

Vápno, cement, ekologie

Jezerka 12. - 14. 6. 2017

scheuch

TECHNOLOGY FOR CLEAN AIR

YOUR STRONG PARTNER FOR CLEAN AIR

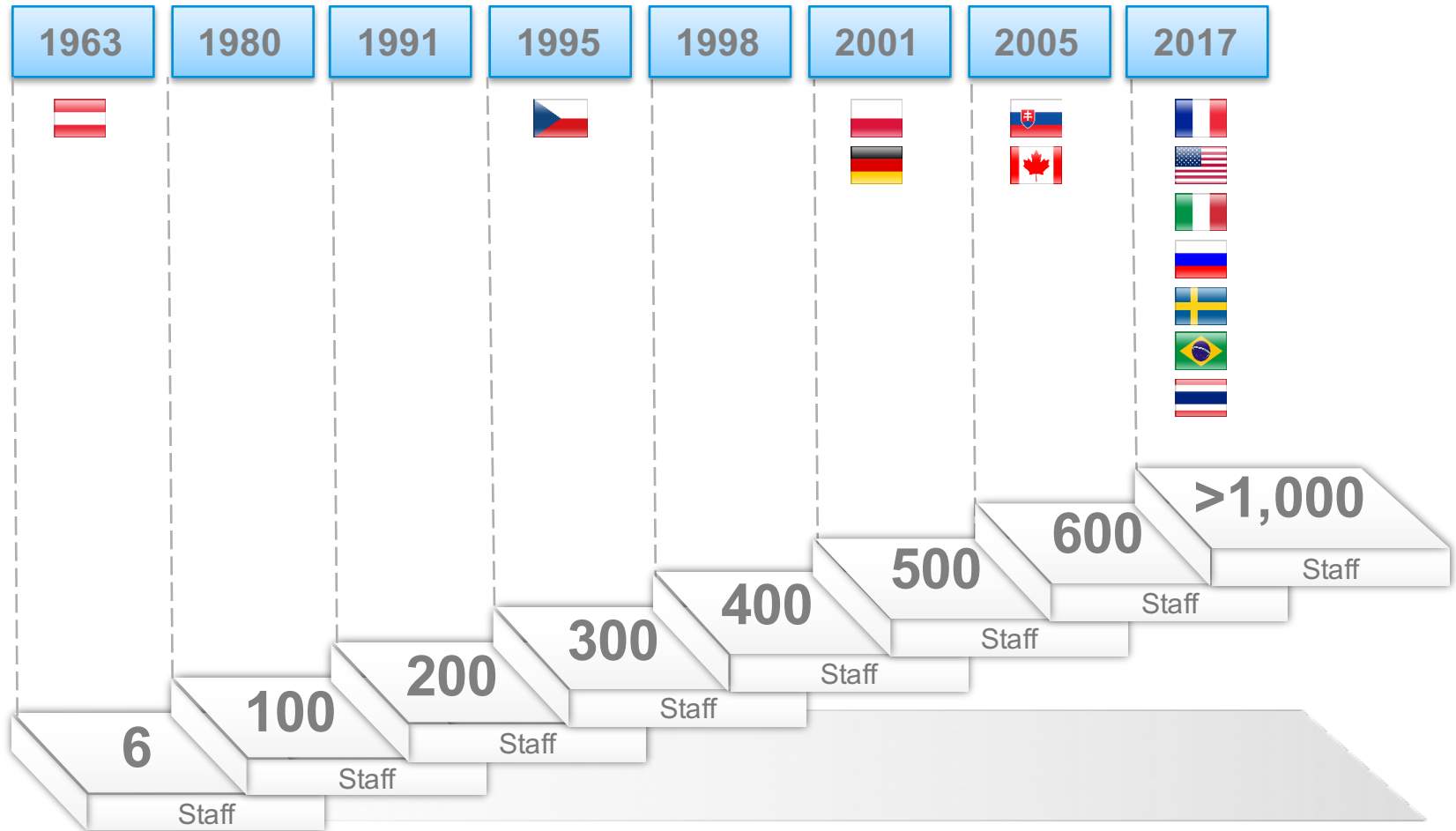
EMISSION STANDARDS

	German Standards 01/2019		Slovak Standards		Czech Standards	
	daily-average limit	1/2 hour - limit	valid	prospect	valid	prospect
NO _x	200	400	1500	200	500	250
NH ₃	30	60	-	30	-	30
CO	50	100	-	-	-	-
TOC	10	20	50	20	10	10
SO ₂	50	100	400	50	400	50
dust/TZL	10	30	50	10	30	10
Hg	0,03	0,05	-	0,05	-	0,05
TK9	0,5	0,5	-	-	-	0,5

TK9 = As, Co, Cr, Cu, Mn, Ni, Pb, Sb, V,

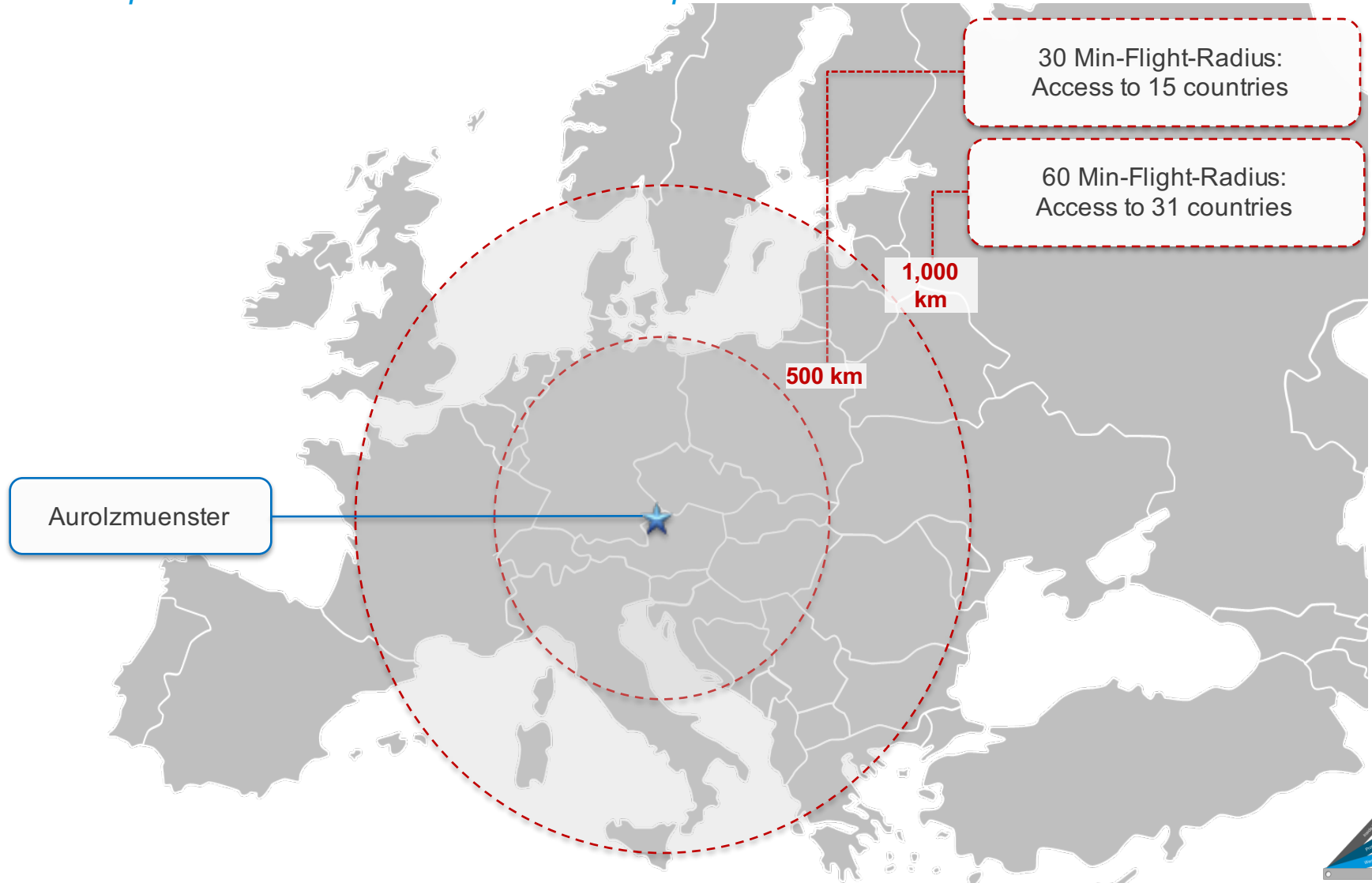
NUMBER OF EMPLOYEES

More than 600 employees are located in Auroldzmuenster/Austria



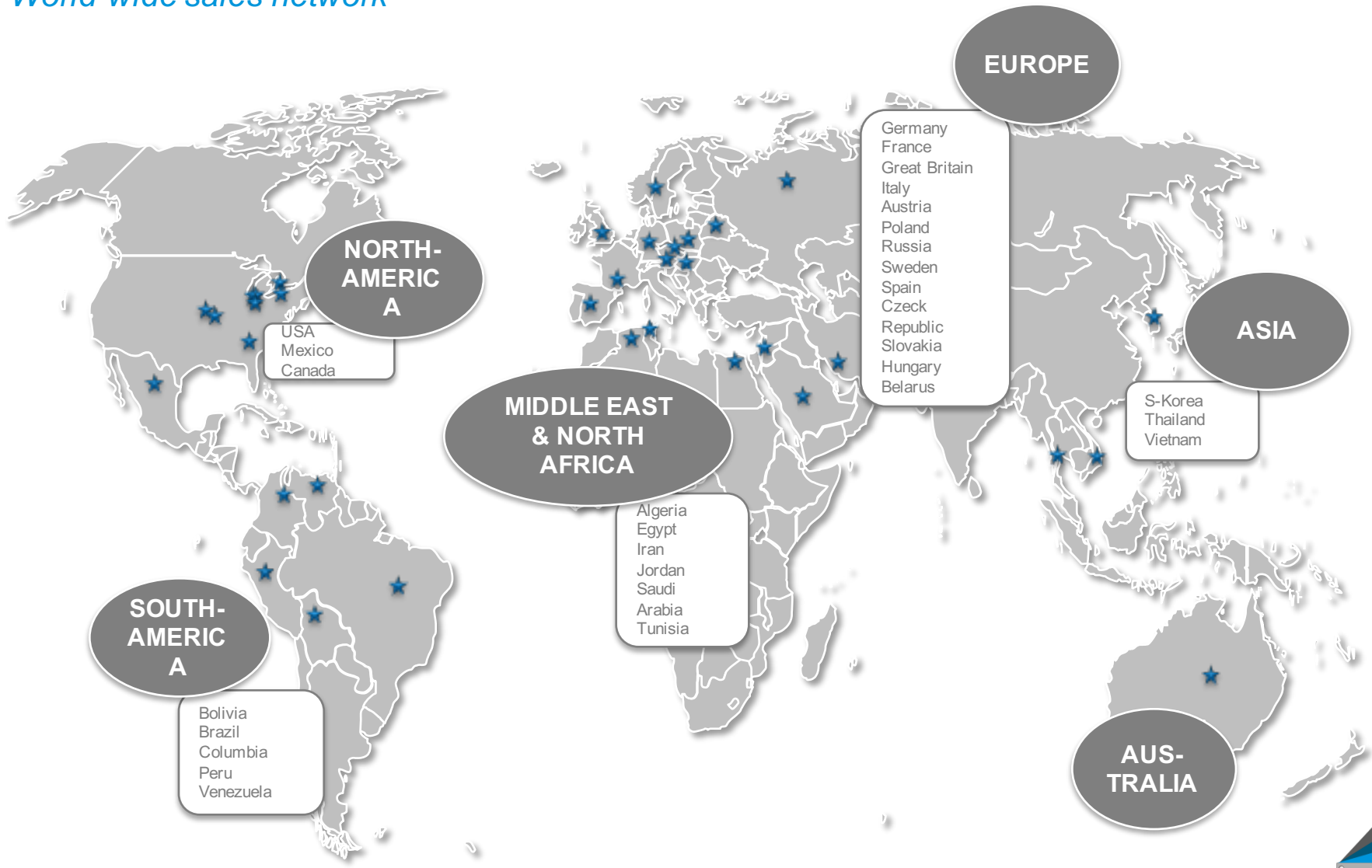
AUROLZMUENSTER

The headquarter is located in the heart of Europe



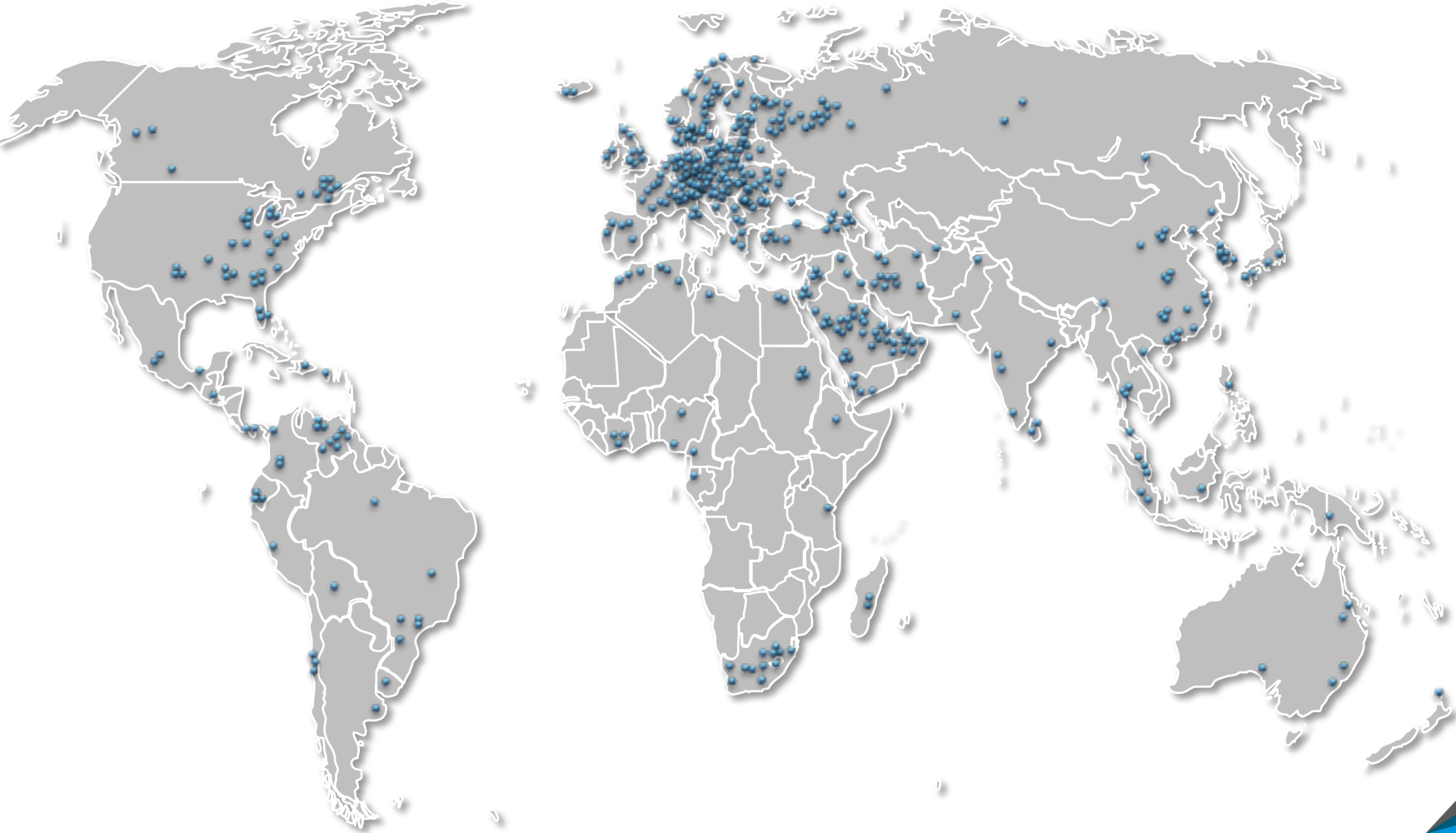
GLOBAL OPERATIONS

World-wide sales network



GLOBAL OPERATIONS

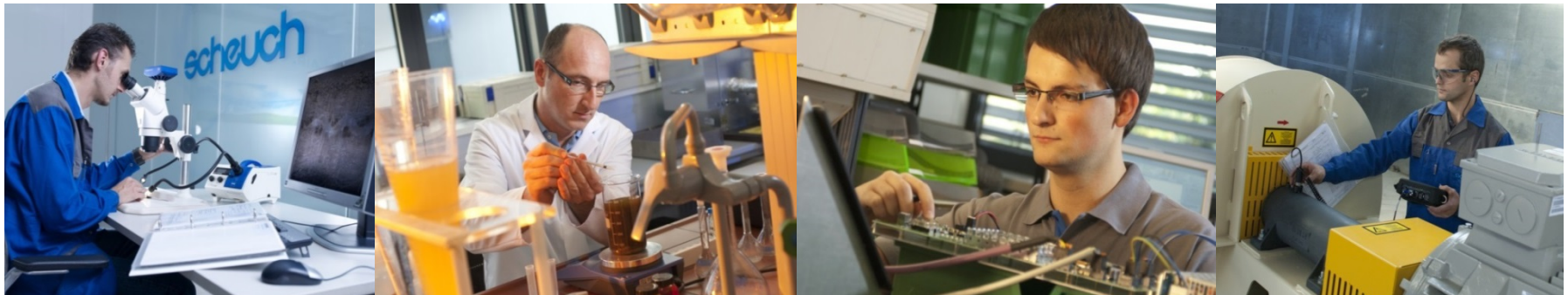
World-wide installed facilities



RESEARCH AND DEVELOPMENT

Scheuch stands for state-of-the-art technology

- Team of ~ 30 specialists
- In-house pilot plant stations and laboratory
- Latest evaluation software and measurement technologies
- Stationary and mobile test facilities



R&D IMPRESSIONS

Pictures of the in-house pilot plant stations and the laboratory



LOGISTIC AND TRANSPORT

We get your precision plants safely to every destination

- Delivery on schedule to every destination
- All involved companies, customs authorities, inspectors, etc. are considered in the handling
- Customer benefit: Tailor-made solutions from a single source → world-wide!
- 4,000 fully-loaded trucks, 3,300 rail consignments, 1,600 DHL-consignments, 2,500 package consignments



ASSEMBLY AND COMMISSIONING

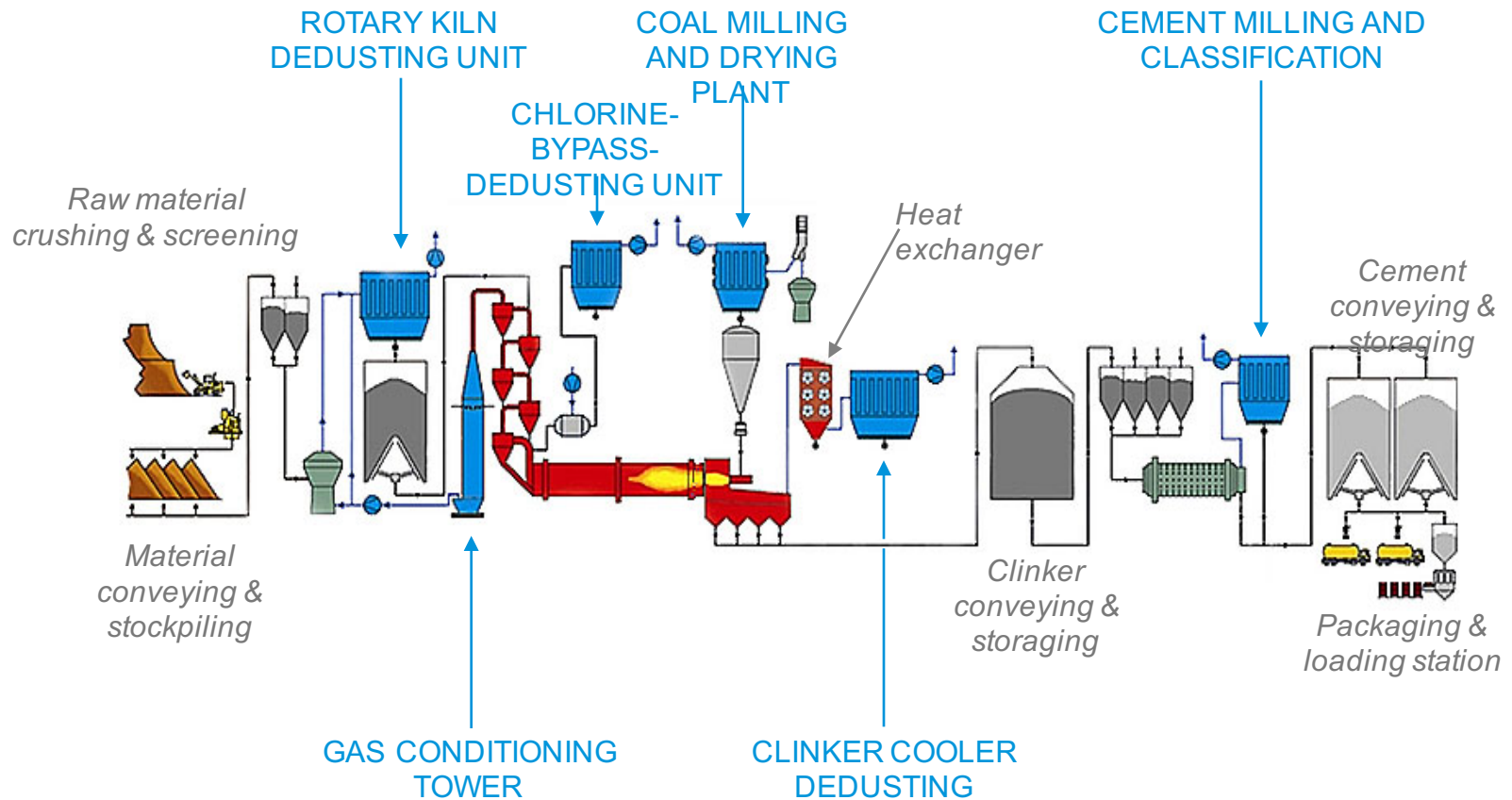
Scheuch Service GmbH is a subsidiary 100% owned by Scheuch GmbH

- Scheuch Service GmbH with 60 staff
- Extensive product and process know how
- Steel work and pipelines
- Wiring and connection works
- Switchboard (control cabinet) construction
- Production monitoring and on-site construction supervision
- Supervision



INDUSTRIAL MINERALS (2)

Functional schematic of a cement plant and Scheuch filter devices



INDUSTRIAL MINERALS (3)

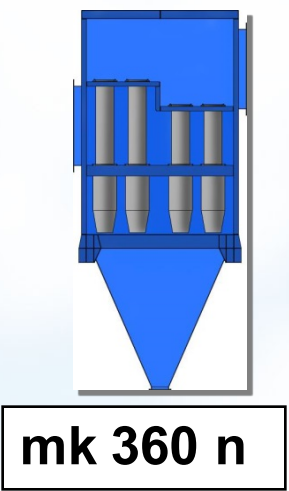
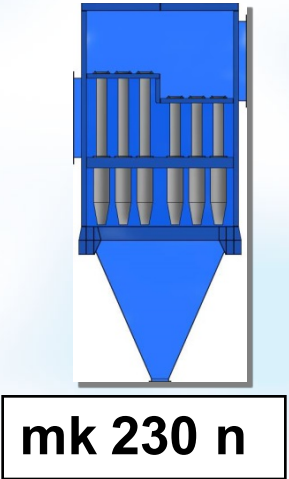
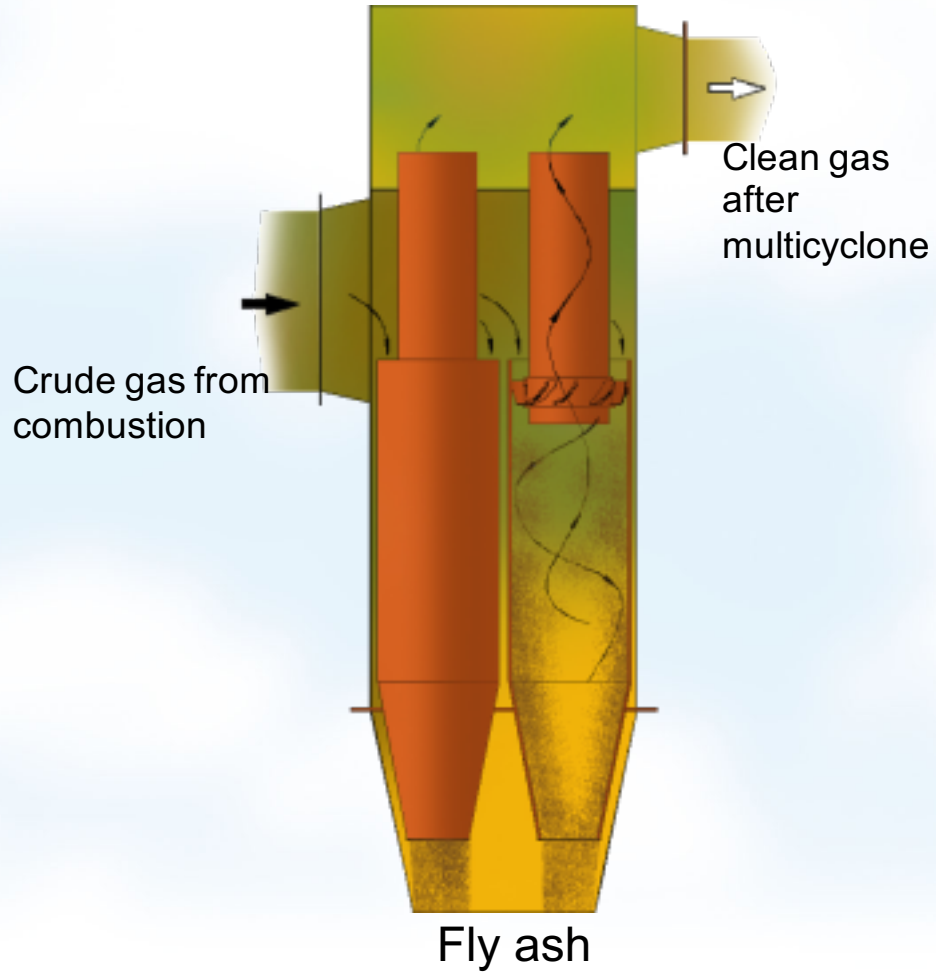
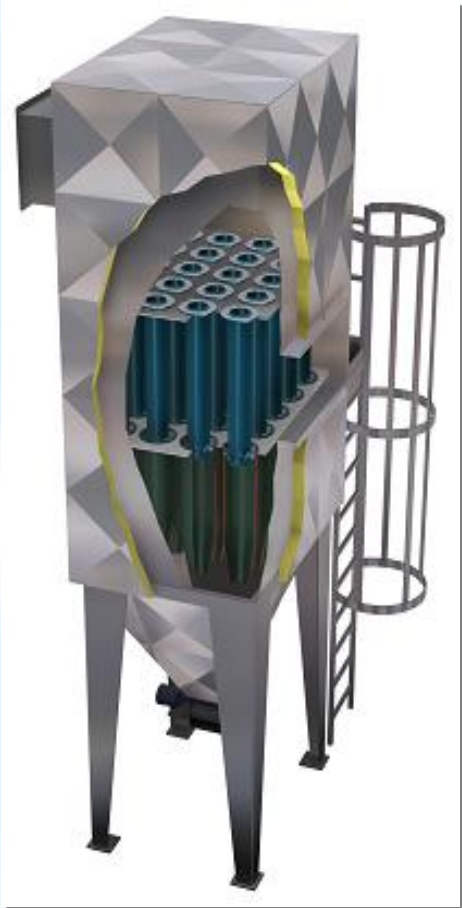
Impressions of installed facilities





Multicyclone

Functional principle

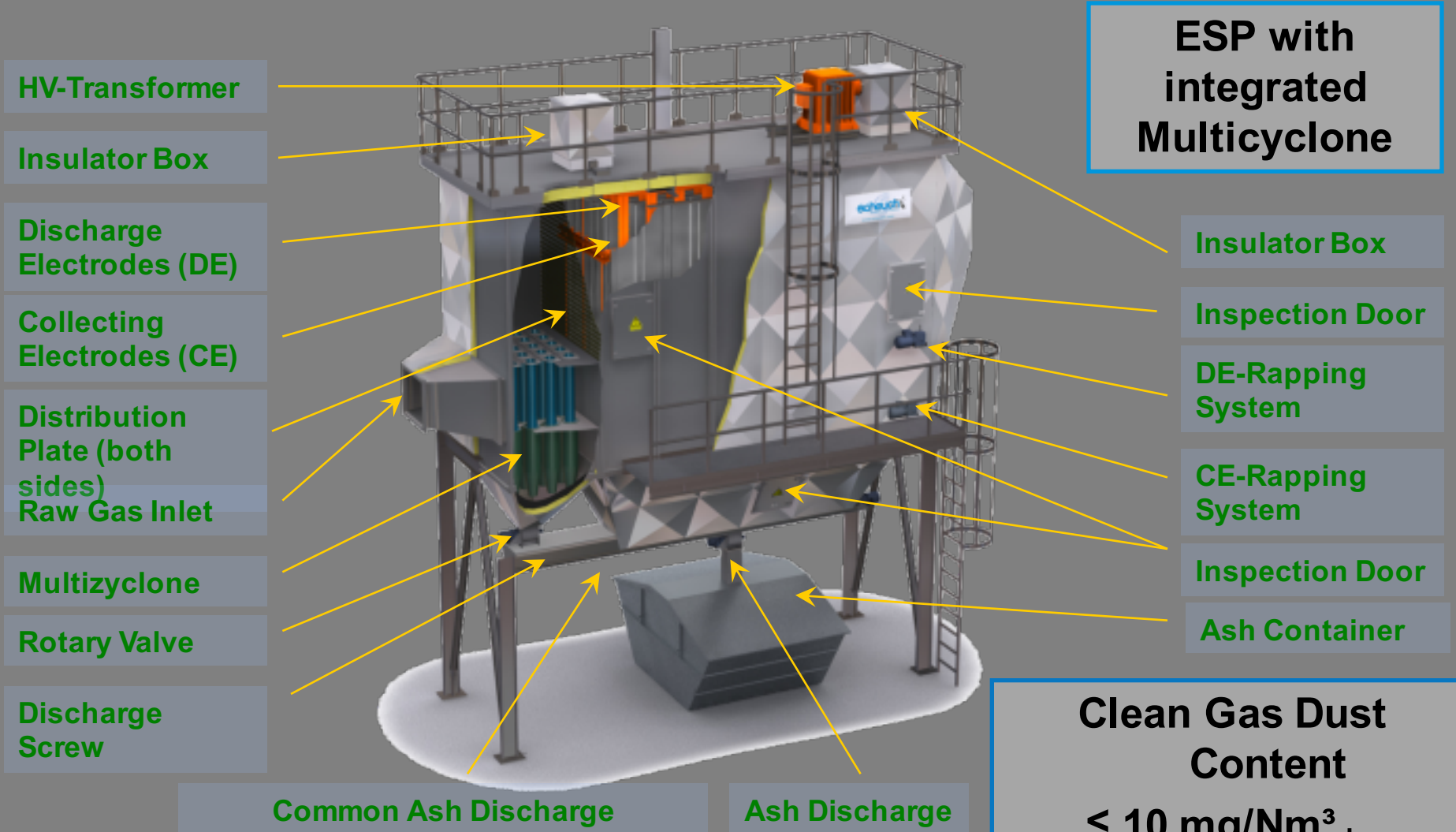


Multicyclone

References



Dry ESP



HV-Transformer

Insulator Box

Discharge Electrodes (DE)

Collecting Electrodes (CE)

Distribution Plate (both sides)
Raw Gas Inlet

Multizyclone

Rotary Valve

Discharge Screw

ESP with integrated Multicyclone

Insulator Box

Inspection Door

DE-Rapping System

CE-Rapping System

Inspection Door

Ash Container

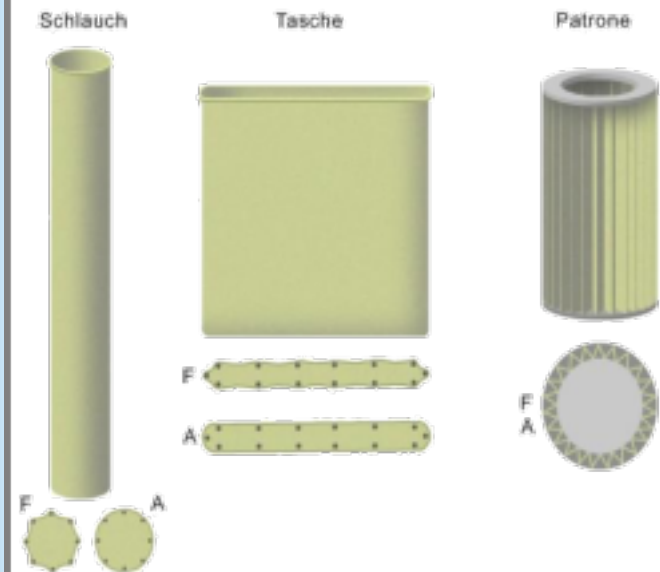
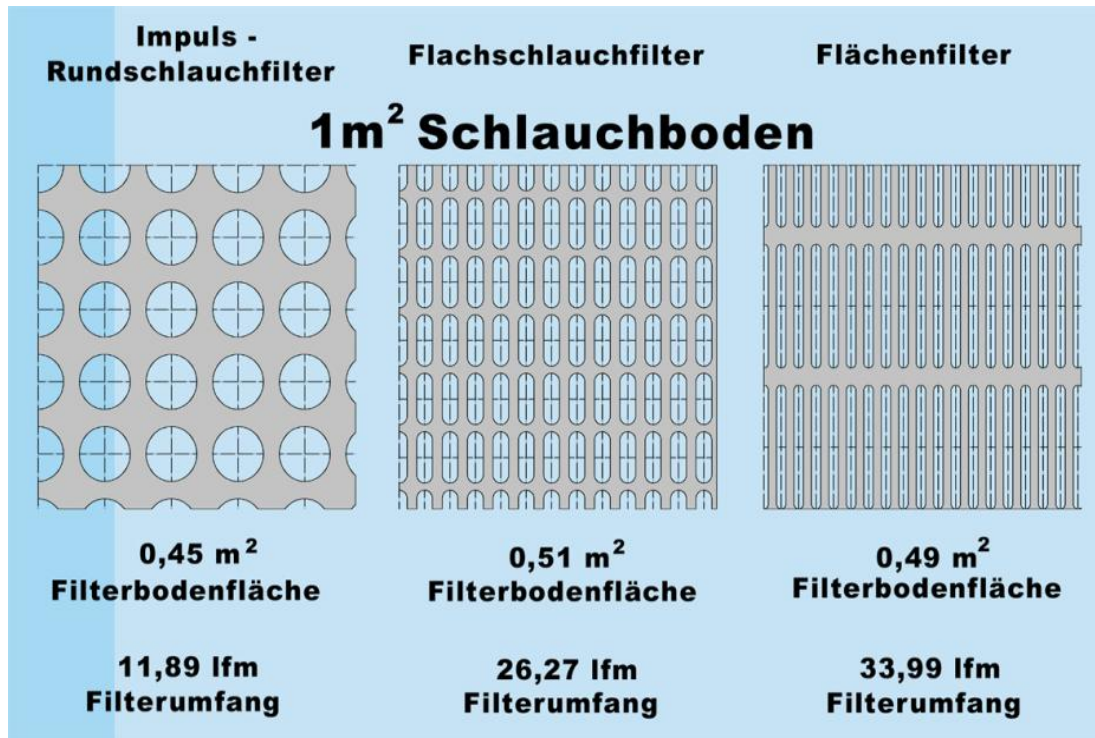
Clean Gas Dust Content

≤ 10 mg/Nm³_{dry}

Common Ash Discharge

Ash Discharge

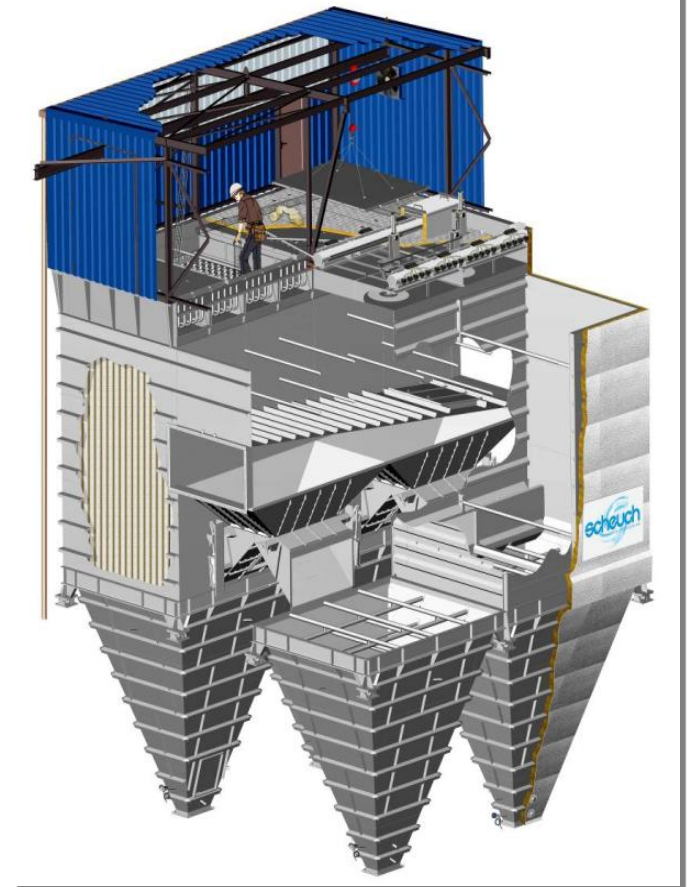
Filter Bag Pattern and Media



SCHEUCH BAG FILTER

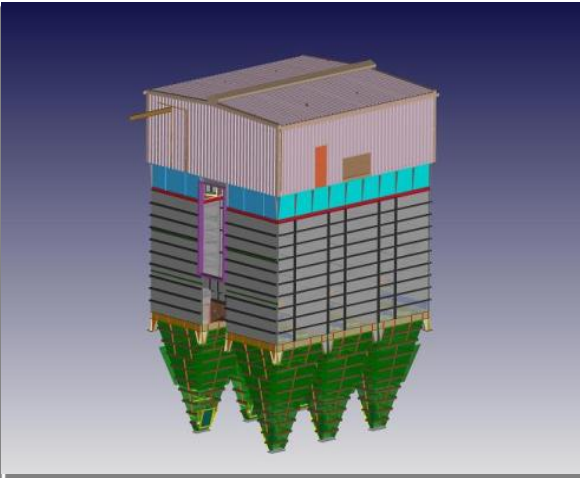
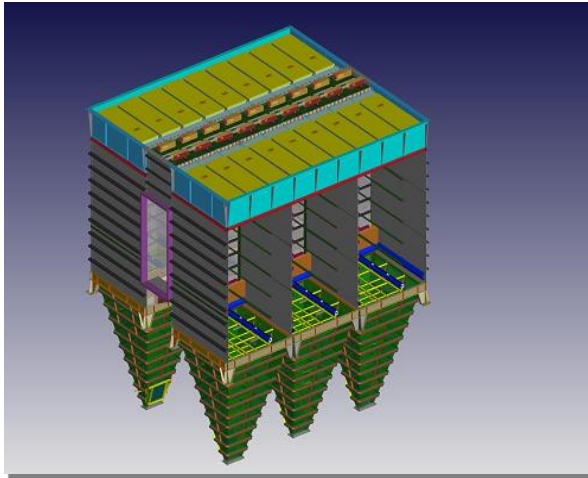
Multi Compartment Filter – SCHEUCH Bag Filter Type fi_rg

- **Multi compartment filter in welded design**
- **Changing of filter bags during operation**
- **Bag diameter \varnothing 165mm**
- **Length of filter bags: standard = 4.500 - 12.000mm**
- **Filter surface 800 - 30.000m²**
- **Indoor + outdoor installation**

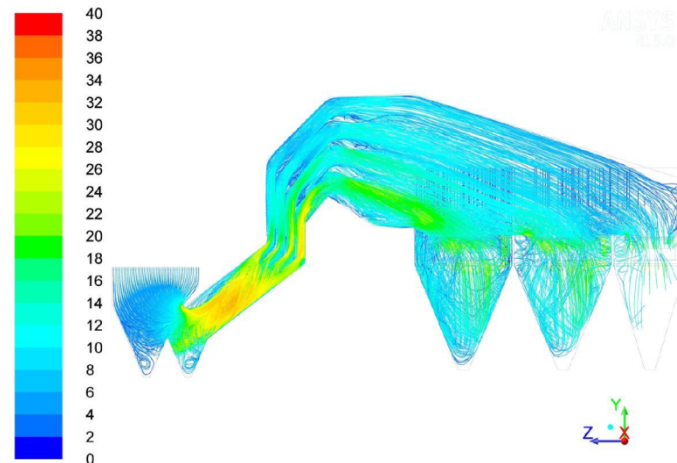


SCHEUCH EQUIPMENT FOR FGC

3D CAD/Modelling + 3D Planning

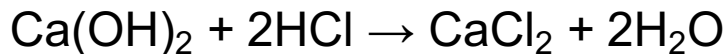
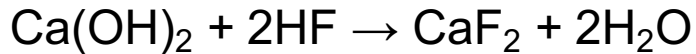
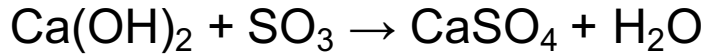


CFD Simulation (Fluent 15.0)

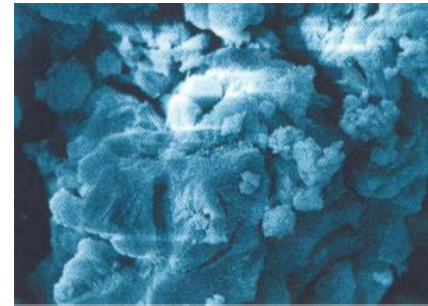


DRY SORPTION BASED on $\text{Ca}(\text{OH})_2$

Dry Sorption Process - $\text{Ca}(\text{OH})_2$



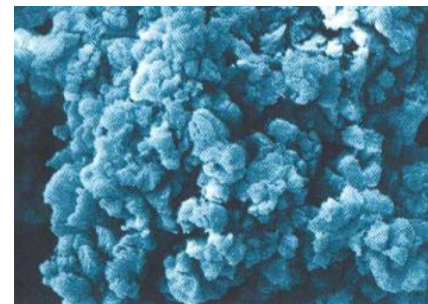
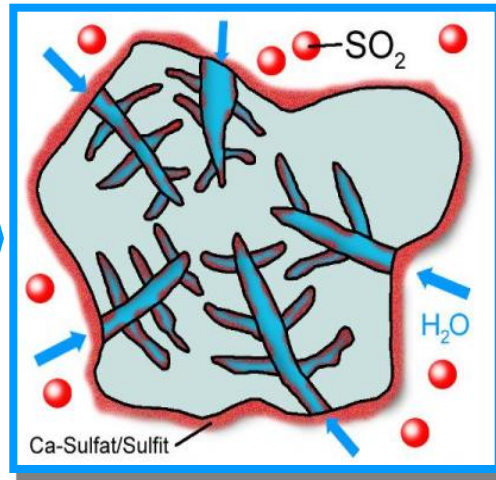
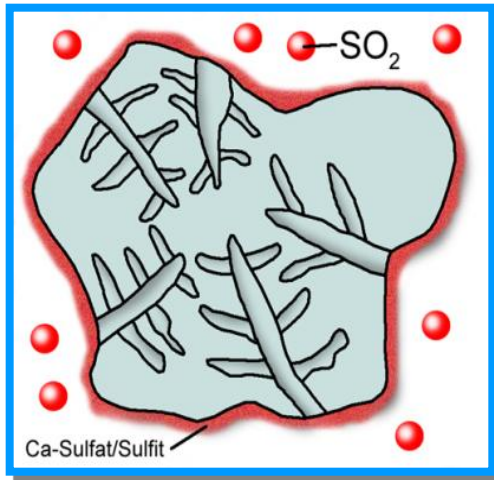
Decreasing
Reactivity



Separation efficiency

HCl approx. 98 %
SO₂ approx. 80 %

$\text{Ca}(\text{OH})_2$ - Spec. Surface > 18 m²/g

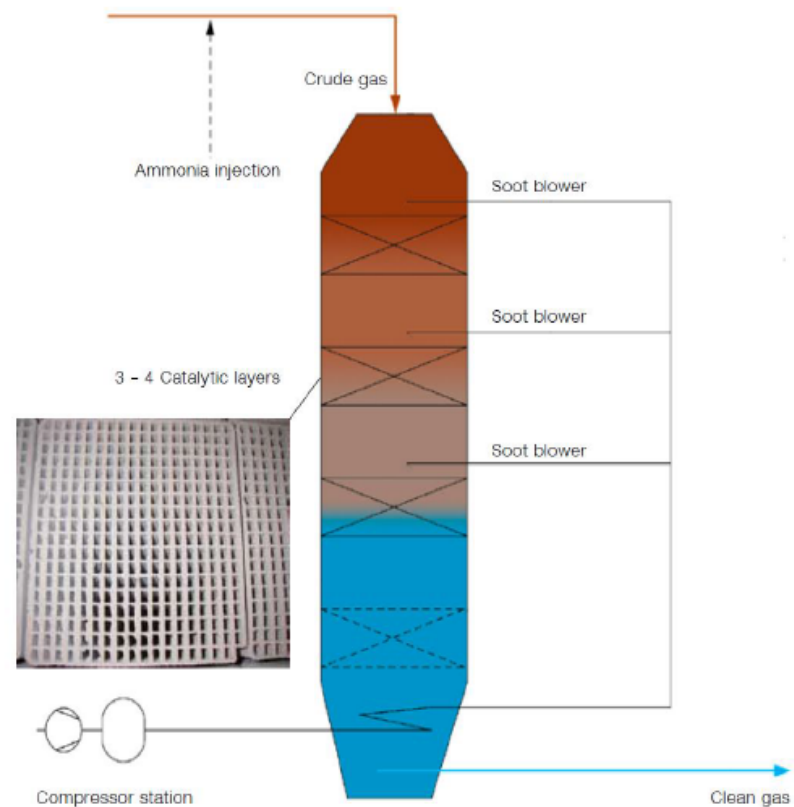


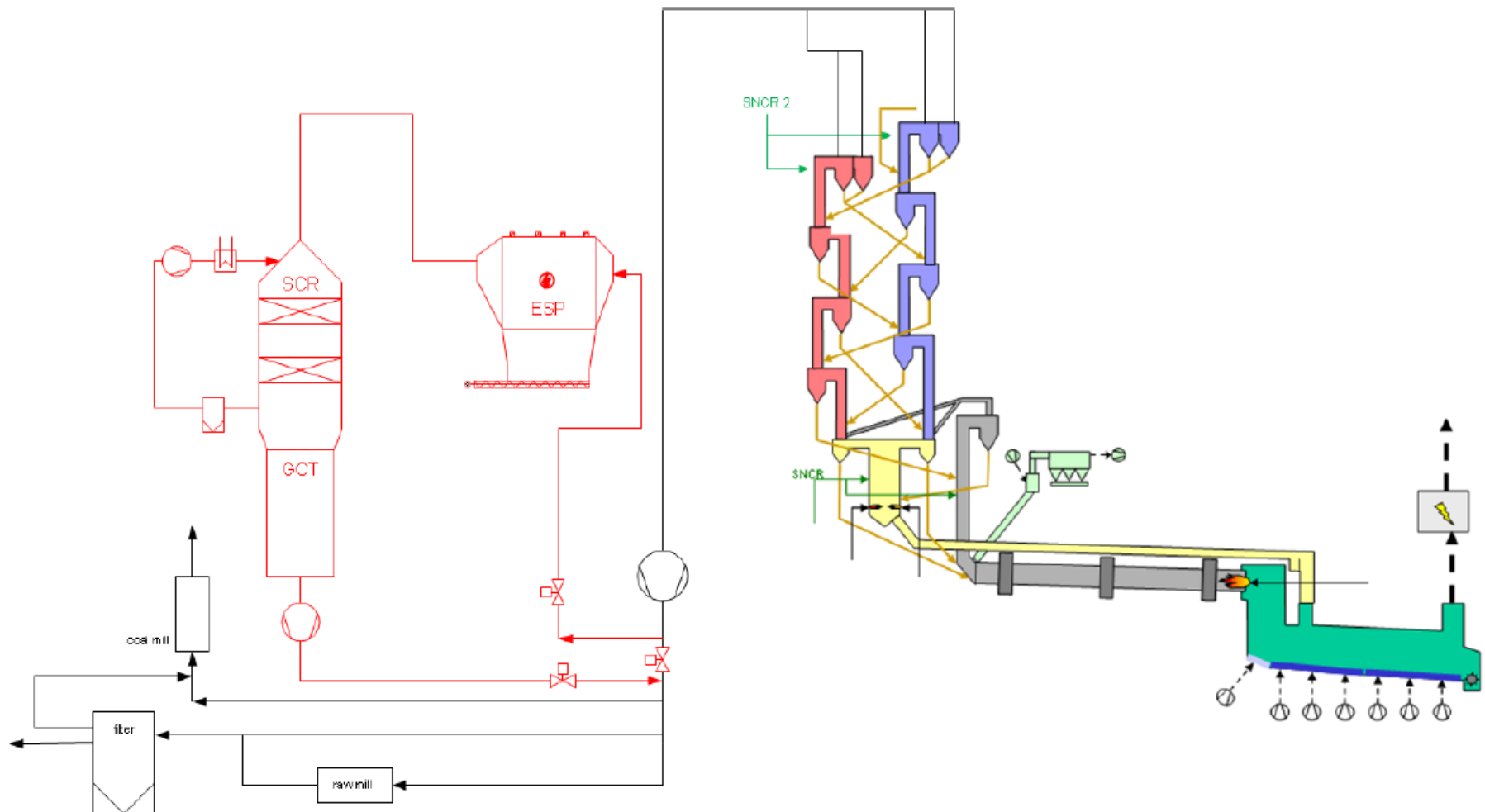
Separation efficiency

HCl approx. 99 %
SO₂ approx. 90 %

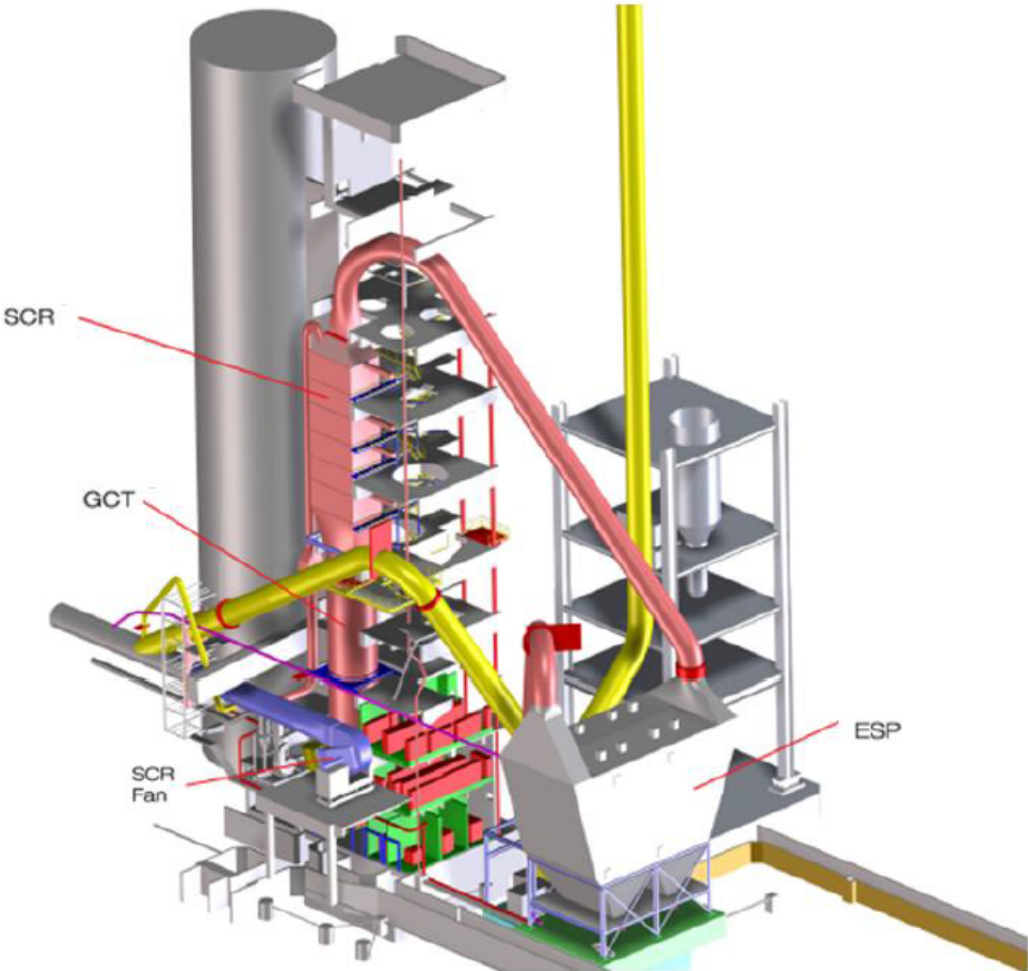
$\text{Ca}(\text{OH})_2$ - Spec. Surface > 40 m²/g

HIGH DUST SCR

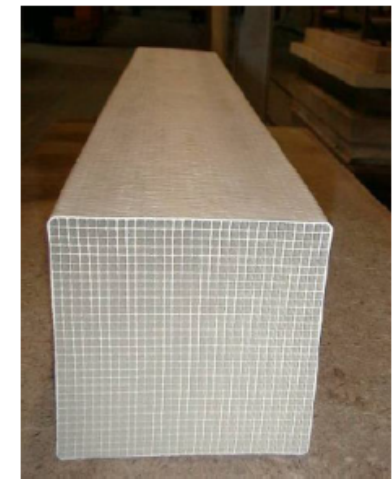




SEMI HIGH DUST MANNERSDORF



CATALYSER INSPECTION MANNERSDORF



Scheuch Soot Blowers



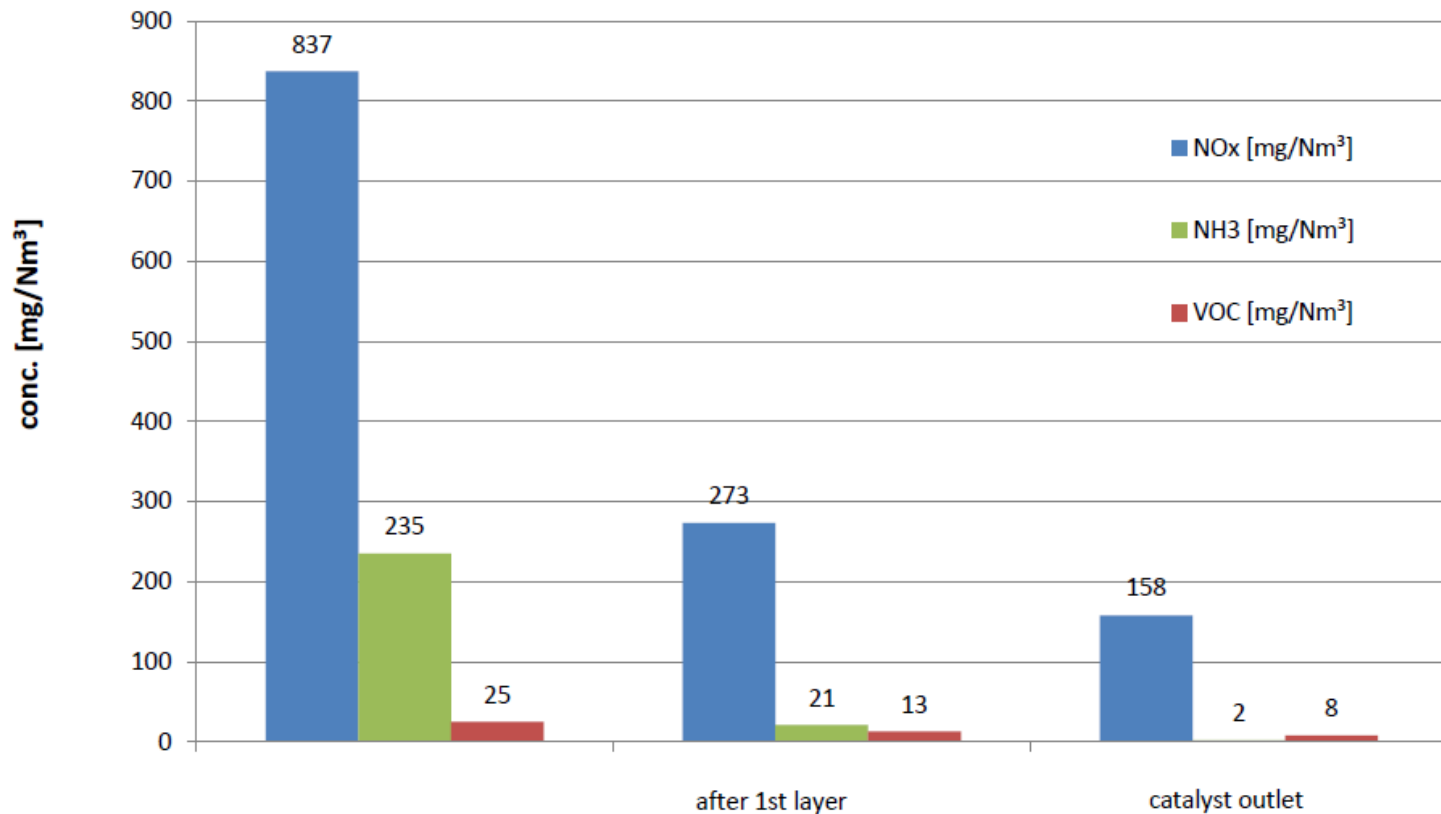
Heat Exchanger



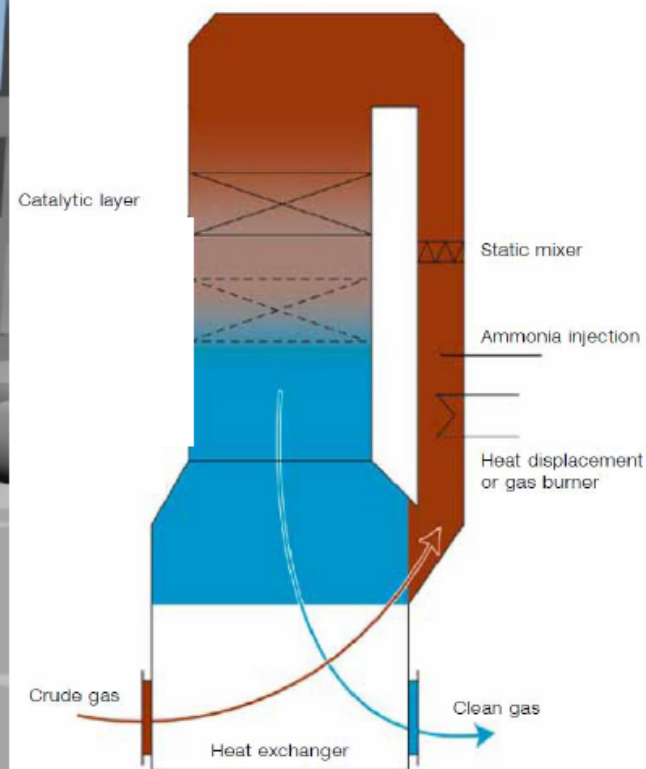
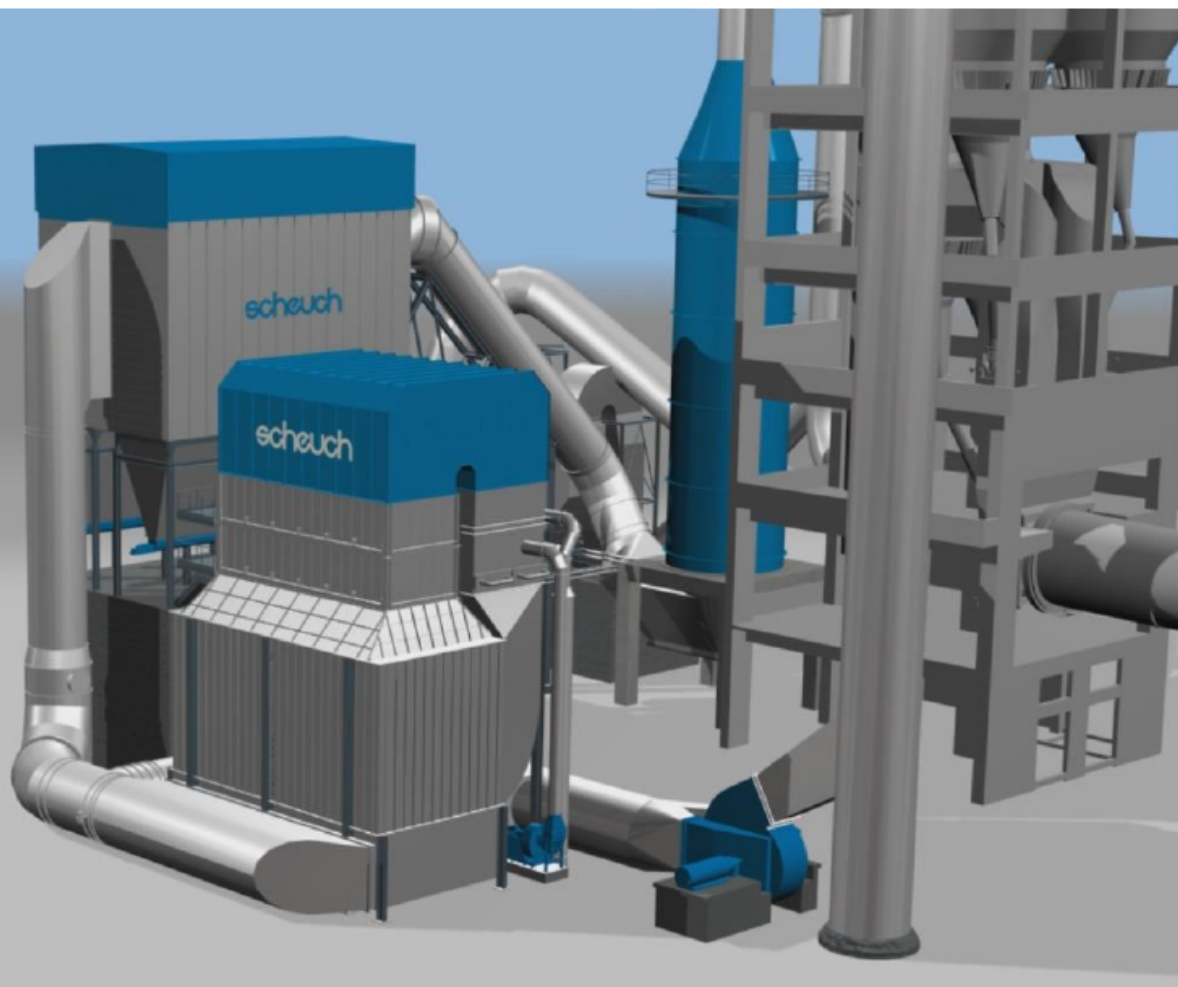
SEMI HIGH DUST MANNERSDORF RESULTS

Project Target ✓

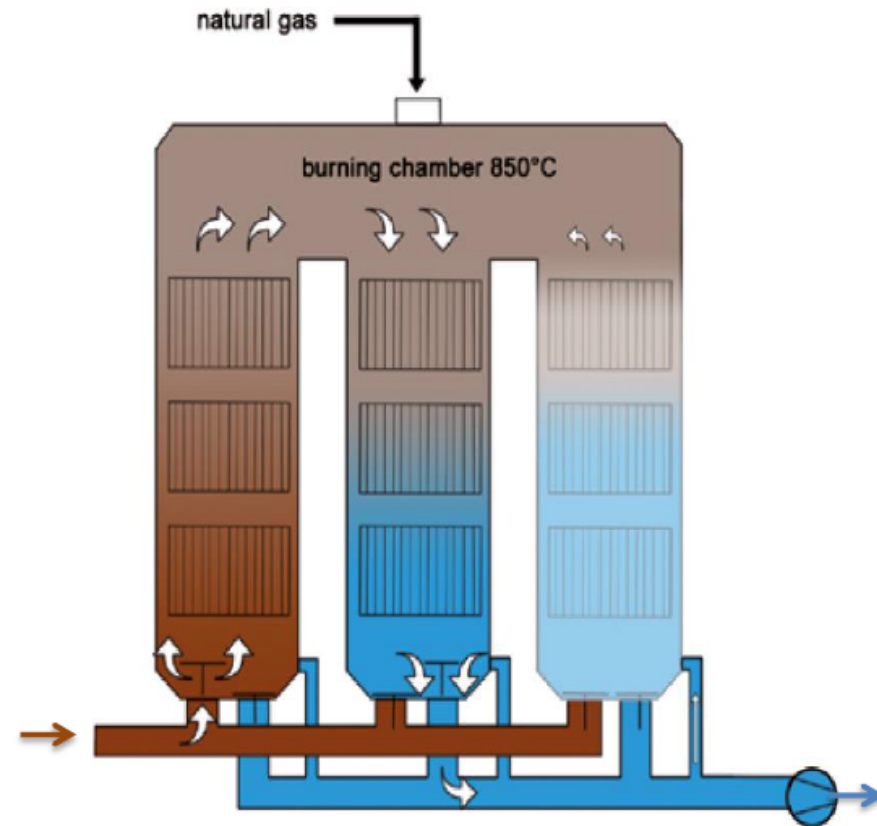
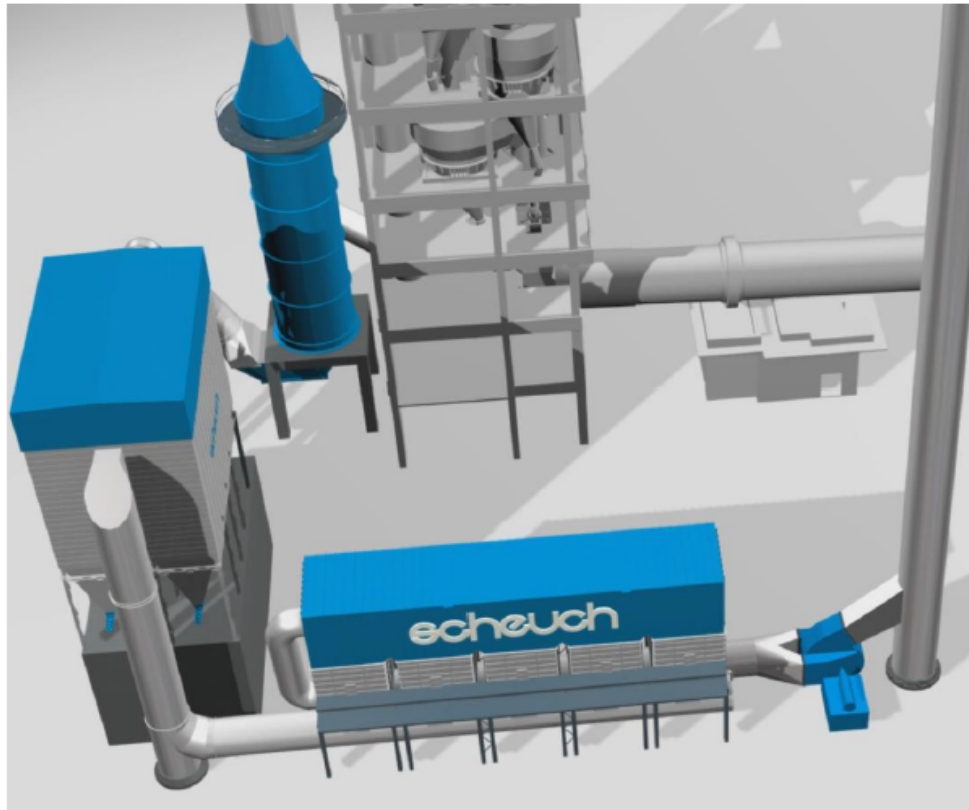
TÜV measuring campaign June 2012



LOW DUST SCR "CLASSIC"



LOW DUST SCR



Schwenk Zement – Allmendingen plant - Germany



Design Data:

- Clinker capacity: 3.500 t/d
- Gasflow: 432,000 Nm³/h
- Temperatures: 120° C – 160° C
- Dust load: < 5 mg/Nm³

Project Targets:

- < 200 mg/Nm³ NO_x
 - < 20 mg/Nm³ NH₃
 - < 10 mg/Nm³ VOC
 - < 50 mg/Nm³ CO
- Compliance to emission limits as per 17. BImSchV*

Start-Up: November 2017

2nd

Site Impressions April 2017



DeCONOX – main parts - finished



Raw Gas Box – finished



Wietersdorfer Zement – Wietersdorf - Austria



Design Data:

- Clinker capacity: 2.200 t/d
- Gasflow: 330,000 Nm³/h
- Temperatures: 130° C – 170° C
- Dust load: < 5 mg/Nm³

Project Targets:

- < 200 mg/Nm³ NO_x
- < 20 mg/Nm³ NH₃
- < 10 mg/Nm³ VOC
- < 50 mg/Nm³ CO

Start-Up: August 2017

