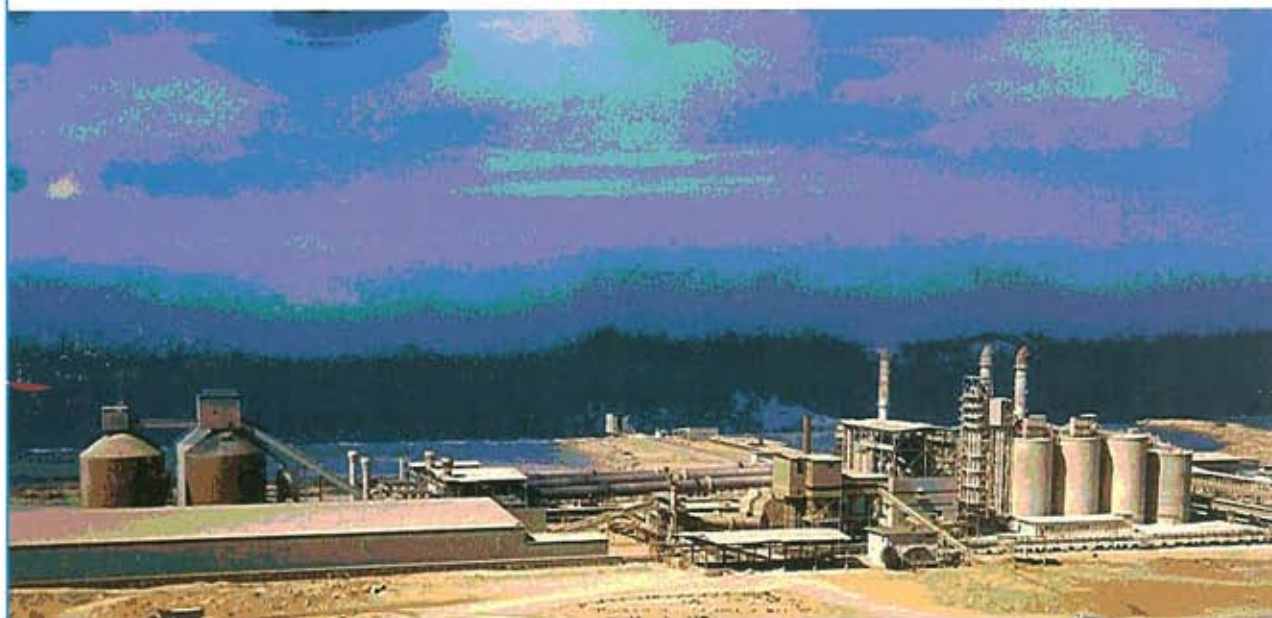


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Cement and Lime

Filtertechnology
for the Cement- and Limeindustry



Mighty solutions for tiny particles.



Production

Nowadays the production of cement and lime in modern production facilities is practically no longer possible without employing high-efficiency filter units.

Increased expectations with regard to emission limit values measures, but also the considerable economy and reliability of modern bag-filter units have redefined filter technology standard.

It is not just the energy consumption of the units or the lifespan of the filter elements which are important today, but also and in particular the high availability, the economic and simple maintenance during operation as well as problem-free integration into existing units which are demanded by operators.

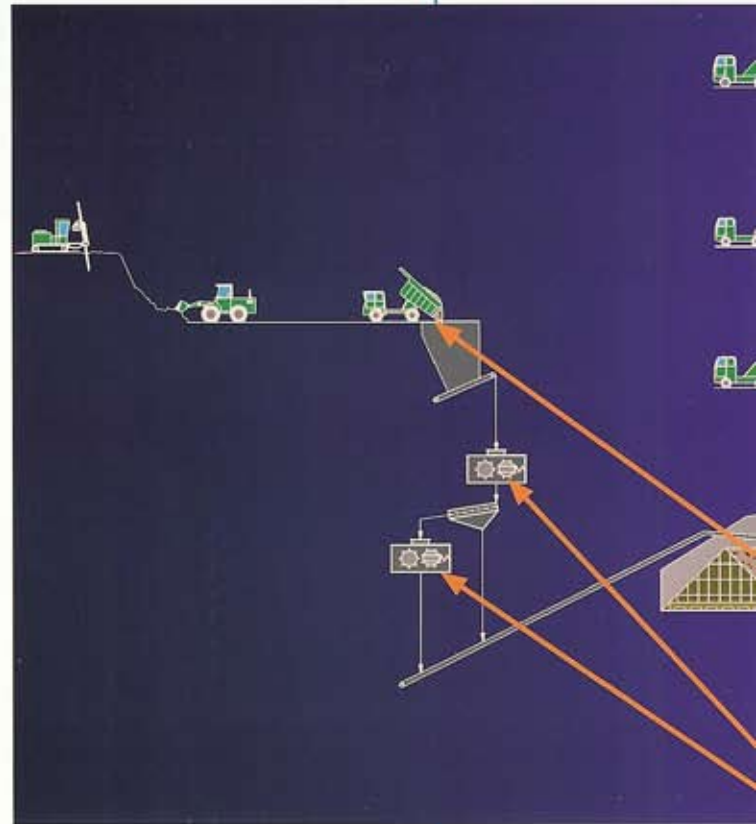
- in short: High Efficiency Best Performing Systems (HEPS) -

Intensiv-Filter has developed optimal bag-filter technology especially for the demands of cement and lime production. Additional matching machinery, e.g.

- fans
- gas coolers / heat-exchangers
- quenchers / gas conditioners
- dust transport and discharge devices

as well as comprehensive gas scrubbing technology deliver the "building blocks" for all specific fields of application in modern production facilities:

- from raw material crusher to bagging plants
- from kiln off-gases to clinker cooler dedusting
- mill, separator, silo dedusting for raw meal, coal or end-product on shaft-kilns and rotary-kilns of the most varied types Intensiv-Filter supplies high-efficiency filter technology with best availability and optimal cost-effectiveness.



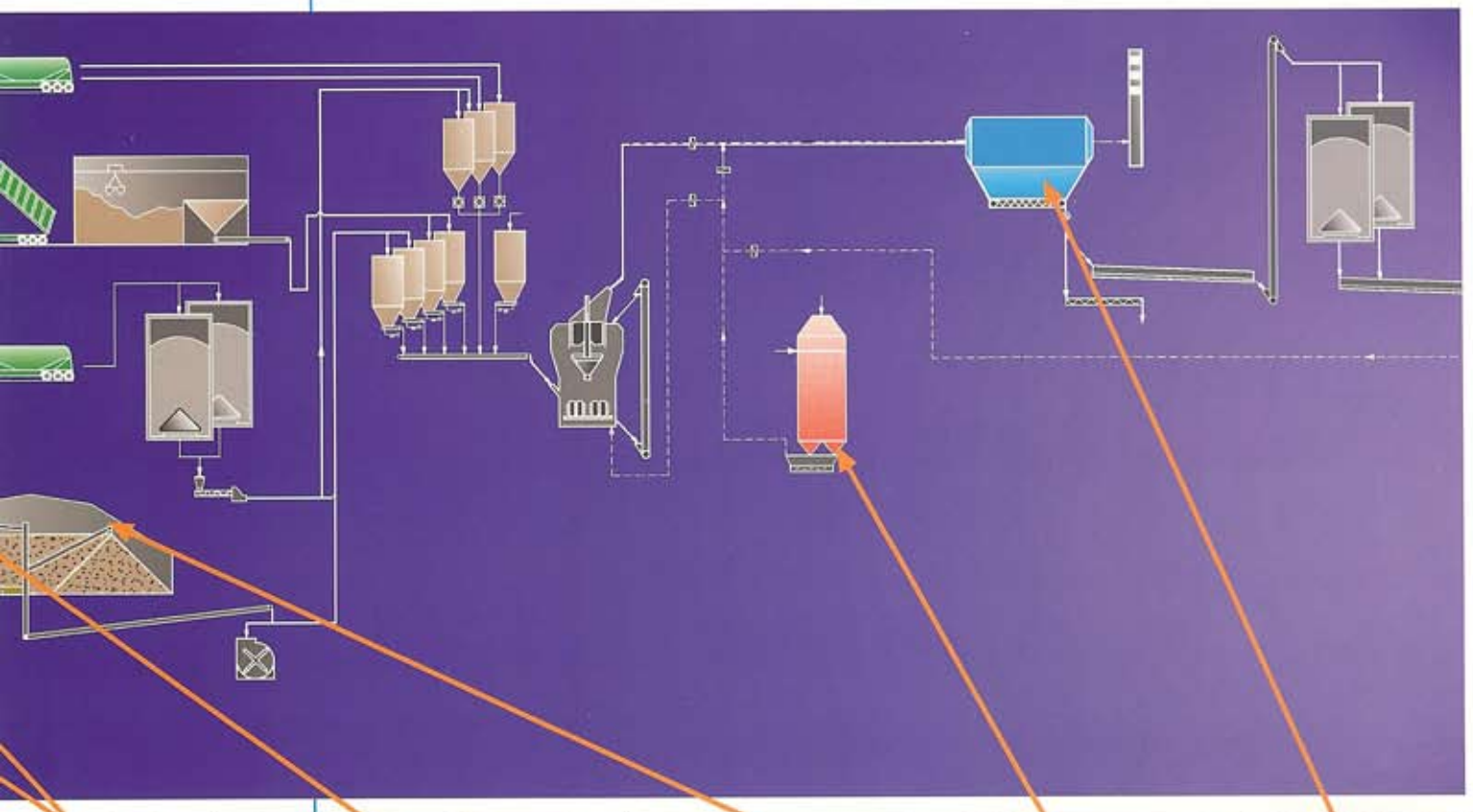
Cement production

Never take your eye off



Erection of a filter unit for kiln raw meal mill and quencher

.....with Intensiv-Filter



n..
ff the ball.

Picture descriptions

1. Dedusting of a raw material crusher.
2. Lorry dedusting.
3. Silo dedusting.
4. Quencher and ECO-Jet-Filter for a klin and raw meal mill.
5. Dedusting of kiln and raw meal mill with fresh-air quencher.

*Dust-free to your customers
Our goal.*



er Technologie.

INTENSIV Star-Jet-Filters

the optimal and at the same time very economic standard-solution for smaller off-gas volumes (from approx. 1,000 – 30,000 m³/h). Star-Jet-Filters have a design tailored to a largely automated production line. Thanks to proven filter elements and extended-period testing of compressed-air cleaning systems as well as a self-monitoring electronic control system, they follow the principle:

"Switch on and forget".

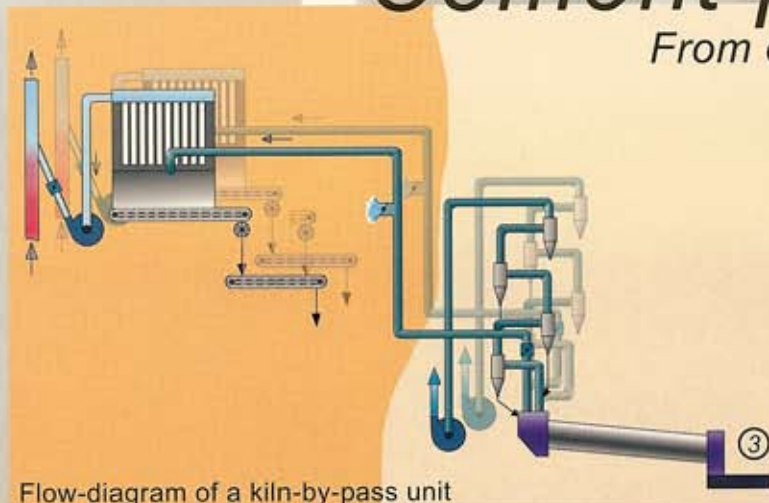
Your crushers, conveying installations, silos or packingplants experience the ideal complement with INTENSIV Star-Jet-Filters.

INTENSIV EcoJet-Filters

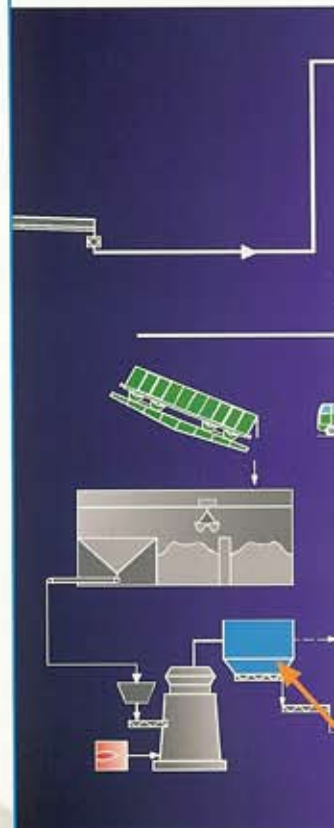
are the solution for the "larger" tasks (20,000 – 1,000,000 m³/h off-gas). Lime shaft-kilns, rotary-kilns for lime and cement, clinker coolers and all mills and separators and even an alkali-bypass were a focus in our EcoJet development.

Depending on the task and off-gas volume the "Eco-Jet-Building Block" gives the constructor the opportunity of building a tailor-made filter unit. Besides, the system is so flexible that normally already existing units (bag-filter, EP-filter) can be modernised.

The low-pressure version (1-3 bar cleaning pressure) with the new N-Jet-System and the classic normal-pressure version (3-6 bar cleaning pressure) with the high-efficiency 2-stage-Coanda-System offer, in conjunction with current filter-media everything to create a HEPS-solution to your needs, the small selection on the following page illustrates.



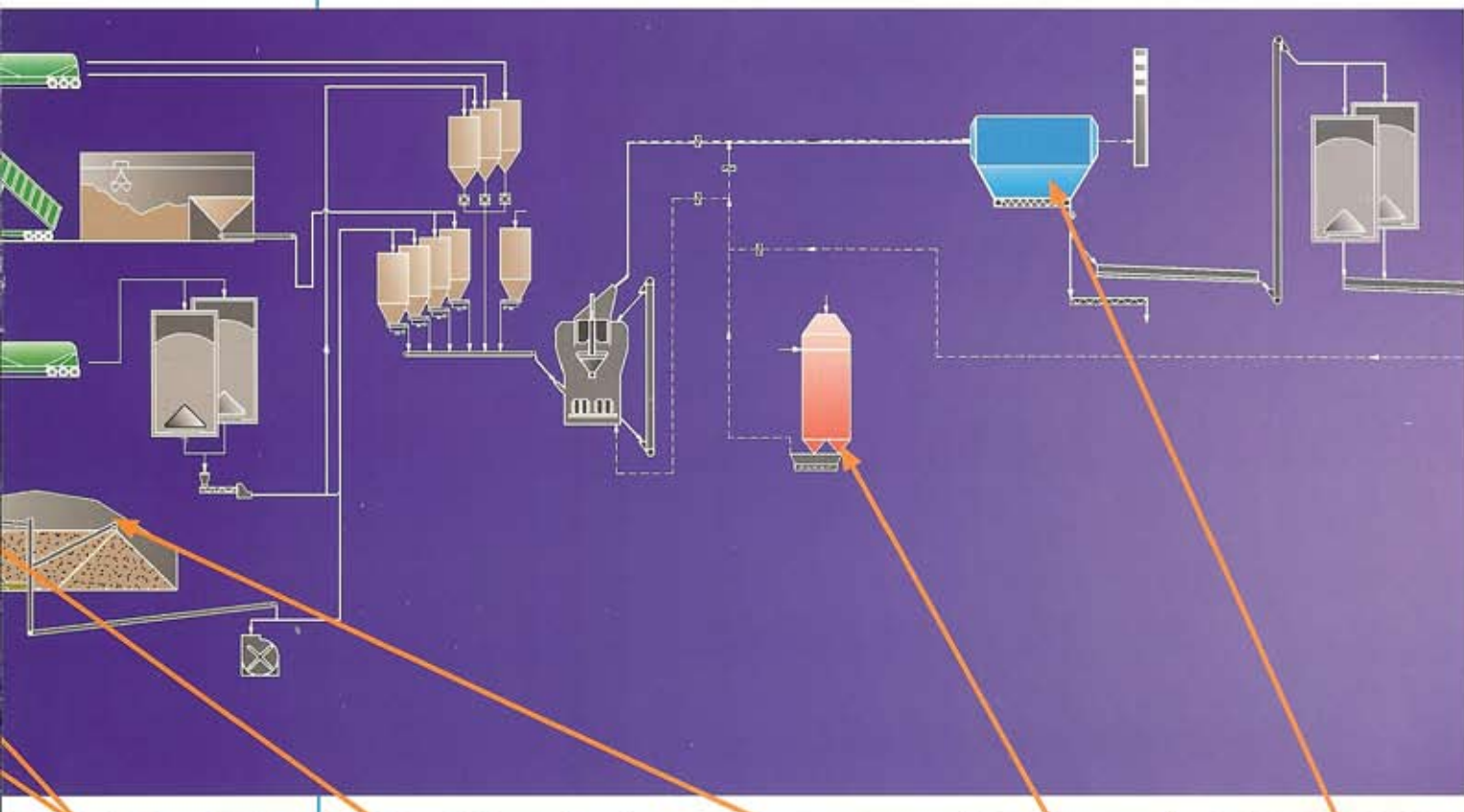
Flow-diagram of a kiln-by-pass unit



Cement product

From our experience for

.....with Intensi



n..
ff the ball.

Picture descriptions

1. Dedusting of a raw material crusher.
2. Lorry dedusting.
3. Silo dedusting.
4. Quencher and ECO-Jet-Filter for a klin and raw meal mill.
5. Dedusting of kiln and raw meal mill with fresh-air quencher.

*Dust-free to your customers
Our goal.*



er Technologie.

a) **Cement kiln and Raw-meal mill**

The Eco-Jet-Bag-Filter, ideally in combination with an INTENSIV-Quench system for off-gas conditioning, can be used in the classic normal-pressure version, as well as in the low-pressure version. Filters have already been supplied for various modes of operation (120°C to 240°C) and bag lengths of up to 6,000 mm, which can be optimally fulfilled by the IF-Quencher.

b) **Lepol kilns**

The Lepol kilns form a speciality among cement kilns. A demanding task is given by the damp off-gas medium with temperatures generally below 100°C, which is safely by an off-line version of the ECO-Jet-Filter.

c) **Clinker cooler dedusting**

Combining the classic Jet-Bag-Filter with the INTENSIV-tube heat-exchanger, for decades best results have been achieved on unit sizes of 100,000 – 550,000 m/h, for clinker-cooler off-gas temperatures up to 450°C.

d) **Kiln-bypass dedusting (Alkali/Chloride)**

ECO-Jet-Bag-filters are offered in a hot-gas version (200 – 260°C) for bypass dedusting. For perfect system operation, an optimal gas-quench and conditioning stage should be used in front of the bag-filter. Dedusting capacity: 50,000 – 250,000 m/h

e) **Coal-mill drying plants**

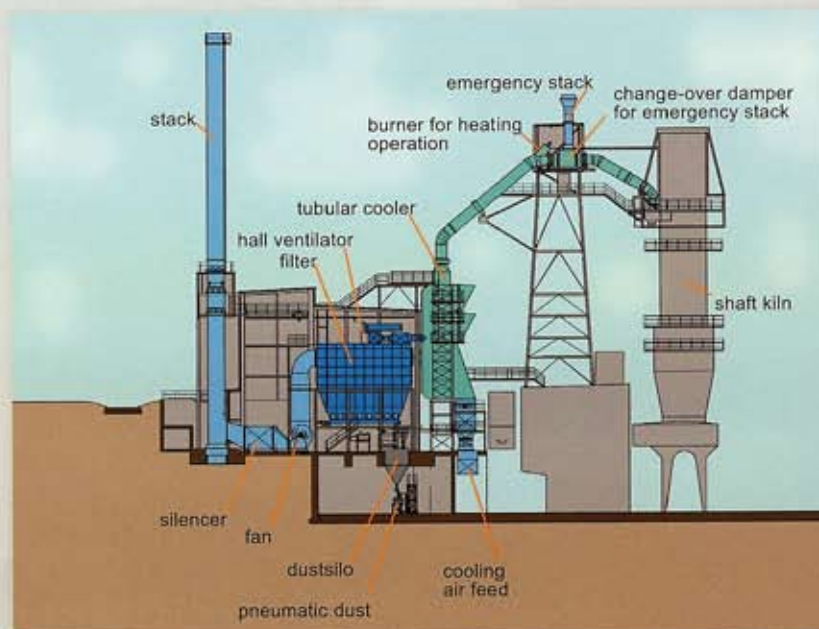
With over 120 filter units in around 20 years (30,000 – 250,000 m/h exit gas), worldwide experience has been gained with the Intensiv-Filter Eco-Jet-System in explosion-protected form. Greatest operational safety with certified design and proven components (pressure-relief hoods, explosiondoors, fire-protection devices, inerting-units) have found the trust of many operators.

f) **Mills and separator plants**

The list of Intensiv-Filter filters for mills and separators is long: Raw meal, clinker, blast-furnace slag, cement up to 6,000 Blaine, from tube or vertical mills – these are the tasks for ECO-Jet-Filters (Dedusting capacity: 50,000 – 250,000 m/h).

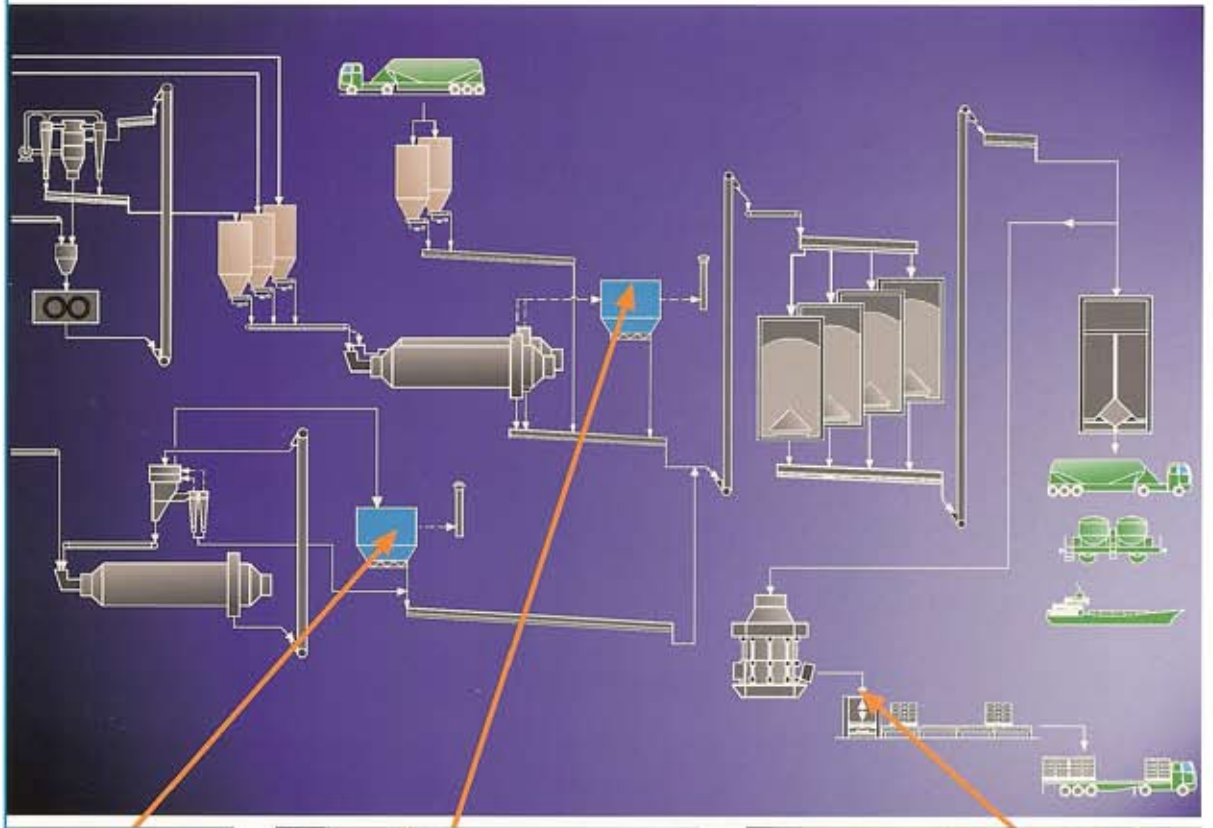
g) **Lime kiln dedusting units**

Shaft-kilns of the most varied design and operational methods, but also rotary-kilns, are to be found in the long reference list for Intensiv-Filter. Versions with standstill-heating, with off-gas heat-exchanger for the production of burnt lime, but also of CO₂ rich gas, can also be found.



Cement
Lime

.....with Intensiv-Fi



Picture descriptions

- 1. Dedusting of a cement mill.
- 2. Dedusting of a cement separator.
- 3. Dedusting of a palletising unit.

*Your products
are our products.*

**nt-and
eproduction...**

*Faithful supply and quality
for your company.*

ter Technologie.





Tailor-made turn-key solutions for total production

Dedusting units and process filters are designed based entirely on your needs. Our experienced engineering and project management, inhouse manufacturing, filter bag production and installation as well as our quality management (ISO 9000:2000 certification) secure frictionless construction of your units.

From the small Star-Jet-Filter to the large Eco-Jet-Filter unit

Intensiv-Filter secures your production through impressive performance and low maintenance systems with

- optimal design
- high availability
- low energy requirement and
- lowest emissions.

Forward-looking and with excellent cost-effectiveness ...

***... that is INTENSIV-FILTER
HEPS-Technology.***



Intensiv-Filter GmbH&Co KG (Germany)
DE-42555 Velbert-Langenberg Voßkuhlstraße 63
☎:0049(0)2052/910-0 📠:0049(0)2052/910-248
www.intensiv-filter.de if@intensiv-filter.de

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