

Atomising landfill leachate

Protecting fine spray nozzles at Otto Dörner

Customer:

The company Otto Dörner Kies und Umwelt Mecklenburg GmbH & Co.KG operates a class 0 landfill in Consrade near Schwerin. Here, mineral wastes are disposed of properly.

Background:

The leachate that accumulates in the landfill as a result of precipitation runs off into percolation trenches and is collected in a basin for disposal. For the purpose of reducing the costs involved in disposing of leachate, an atomising system was installed above the basin. The system consists of a submersible pump and a PE line, along which nozzles are installed. The submersible pump conveys the leachate through the line to the nozzles. A rotary drum is located inside the nozzles and atomises the leachate. The atomisation process creates a large surface area, which significantly improves the efficiency of natural evaporation.

Description of the solution:

For this application, an automatic type 6.03 AOT BOLLFILTER with its 2-in-1 system, providing both filtration and disinfection, offers optimal protection for the fine spray nozzles, while at the same time preventing bacteria and viruses from being spread as particulate matter. The type 6.03 AOT backflushing filter prevents the fine nozzle openings from becoming clogged by solid matter and inactive microorganisms, such as legionella. The filter fineness is 50µm at a flow rate of approx. 5 m³/h.

Advantages and added value for customers:

The system's reliability has improved considerably thanks to the performance of the automatic type 6.03 AOT BOLLFILTER, thus preventing blockages in the fine spray nozzles and ensuring that no more failures occur in the evaporating unit.

After commencing atomization in May 2018, approx. 306 m³ of landfill leachate were evaporated in the following three months using the atomisation process, which corresponds to annual savings of approx. EUR 1,400 for transport and disposal charges, without consideration given to the costs for defective nozzles and maintenance.



Fine spray nozzles protected by BOLLFILTER



BOLLFILTER automatic type 6.03 AOT