

MUTAG provides efficient solution for coke oven effluent treatment

The German company Multi Umwelttechnologie AG (MUTAG) has been awarded several contracts for the engineering of coke oven effluent treatment plants in India; Korea, Brazil and South Africa for the world's leading steel manufacturers.

In 2008, MUTAG launched a new high-performance biofilm carrier media for the biological treatment of wastewater, called Mutag BioChip™. After a large-scale testing period of multiple years in coke oven effluent treatment, the paraboloid disc-shaped MBBR carrier media provides convincing results and has proved to be ideally suitable for the treatment of wastewater from coking plants.



Fig. 1: Mutag BioChip™

“It took us a lot of time to develop the Mutag BioChip™. Hence we are all the more glad about the carrier having confirmed all of our ambitious expectations,” says Dr.-Ing. Markus Geiger, board member of MUTAG. “Before the carrier was launched on the market more than two years ago, we already had obtained profound long-term experience in purifying coke oven effluents. The development of the BioChip carrier finally allowed us to implement our entire knowledge in practice,” he continues. “So we now have the possibility to offer complete coke oven wastewater treatment systems at highly competitive prices as the carrier's efficiency in COD degradation and in nitrification is notably superior to any other make available on the market.”

Indeed, according to the company's information, the protected active surface area of this “high performance carrier” accounts for 3,000 m²/m³ and has been proved in several large-scale applications. It is therefore significantly higher

than the surface area provided by “conventional” MBBR carrier media. Not only have numerous experimental results given evidence of the remarkably persistent treatment process stability in COD/BOD₅ reduction as well as in nitrification, but also the several international projects executed by the company seem to support the arguments in favour of the Mutag BioChip™.

Dr.-Ing. Geiger: “The effluent treatment plants which we implemented at coke oven plants in China, Poland and Germany run reliably and solidly for years now due to our Mutag MBBR Technology™. On the one hand, the Mutag BioChip™ allows for dramatically increasing the treatment efficiency of existing wastewater treatment plants without any need for constructional changes. On the other hand, new MBBR treatment plants can be designed with a remarkably smaller footprint than usual. It is just a question of time that the advantages of this technology will be recognized by further steel producers as an optimal and sustainable solution for highly efficient coking plant wastewater treatment.”



Fig. 2: Coke oven wastewater treatment plant with Mutag BioChip™ in Poland