

#### 43.- Moving Bed Adsorption

<b>Title and name of product or technology</b>	
Moving Bed Adsorption	
<b>Abstract</b>	
Removal of suspended particles and dissolved organics in one step, using a moving sand bed with a small amount of carbon adsorption particles.	
<b>Description including main features/advantages</b>	
<p>Combination of two techniques in one apparatus: a) moving sand bed filtration and b) carbon adsorption; this leads to low investment costs. Basically, both the sand and carbon particles move counter currently with the water flow (note: other configurations are also possible).</p> <p>Best type of carbon sorption particles will be determined by laboratory experiments.</p>	
<b>Innovative aspects</b>	
Low investment costs, because suspended particles and dissolved organics are removed in one, robust piece of equipment.	
<b>Current and potential industrial users/domains of application</b>	
<p>Selective removal of suspended particles and dissolved organics on milligram and microgram per litre levels. Especially suitable for medium and large flows (&gt; 10 m<sup>3</sup>/h) and for cleaning requirements of the organics between approx. 50 and 98%. Potential applications:</p> <ul style="list-style-type: none"> <li>- effluent cleaning/polishing (meeting the standards of the Water Framework Directive)</li> <li>- recycling of streams in textile industry (color removal).</li> </ul>	
<b>Current state of development</b>	
The technology has been demonstrated in pilot tests on urban wastewater effluent (Horstermeer, Netherlands).	

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