ENGINEERING
YOUR SPRAY SOLUTION

EFFICIENT COOLING, CONDITIONING AND QUENCHING WITH LECHLER NOZZLE LANCES AND SYSTEMS

Lechler is Europe's No.1 leading supplier of nozzles and systems worldwide. For over 140 years, we have pioneered numerous groundbreaking developments in the field of nozzle technology. We combine comprehensive nozzle engineering expertise with a deep understanding of application-specific requirements to create products that offer outstanding performance and reliability.

NEW

Spillback Nozzles RS II-3

With this special type of single-fluid nozzle the water is always carried to the nozzle at nearly the same pressure, resulting in a fine droplet spectrum. Regulation is performed by opening a control valve in the spillback line, which carries a partial flow back to the tank. The maximum atomized flow rate is achieved with the control valve fully closed.

- Smaller droplets and therefore min. 20% (up to 50%) shorter evaporation distance compared to old series (design cases, example GCT in cement plant)
- Due to optimized evaporation distance, the spillback system can be offered significantly longer as an alternative to twin-fluid system
- Focus on reduced operating costs compared to the twin-fluid system
- High turn-down ration with min. 10:1
- Spillback is and remains a state-of-the-art technology

KSD Nozzles

These twin-fluid nozzles with external mixing generate a full-cone jet with a spray angle of up to 30°. The liquid is divided into a hollow cone in a special atomization unit and is then atomized into fine droplets by a gaseous medium fed in through an annular gap. This means that liquid and gas are only mixed outside the nozzle body, thereby allowing steam to be used besides air and various gases.

Technical data:
Spray angle: 20 – 30°
Turn-down ratio: 5 : 1
Typical pressure range: Liquid 0,3 – 10 bar (g)
Atomization air/steam 1 – 5 bar (g)

Application examples:
- Gas cooling in medium-sized towers and ducts, e.g. in the cement, lime, glass, power plant and metallurgical industry, steel industry.

Latest references:
- Dolvi
- Hoa Phat

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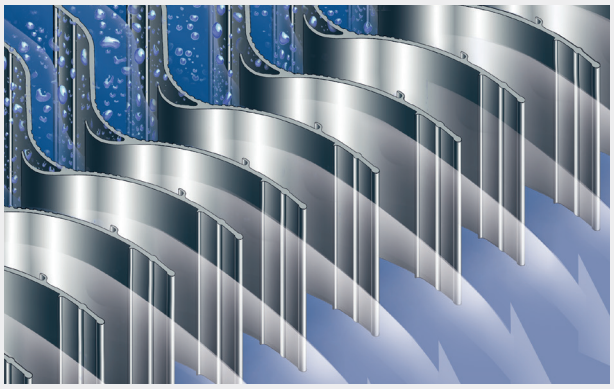
Droplet Separators



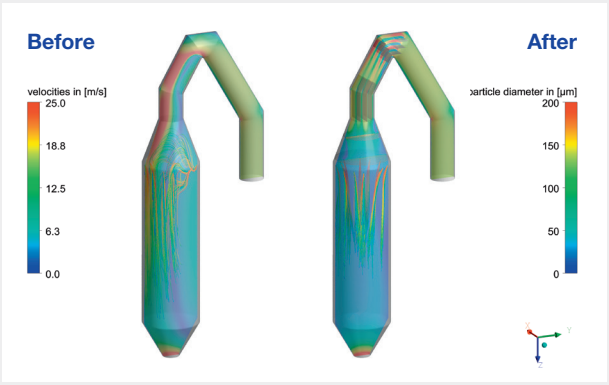
Task:

- Protection off downstream installation components e.g. refractory, ID fans
- Reduction of operating costs
- Removal of dust-loaden droplets
- Removal of sulfur compounds

Your advantages:

- Modular system design
- Highest separation efficiency up to 5 µm
- Highest degrees of separation for large liquid quantities
- Separation of small droplets
- Compact design even for high gas speeds
- Very low pressure losses compared to spin-type separators
- More uniform flow distribution
- Use also with high sold particle quantities
- Cleaning during ongoing operation
- Delivery of an overall concept
  – Nozzles for desulfurization of flue gases
  – Droplet separator systems
  – Integrated cleaning systems for droplet separators

CFD (with optimization)



Our service:

- Simulation and optimization of process gas flow and spray system
  – Pressure loss
  – Uniform flow
  – Spray traces
  – Wall wetting
  – Evaporation and cooling rates
  – Temperature distribution
  Analysis of status quo or concept regarding effect, efficiency and risks
- Layout of necessary optimization activities
- Comparison of existing and optimized system regarding effect and efficiency via CFD
- Validated virtual engineering combined with long term know-how

Your advantages:

- Understanding the effects of many parameters onto your process
- Lechler is engineering your spray solution
- Understanding the process
- System upgrades
- Risk free support from the best supplier
- Several references

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Talk to us

Your requirements are the first step towards a solution. We are more than happy to help you solve your individual tasks. Tell us your objectives and we will take care of the solution. If the solution is not yet available, we will tailor-make one for you. That is our promise.

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