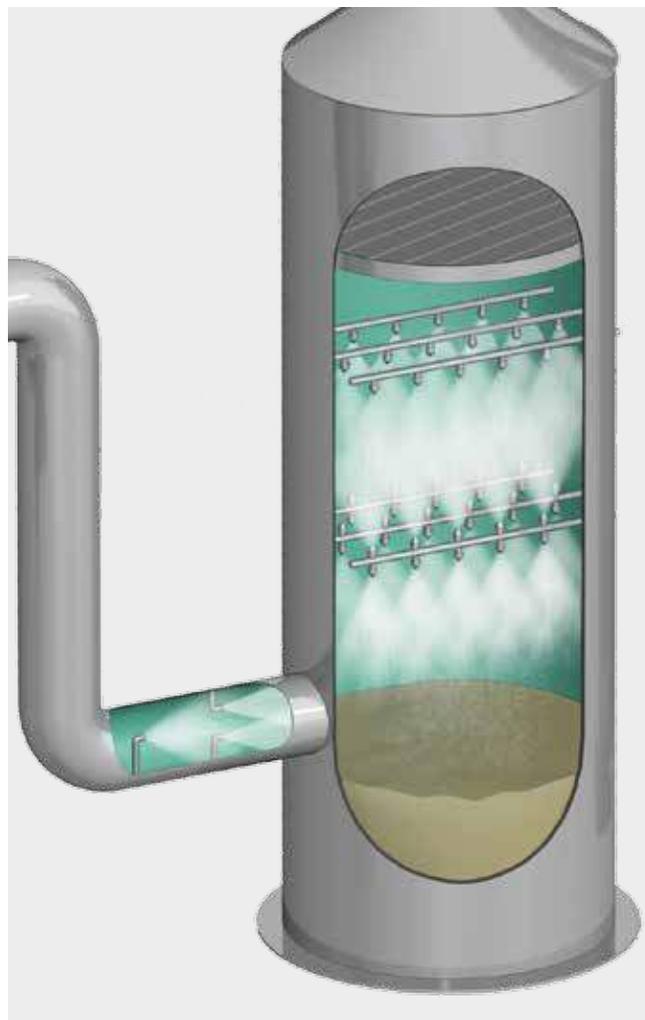


NOZZLES FOR FLUE-GAS DESULFURIZATION

Flue-gas desulfurization in power plants requires nozzles that guarantee precise long-term operation and can withstand extremely aggressive ambient conditions. Lechler has developed atomizing nozzles made of ceramic materials, e.g. from SiC, SiSiC or ReSiC, for these applications.

Lechler TwinAbsorb® nozzles ensure efficient flue gas cleaning and reliable SO₂ separation. Their improved efficiency, reduced operating costs as well as low maintenance costs make TwinAbsorb® nozzles the first choice for power plant operators for both process and economic reasons.



TwinAbsorb® EV

Equilateral full cone nozzle

The proven TwinAbsorb® EV equilateral full cone nozzle generates two full cones from only one supply.

Advantages

- Finer droplets (SMD d32) due to dual spray cones
- Particularly advantageous not only for high flow rates per nozzle
- Improved mass transfer due to higher relative speeds in relation to the gas flow
- Supports more uniform gas distribution over the scrubber cross-section
- No additional swirl introduced into the gas flow
- Better coverage of the scrubber wall zone
- Reduced losses at the scrubber wall in comparison with hollow cone nozzles
- Reduced torque acting on the pipelines
- Preservation of the positive characteristics of standard tangential flow full cone nozzles:
 - Self-draining
 - Large clear cross-sections
 - Non-clogging design



TwinAbsorb® EH

Equilateral hollow cone nozzle

The proven TwinAbsorb® EH equilateral hollow cone nozzle generates two hollow cones from only one supply.

Advantages

- Finer droplets (SMD d32) due to dual spray cones
- Particularly advantageous not only for high flow rates per nozzle
- Optimized secondary optimization through doubling of the collision areas
- Highly efficient generation of tiny droplets without additional energy input
- Intensive secondary atomization and therefore increased activated surface for faster mass transfer
- Improved mass transfer due to higher relative speeds in relation to the gas flow
- Increased turbulence in the droplets for more active mass transfer
- No additional swirl introduced into the gas flow
- Improved coverage of the scrubber cross-section
- Reduced torque acting on the pipelines
- Preservation of the positive characteristics of standard hollow cone nozzles:
 - Self-draining
 - Large clear cross-sections
 - Non-clogging design



NOZZLES FOR FLUE-GAS DESULFURIZATION

TwinAbsorb®-V

Bi-directional double full cone nozzle

The proven TwinAbsorb® V bi-directional full cone nozzle generates two counter-rotating full cones.

Advantages

- Improved mass transfer due to higher relative speeds in relation to the gas flow
- No additional swirl introduced into the gas flow
- Increased turbulence in the droplets for more active mass transfer
- Doubling of the hydraulic spray levels in comparison with single-direction nozzles
- Reduced pressure loss when used in counter-current scrubbers
- Increased dwell time of the droplets in the gas flow
- Reduced losses at the scrubber wall in comparison with hollow cone nozzles
- Better coverage of the scrubber wall zone
- Lower wall load in comparison with hollow cone nozzles
- Finer droplets (SMD d_{32}) in comparison with single-direction full cone nozzles
- Reduced torque acting on the pipelines
- Preservation of the positive characteristics of standard tangential flow full cone nozzles:
 - Self-draining
 - Large clear cross-sections
 - Non-clogging design



TwinAbsorb® H

Bi-directional double hollow cone nozzle

The proven TwinAbsorb® H bi-directional hollow cone nozzle generates two counter-rotating hollow cones.

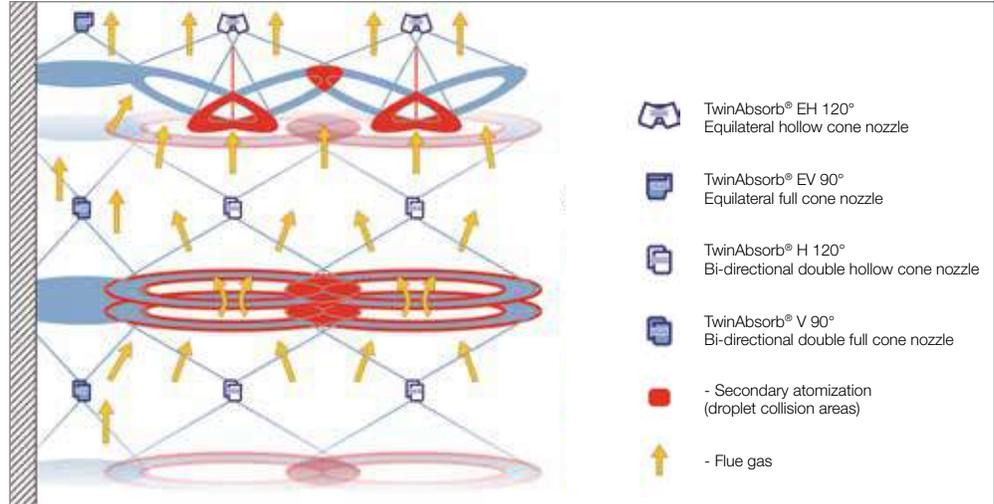
Advantages

- Improved mass transfer due to higher relative speeds in relation to the gas flow
- No additional swirl introduced into the gas flow
- Intensive secondary atomization and therefore increased activated surface for faster mass transfer
- Increased turbulence in the droplets for more active mass transfer
- Doubling of the hydraulic spray levels in comparison with single-direction nozzles
- Reduced pressure loss when used in counter-current scrubbers
- Increased dwell time of the droplets in the gas flow
- Supports uniform gas distribution over the scrubber cross-section
- Finer droplets (SMD d_{32}) in comparison with single-direction full cone nozzles
- Reduced torque acting on the pipelines
- Preservation of the positive characteristics of standard double hollow cone nozzles:
 - Self-draining
 - Large clear cross-sections
 - Non-clogging design



Process-oriented nozzle configuration

- Supports better gas distribution
- Highly efficient secondary atomization
- Improved mass transfer
- Swirl compensation



-  TwinAbsorb® EH 120°
Equilateral hollow cone nozzle
-  TwinAbsorb® EV 90°
Equilateral full cone nozzle
-  TwinAbsorb® H 120°
Bi-directional double hollow cone nozzle
-  TwinAbsorb® V 90°
Bi-directional double full cone nozzle
-  - Secondary atomization
(droplet collision areas)
-  - Flue gas

In addition to the TwinAbsorb® series, Lechler also offers a comprehensive range of nozzles for flue gas desulfurization in a wide range of designs and materials that are exactly tailored to your specific application.



Twin4Absorb

Twin4Absorb nozzles are a further development of the Twin-Absorb® nozzle series. Four overlapping spray cones generate additional jet collisions and thus a more active reaction surface. Thanks to the enhance spatial distribution, the Twin4Absorb nozzles are ideal for optimizing existing scrubbers.



Nozzles made of SIC



Nozzles made of SISIC



Helix nozzles made of SISIC/ReSIC



Helix nozzles made of Stellite

Talk to us

Are you not sure which configuration best meets your requirements? We will gladly advise you. Just give us a call.

