

SCOPE OF CONSULTANCY AND RANGE OF SUPPLIES

Since our formation in 1973, we have gained a reputation for technical innovation and reliability, together with excellent quality and service in the fields:

- Atomising technology
- Gas cleaning
- Quenching systems / spray evaporators
- CO₂-evaporators

The CALDYN product range includes:

- Delivery of components (nozzles, lances, droplet eliminators, etc.)
- Apparatus (quenching systems, scrubbing systems, CO₂-evaporators, etc.)
- Complete plants
- Extensive engineering in the fields mentioned above

The in-house design and manufacture of essential items ensures optimum solutions for our clients.



Atomising systems

The nozzle with internal mixing chamber, developed by CALDYN (German patent 1976) is manufactured in various designs (lances with protection tube, water cooling, adjustable lengths, cleaning device etc). The atomising systems are made on customer's request and can thus be adapted to any special requirements.



Standard nozzle type CSL_B



Standard nozzle type CSL_C



Lances type CSL_DML each with 6 nozzle tips in line (DeNOx-plant)



Lance type CSL_DE



Lances type CSL_DMR with 5 nozzle tips each (quenching system)



Lance type CSL_DMR with 3 nozzle tips (DeNOx-plant)

Pneumatic nozzle CSL

Hydraulic nozzle CED

CALDYN supplies full cone nozzles and complete lances made of stainless steel. Other materials or designs can be delivered on request.



Lance with hydraulic nozzle



Hydraulic nozzles type CED

Quenching systems/ Spray evaporators

CALDYN has more than 20 years of experience in planning, engineering, fabrication and commissioning of quenching systems. CALDYN has delivered more than 100 quenching systems worldwide in:

- chemical industry
- power plants
- copper industry
- waste incineration plants
- steel industry
- cement industry
- zinc industry



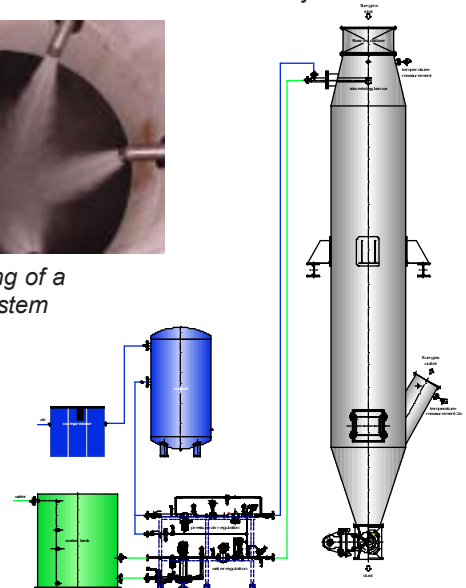
Quenching tower steel industry

Quenching system QN



Commissioning of a quenching system

Scheme of a quenching system



CALDYN delivers spray evaporators for the following applications:

- Spray absorber with lime or caustic soda
- Evaporation of waste water (i.e. from gas cleaning systems)



Spray evaporator in an incineration plant for hospital waste

Spray evaporator



Lime tank with pump and regulating station for two spray absorbers in a waste incineration plant

Gas Cleaning

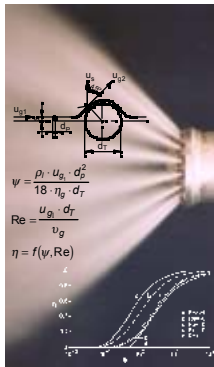
Scrubbing System CALWIR

The CALWIR scrubber system can be delivered in two main designs:

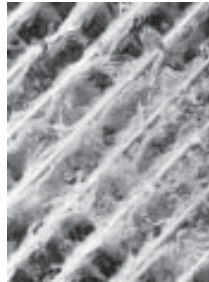
- As packing column for dedusting and the absorption of gaseous pollutants
- As scrubber for the separation of aerosols with aerosol-enlargement by means of water vapour condensation with subsequent coalescencer and removal of the enlarged aerosols in the final MULTIWIR demister.



CALWIR scrubber for the separation of boracid aerosols



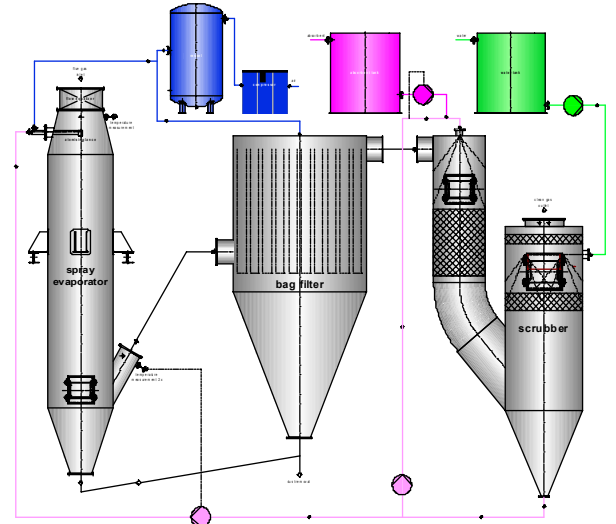
Nozzle cluster with pneumatic nozzles CSL showing the principle of particle removal by inertia forces



Water containing mass transfer packing MULTIWIR

Desulphurisation without residual water ABR

The CALDYN gas cleaning system without residual water ABR meets the legal limits for SO₃, SO₂, HCl, HF und dust with low absorbent consumption (stoichiometric factor approximately 1.1).

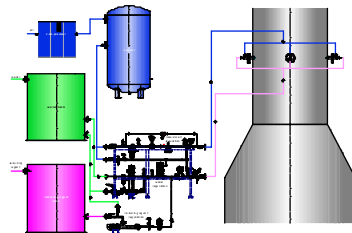


Scheme ABR-system

DeNOx-Systems

SNCR-plants

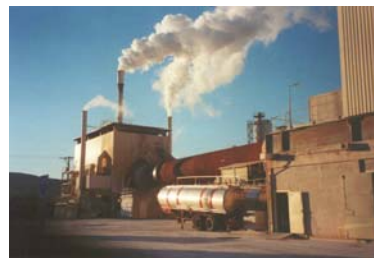
The CALDYN range of supplies comprises the engineering as well as complete plants (see scheme).



Scheme SNCR-plant



Regulating station SNCR-plant



SNCR-plant in cement industry

SCR-plants

CALDYN delivers the engineering and spraying system for the evaporation of the reducing agent before the catalyst.



Lance DeNOx-plant

Demister MULTIWIR

Besides the application in scrubbers the MULTIWIR-system is used in air humidifiers and for gas cooling. The MULTIWIR is plugging-free and more efficient compared to conventional demisters.



Demister MULTIWIR made of stainless steel



Demister MULTIWIR made of PP mounted in a scrubber



Demister MULTIWIR made of stainless steel with FRG-housing

CO₂-Evaporator

CO₂-Evaporator CL

The CALDYN system uses the heat of the ambient air for the evaporation of CO₂. The evaporators are used by most of the big breweries and have proven to be reliable even with continuous running for decades.



CALDYN-evaporator type CL 90 (for 1000 kg/h CO₂)

References

CALDYN delivered to the following companies:

Further information

For the individual products detailed technical information can be submitted. Moreover, CALDYN issued several publications, which can be sent on request.

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