Reed Bed Treatment System

Wetland Treatment Center of Advanced Materials Changshu Industrial Park

Owner:
Changshu Industrial Park Administration, Jiangsu province, China

Industrial wastewater treatment; reuse of treated wastewater; protection of the Yangtze river

Planning, tendering and construction supervision: Blumberg Engineers, Germany and two German partners with DeHua Eco Tech, China

Daily wastewater volume: 4000 m³/d

Planning: 2010/2011
Construction: 2013/2014

Total constructed wetlands area: 6 ha

Treatment Cascade:

1. step:
Vertical subsurface flow constructed wetlands: 20,000 m²

2. step:
Pond cascade:
- Deep pond with floating islands: 2,652 m²
- Rocky creek: 1,064 m²
- Shallow surface flow wetland: 4,019 m²

3. step:
Horizontal subsurface flow constructed wetlands: 10,062 m²

Special features:
- Pretreated wastewater from Industrial Park (chemical companies)
- Reuse of effluent as process water within the industrial park.
- High salinity and fluoride content of the wastewater.

Horizontal subsurface flow constructed wetland

Vertical subsurface flow constructed wetland
Our spray nozzles in action.

Arundo donax, Operations and demonstration centre in the background.

Advanced Materials Industrial Park (AMIP) Changshu Treatment performance:

<table>
<thead>
<tr>
<th>Year</th>
<th>Influent</th>
<th></th>
<th></th>
<th></th>
<th>Effluent</th>
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<tr>
<td></td>
<td>pH</td>
<td>COD</td>
<td>NH₃N</td>
<td>TN</td>
<td>TP</td>
<td>pH</td>
<td>COD</td>
<td>NH₃N</td>
</tr>
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<td>2015</td>
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