



ANNUAL SAVINGS OF € 70,000 IN ELECTRICITY COSTS WITH LECHLER RS II-3 NOZZLE LANCES IN THE GCT OF A GERMAN CEMENT PLANT

Industry: Cement
Country: Germany
Application: Gas cooling in the evaporative cooler



PROJECT GOAL

A German cement plant commissioned Lechler to optimize the injection system of the GCT. The aim was to further increase the control range of the spillback nozzles (turn-down 10:1) in order to achieve a minimum volume of 1.5 m³/h without switching off nozzle lances, as well as to increase efficiency and reduce energy costs.





CHALLENGE

The GCT's injection system had already been optimized several times, but consisted of different spillback nozzle lances. This heterogeneity led to an inefficient droplet spectrum and high energy consumption of over € 120,000 per year.



SOLUTION

To optimize the injection system, 12 RS II-3 spillback nozzle lances were installed and the old pump was replaced by a precisely tuned pump with a frequency converter. Thanks to its improved technology, the newly developed spillback nozzles produce a much finer droplet spectrum, making it possible to reduce the feed pressure from 35 to 25 bar and reduce the pump output.

Existing spillback system	New spillback system	
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Various nozzle lances Pump capacity 95 kW (CO)/93 kW (DO) Energy costs 120,870 €/a	RS II-3 nozzle lances Pump capacity 40 kW (CO), 30 kW (DO) Energy costs 49,725 €/a	SAVINGS OF 475 MWh/a COST SAVINGS > 70,000 €/a
		To calculate your specific future savings, please contact us at aqcs@lechler.de



CUSTOMER BENEFITS

Optimizing the injection system ensures a sustainable and long-term reduction in energy and operating costs. The use of technical innovations and individually tailored solutions results in tangible and measurable benefits for the customer.



Spillback nozzle lances

- Fine droplet spectrum without compressed air
- Spray angle of 90° for good coverage of the cross-section
- Lance design can be adapted to customer requirements

We are committed to responsibility and sustainability. Our products support you on your way to achieve your own sustainability goals.