

36.- Jet Zone Reactor (JZR), high performance aerobic biological treatment

Title and name of product or technology
JZR (Jet Zone Reactor)
Abstract
The JZR Technology is an aerobic high-performance biological treatment based on a novel mass transfer design
Description including main features/advantages
<p>Aerobic purification of effluents in highly loaded reactors (small reactor volumes) has only been possible until now under conditions of increased use of energy.</p> <p>The JZR (Jet-Zone-Reactor) developed in cooperation with the Institute for Environmental Technology of Bremen University, overcomes this limitation by intensifying the mass transfer in the reactor.</p> <p>This slim, high-performance reactor that is especially space saving can be combined, if needs be, both with conventional sedimentation and also with membrane filtration (Ultra-Filtration: this gives a very high potential for the saving of space and outstanding discharge output values).</p> <p>Particular advantages of the JZR Technology</p> <ul style="list-style-type: none"> • A greater proportion of active biomass in comparison with conventional treatment processes. • A very high rate of conversion. • Compact design, minimum space requirement. • Can be integrated into existing equipment without any problem. • Optimum energy requirement (low operating cost). • No moving components, no wear and low maintenance requirements. • Totally enclosed housing. • Simple to operate. • Easy extendable (modular concept) in the case of a change in limit values, increases in capacity and new standards
Innovative aspects
As a result of the vast improvement in its geometry, the optimised hydrodynamic and its patented nozzle technology, the JZR ensures to the maximum the dissolving process of oxygen and enhances the activity of the microorganisms in the reactor system.
Current and potential industrial users/domains of application
The JZR Technology is specially fitted for the treatment of high load wastewaters from the paper, food or textile industries.
Current state of development
First JZR plants were built in 2007.

Contact details	
Organisation	WEHRLE MEDIOAMBIENTE
Website	www.wehrle.es
Contact person	Pablo García
Address	C/Belice 1 3 ^o C 33212 Gijón – Asturias, Spain
Phone	985 308 571
Fax	985 317 136
Email	pgarcia@wehrle.es