

Spillback nozzles

Atomization without compressed air



Lechler spillback nozzles atomize liquids as a fine hollow cone.

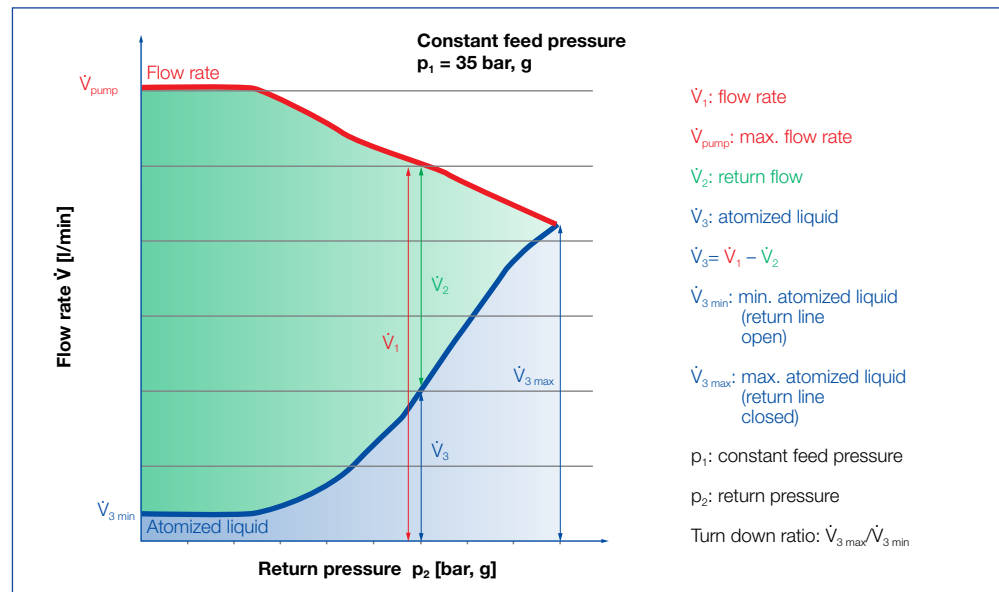
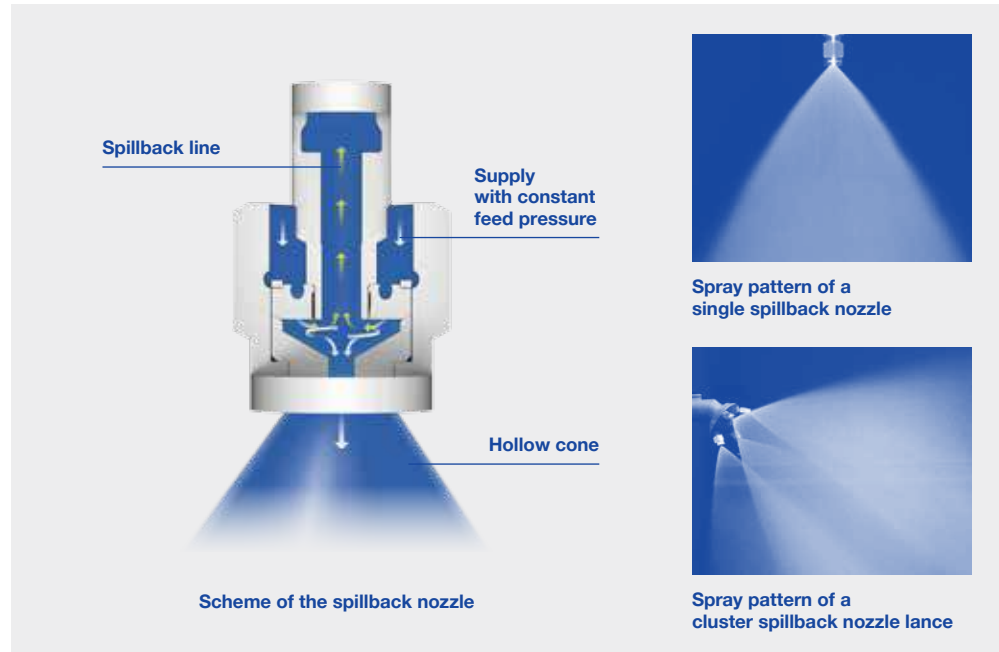
This special single-fluid nozzle works according to the pressure atomization principle. The water is sent to the nozzle with a relatively constant feed pressure, independent of the atomized flow rate.

The amount of liquid injected is adjusted via a control valve in the spillback line, whereby part of the flow is taken from the inlet flow rate and returned to the tank. The maximum atomized flow rate is achieved with the control valve closed.

Uniform and fine liquid atomization is achieved across the entire control range.

The atomized flow rate can be distributed over cluster heads with up to six small nozzles. This results in a total spray angle of approximately 120°.

This wide distribution of liquid over the entire duct is advantageous for reducing the number of lances.



Use:

- Gas cooling in medium-sized and large gas cooling towers

Properties



Spray angle of the individual nozzles
90° or 60°
as hollow cone



Low operating costs as no atomizing air required



Execution
as single or cluster nozzle lances possible



High turn-down ratio
of up to 12:1



Even and fine liquid atomization
over the entire control range



Typical pressure range
of 35 bar, g in the supply line at the nozzle

Lechler Online Cleaning (LOC[®])

Cleaning-in-Place system for twin-fluid nozzle lances

In the semi-dry flue gas cleaning processes used in power plants, an alkaline washing suspension, usually lime slurry, is injected into the hot flue gas in spray towers. The droplets injected by twin-fluid nozzles are evaporated by the transferred heat. At the same time, pollutants such as SO₂, HCl and HF react with the reactants in the washing fluid.

The washing suspension frequently causes damaging deposits and blockages in the nozzles, nozzle lances and pipelines. In the past, reliable long-term plant installation was often not possible without regularly dismantling and cleaning the nozzle lances. Good process results frequently came at the cost of high maintenance effort.

The Lechler LOC[®] Cleaning-in-Place system eliminates the need for complex disassembly, unnecessary downtimes and personnel costs.



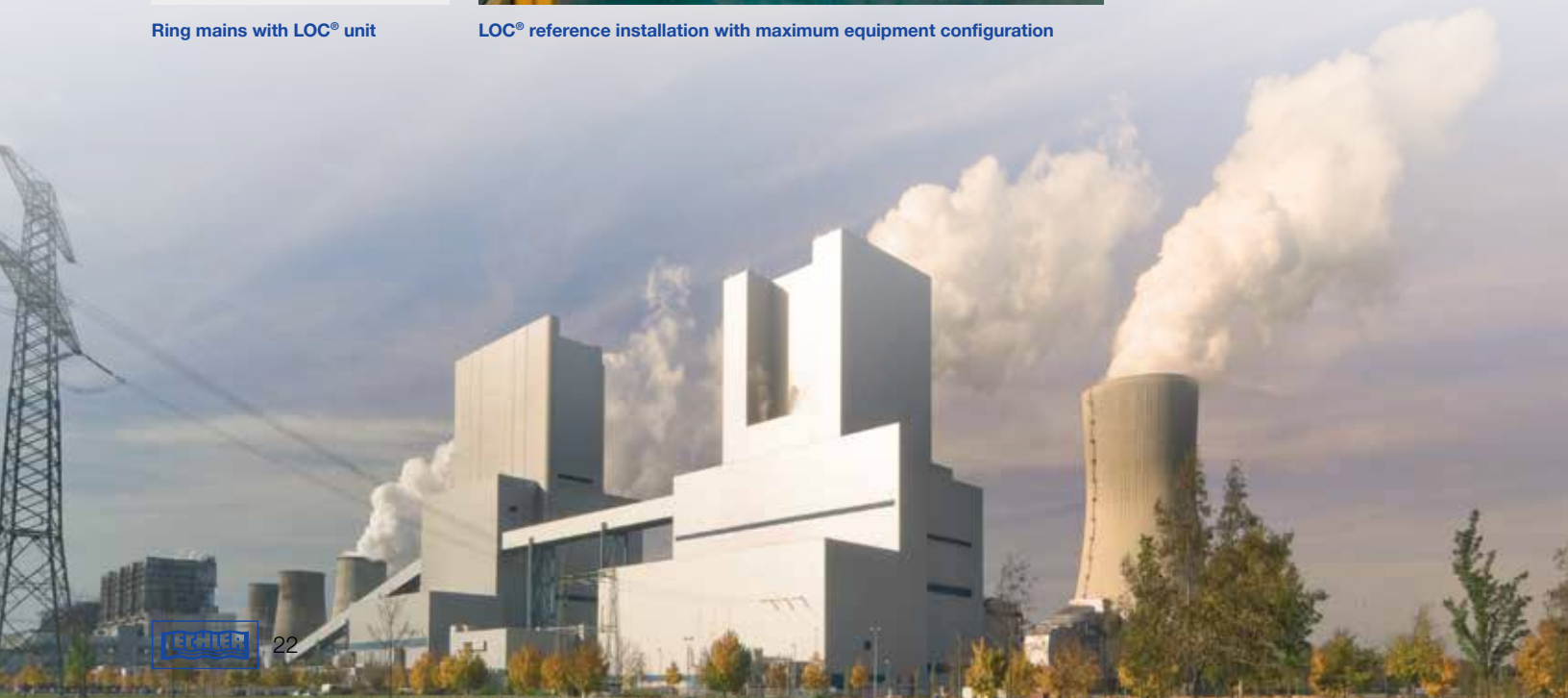
Spray absorbers/dryers

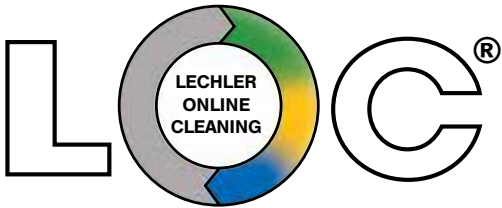


Ring mains with LOC[®] unit



LOC[®] reference installation with maximum equipment configuration

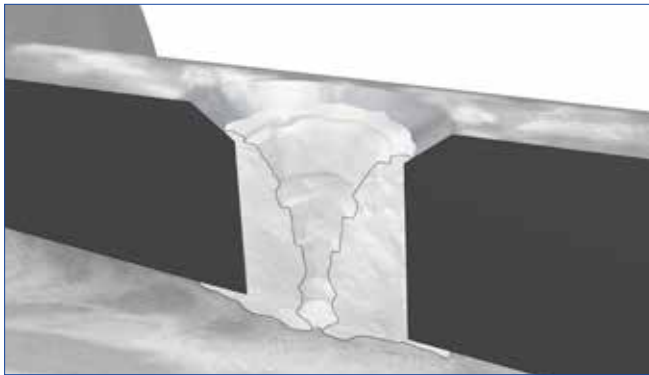




LOC® makes your plant more economically efficient

Lechler offers an online cleaning system tailored to the respective application which allows reliable continuous operation and inexpensive cleaning of the nozzle lances.

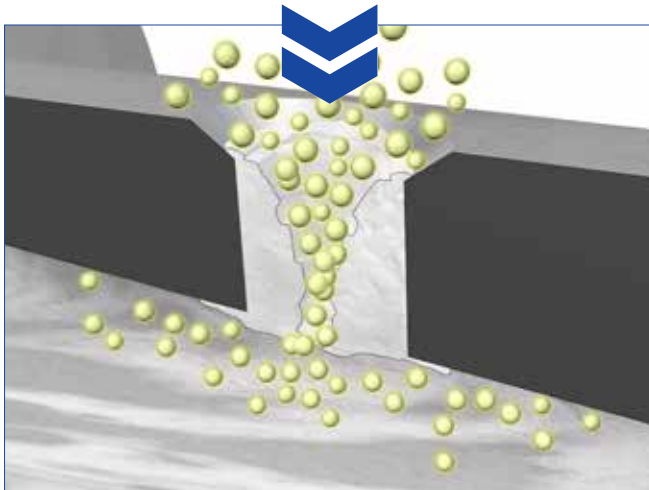
The nozzles are made of wear-resistant hard metal and have been optimized for atomizing suspensions. The individual lances are cleaned cyclically during ongoing operation using precisely metered quantities of cleaning agents. In many cases, minimum use of diluted citric acid (10%) and compressed air is sufficient for reliable cleaning while at the same time ensuring compliance with the process limit values.



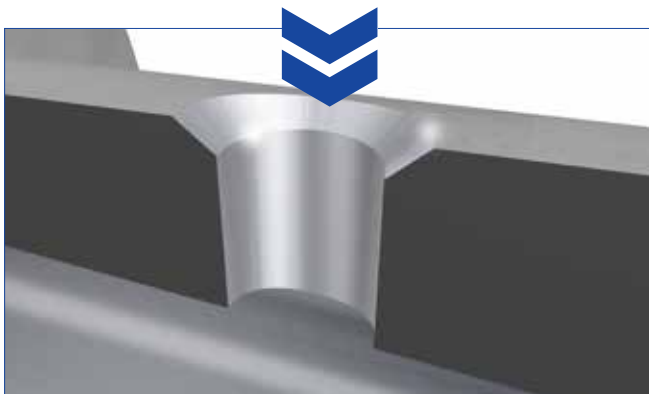
Blocked air holes



A visible difference:
Nozzles before and after LOC® treatment



Cyclical cleaning with citric acid doped in compressed air



Cleaned nozzle

Advantages

- High availability of the spray reactor/dryer
- Uninterrupted operation
- Minimum maintenance effort
- Low costs through the controlled use of cleaning agents

Talk to us

Lechler Online Cleaning (LOC®) is a tailor-made solution. The better we know your requirements and operating conditions, the more efficiently your processes will run. Let's talk to each other – about efficiency, cost savings and success.

