

Company Profile

A Tradition of Clay Mining



Ceramic raw materials
Ready-made bodies

Arno Witgert has been engaged in the mining and refining of Westerwald clays since 1820 – which makes it the oldest Westerwald clay mining company still in operation. Now in its

eighth generation, the family business is currently managed by Dipl.-Ing. (FH) Michael Liebig.



Clay mining in the past ...



... and nowadays

Originally, the company was devoted entirely to mining, i.e. the extraction of clays. However, in more recent decades, it has turned its attention increasingly to the development of customer-oriented products and the processing of clays into ready-mixed ceramic bodies. Today, with 30 employees, Arno Witgert generates annual sales of about 5 million € and sells 150,000 t of

ceramic raw materials, almost half of this ready-processed.

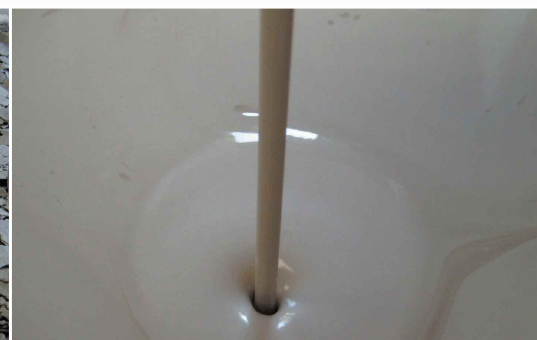
This is carried out using all processing methods:

- Dry processing with grinding/drying installations
- Semi-dry processing with precision fine roller mills
- Slurry processing with dissolvers and filter presses or spray dryer

dry

semi-wet

wet

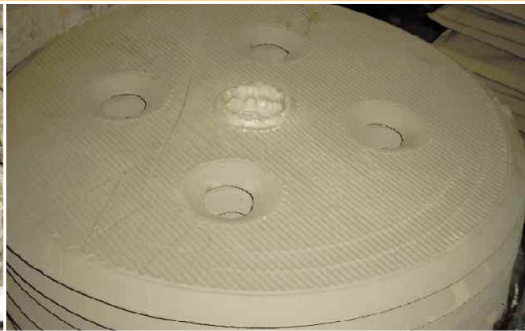


The company sells all end and intermediate products. It is capable of supplying clays and bodies in the following forms:

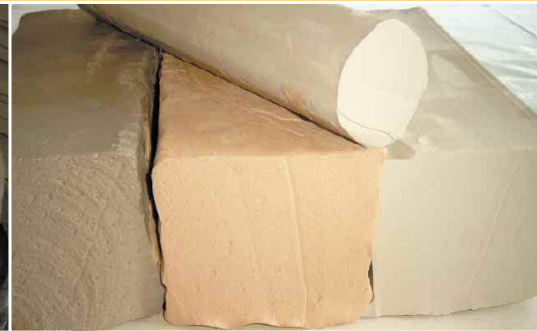
- Clays and clay mixtures, shredded
- Clays, clay mixtures and bodies, rolled into flakes
- Clays, clay mixtures and bodies, ground into powder
- Clays, clay mixtures and bodies, ground and granulated
- Bodies, liquid in the form of slip
- Bodies, plastic in the form of filter cakes
- Bodies, vacuum-extruded into clots or sheets, also with chamotte
- Bodies, spray-dried into spray granulate



Clay, shredded



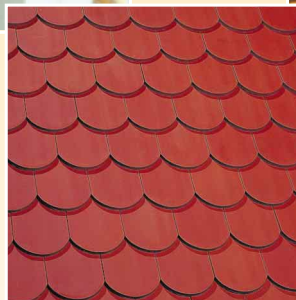
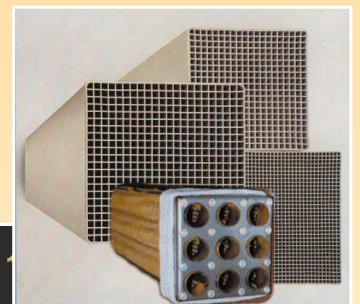
Filter cakes



Clots

The various raw and processed materials are supplied to all branches of the ceramics industry and are also used in non-ceramics applications, e.g.:

- Wall and floor tiles
- Sanitaryware
- Facing bricks and clinkers
- Roof tiles and common bricks
- Tableware and decorative ceramics
- Refractory applications
- Stove tiles
- Engobe and glazing clays
- Advanced ceramics
- Sealing clays for dumpings and landscaping
- Fire-retardant additives for dry construction materials



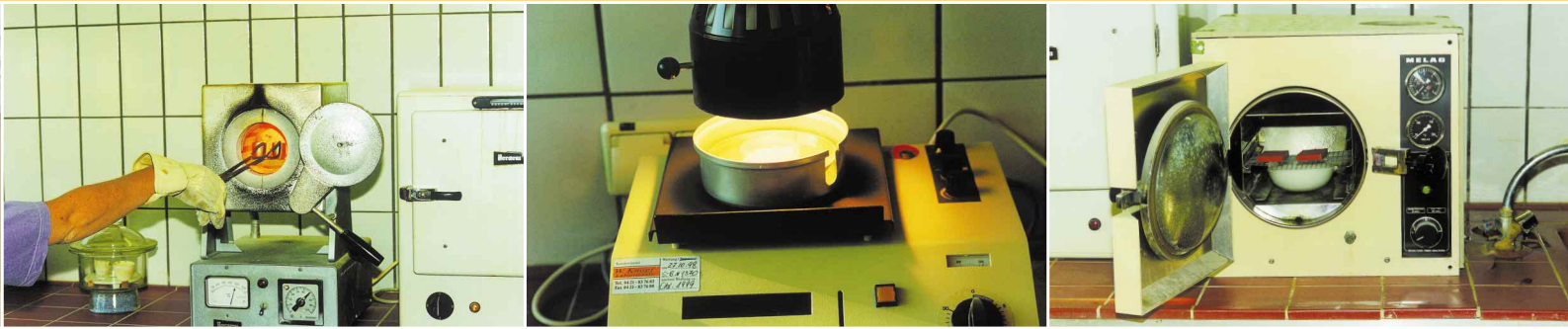
The raw materials are shipped by truck ex works or pit, by rail from the Meudt station, and by ship from nearby Bendorf harbour on the Rhine. About 40 % of total output makes its way

abroad via this route – mainly to Central Europe but also to Asia and Africa.



Not only the inspections of incoming and outgoing materials are carried out in the company's own laboratory, but also virtually all

of the research and development in order to supply the customer not only with raw materials, but also with solutions.



Witgert is the only clay mining company in Westerwald to operate its own semi-wet processing line and, using this method, markets 5,000 t of flakes per month with a thickness of $<500 \mu\text{m}$. It is also capable of producing superfine shreds to an edge length of $<8 \text{ mm}$. Superfine shredded clays are used as an additive in the simple processing systems of manufacturers of heavy clay ceramics (roof tiles, facing brick, refractory materials), while superfine shredded bodies are used in cast fine ceramics processes (sanitaryware, tableware and decorative ceramics, stove tiles). The high specific surface permits the uniform

mixing of preground hard materials such as chamotte, feldspar, calcite, talcum, etc.

Flakes are usually used as complete body, thus bypassing the entire processing step on the customers' site. With the addition of water, it can be poured straight into the dual-shaft mixing section of the vacuum unit. This makes their use particularly interesting in special colours for roof tiles, facing bricks, unglazed floor tiles and plant vessels. Special applications such as advanced ceramics or non-ceramic applications are also served with flakes.



Roller milled clays



Superfine shredded clay blends

The reserves belonging to Witgert at the Mathias and Wahnscheid clay pits, both in Herschbach, and the Steudter grants of mining rights near Wirges were extended in 2005 by the takeover of the Wirth Glückauf pit in Ruppach-Goldhausen. This means that Witgert now again has access to the familiar white-firing Goldhausen clays distinguished not only by their high plasticity, but also by their early sintering. Witgert was actively involved in clay mining in Ruppach-Goldhausen from the 19th century to the Fifties of the

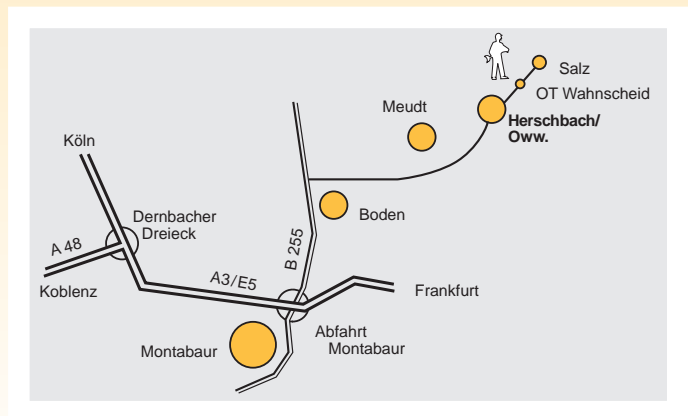
20th century, but had to sell these resources at the time due to the difficult market situation. The purchased reserves consist of highgrade clays with a content of 10 to 35 % Al_2O_3 , which is mainly used for the production of wall and floor tiles, but also for the production of tableware and decorative ceramics, stove tiles, engobes and glazes, advanced ceramics and refractory products. Coloured clays are also mined here, and these are processed by manufacturers of facing bricks and plant vessels.



To satisfy the needs of the customer, clays are also bought in from eastern Germany, the Czech Republic, France and the UK and even from as far away as New Zealand. No effort is spared to give the customer what he wants. In order to provide the necessary advice, service and quality assurance, the company has added several application specialists to the payroll in the last few years and the workforce in production has been exten-

ded to include highly skilled employees such as processing mechanics trained internally and ceramics materials testers. To survive on the global market, customers will expect more and more of their suppliers. The supplier can therefore see himself no longer merely as a raw materials supplier, but as a service provider. Witgert has grasped this important fact and is equipped for the future.

witgert : focuses solutions.



Clays and ready-made bodies in all natural colours: shredded · ground · roller milled · granulated
 plastic · liquid · Kaolins · Manganese clays and oxides · Chamottes/grogs · Sintering engobes

Application consultancy by ceramic engineers
 Own laboratory

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