg/l
Ammium	5 mg/l

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