


High quality filter cloths for Alumina

Markert Group – four generations of excellence in textile process filtration

Since 1929 Markert has been producing filter fabrics for liquid process filtration systems. Today Markert is the market leader in Germany – which has the most sophisticated filtration market in the world!

Over generations, Markert has built up a distinctive network and close contacts to leading OEMs. The company is located in the heart of Europe and has a clear mission: to make its customers' filtration processes as efficient as possible.


Markert's plant near Hamburg is not only the largest but also the most modern filter cloth production site in the world. So each and every product holds true to the promise: Made in Germany!

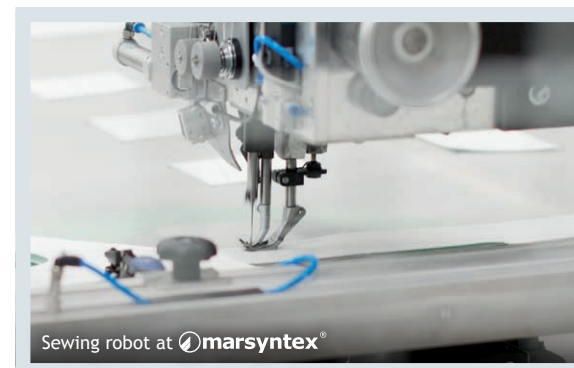
Markert's brand name  **marsyntex**® has become well known in the chemical industry and is growing rapidly in other important markets such as minerals, mining and alumina.


Our strong brand reputation is based on three simple principles:

- integrity
- optimization
- innovation

This brochure will show you our capabilities in the alumina sector.

Get in contact with us and find out more about our  **marsyntex**®-filters.

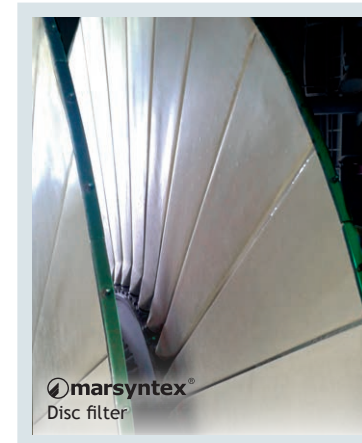
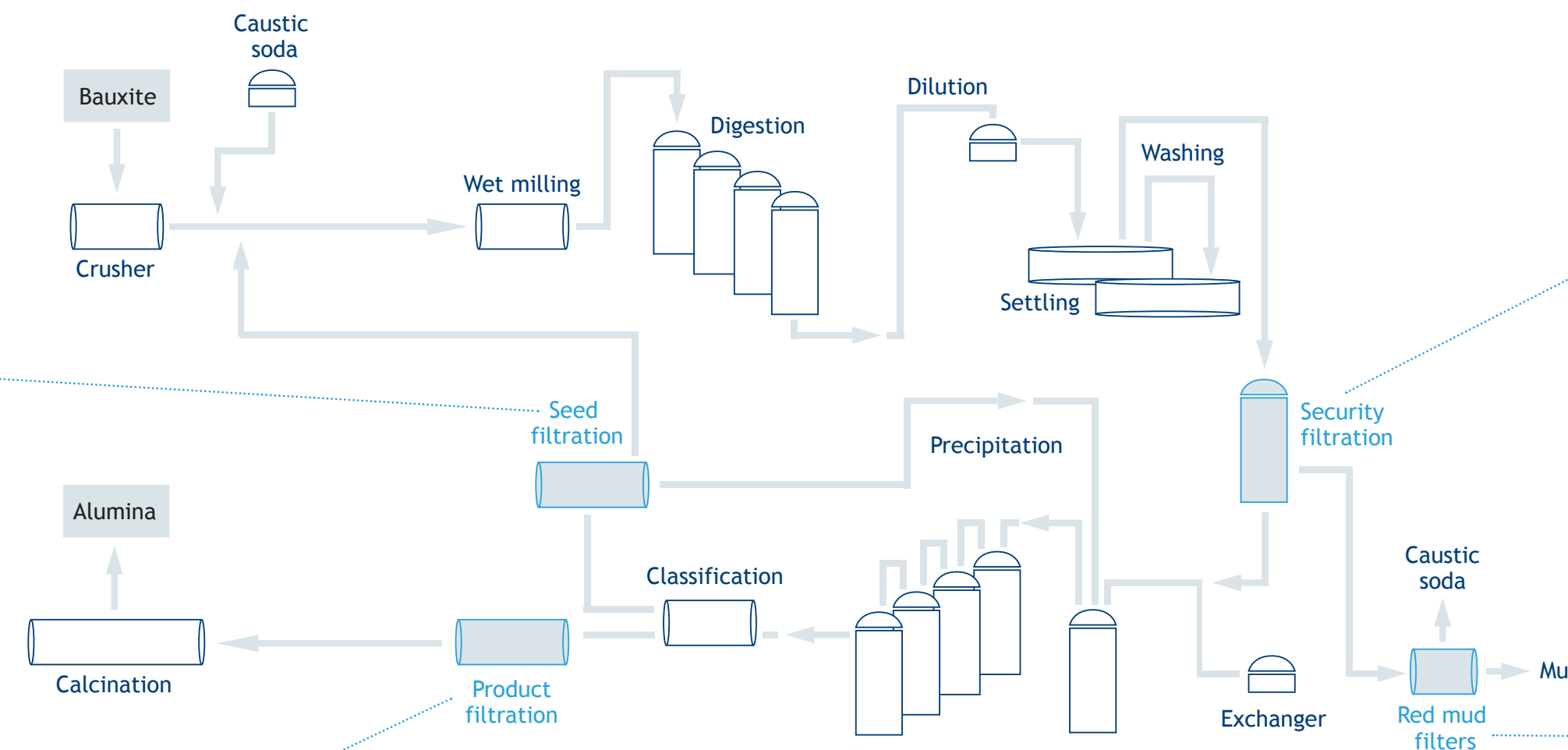


 **marsyntex**®
Textile filter technology

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Bayer process flowchart



Marsyntex® FILTER CLOTH FOR SEED FILTRATION

Seed filtration is not very demanding for a filter cloth in terms of separation, but because of the enormous throughputs required it is quite challenging.

Important features of Marsyntex® cloth can be listed as follows:

- improved dewatering and cleaning properties **constantly high throughputs**
- smooth surface of cloth **100% cake discharge even at high rpm**
- excellent wear properties cloth must withstand high mechanical impact of snap blow **prolonged life time**



Marsyntex® FILTER CLOTH FOR PRODUCT FILTRATION

The most common method of filtration and washing of hydrate product is in a single step process on pan filter. It can be also carried out in a two-step or three-step process where drum filters and disk filters are applied. Marsyntex® double layer weave cloth on pan filters offer:

- Excellent dewatering properties **high throughputs, best washing results**

- strong resistance against mechanical wear **prolonged life time**
- smooth surface **easy cake discharge, no adhering residues**

The leading technology for large capacity disc and pan filter: **Double layer weave cloth**

This special weave pattern might be also the solution for improving your filtration!

It gives the benefits of combined filter and supporting cloth in a single cloth. The filtration side of the fabric consists of a monofilament that provides high throughput and excellent cake discharge while the back side consists of an integrated rigid supporting cloth which protects from damage.

This means there is no need for a separate backing cloth installation beneath the filter cover. This saves time during installation and set-up and offers an added benefit of increased life due to the advanced cleaning properties of the cloth.



Marsyntex® FILTER CLOTH FOR SECURITY FILTRATION

The purification of liquor is usually performed on

- Kelly filters
- vertical filters
- backwashing filters

Main features of Marsyntex®:

- high throughput but at the same time excellent retention of even very fine particles with size < 1 µm **high filtrate clarity**
- form stability (no shrinkage) of cloth at temperatures in the range of 95–110 °C (203–230 °F) **minimizes the risk of damage caused by friction**
- very good resistance of cloth against wear and tear **prolonged life time of cloth**
- excellent cleaning properties **consistent high throughputs**
- precise manufacture and use of auxiliary materials according to the needs of the machine and process



Marsyntex® FILTER CLOTH FOR RED MUD FILTRATION

The dewatering of thickened and washed red mud slurry can be performed in different ways. Traditional vacuum drum filters are widely used since they can handle large volumes of sludge. In the past decade, many OEMs have reacted to

alumina refineries' requirement for increasing production rates by implementing filtration systems offering considerable higher capacities such as the horizontal filter press.

The main claims of this process step are high throughput, excellent cake washing and lowest possible moisture content in the cake. Marsyntex® has suitable products to offer:

- particle size distribution $X_{50} < 10 \mu\text{m}$ requires a very good filtration efficiency of cloth **high filtrate clarity and low moisture content**
- at the same time cloth should allow maximum throughput
- excellent wear properties **prolonged life time**
- extraordinary stability of cloth in regards to elongation and shrinkage
- good cleaning properties