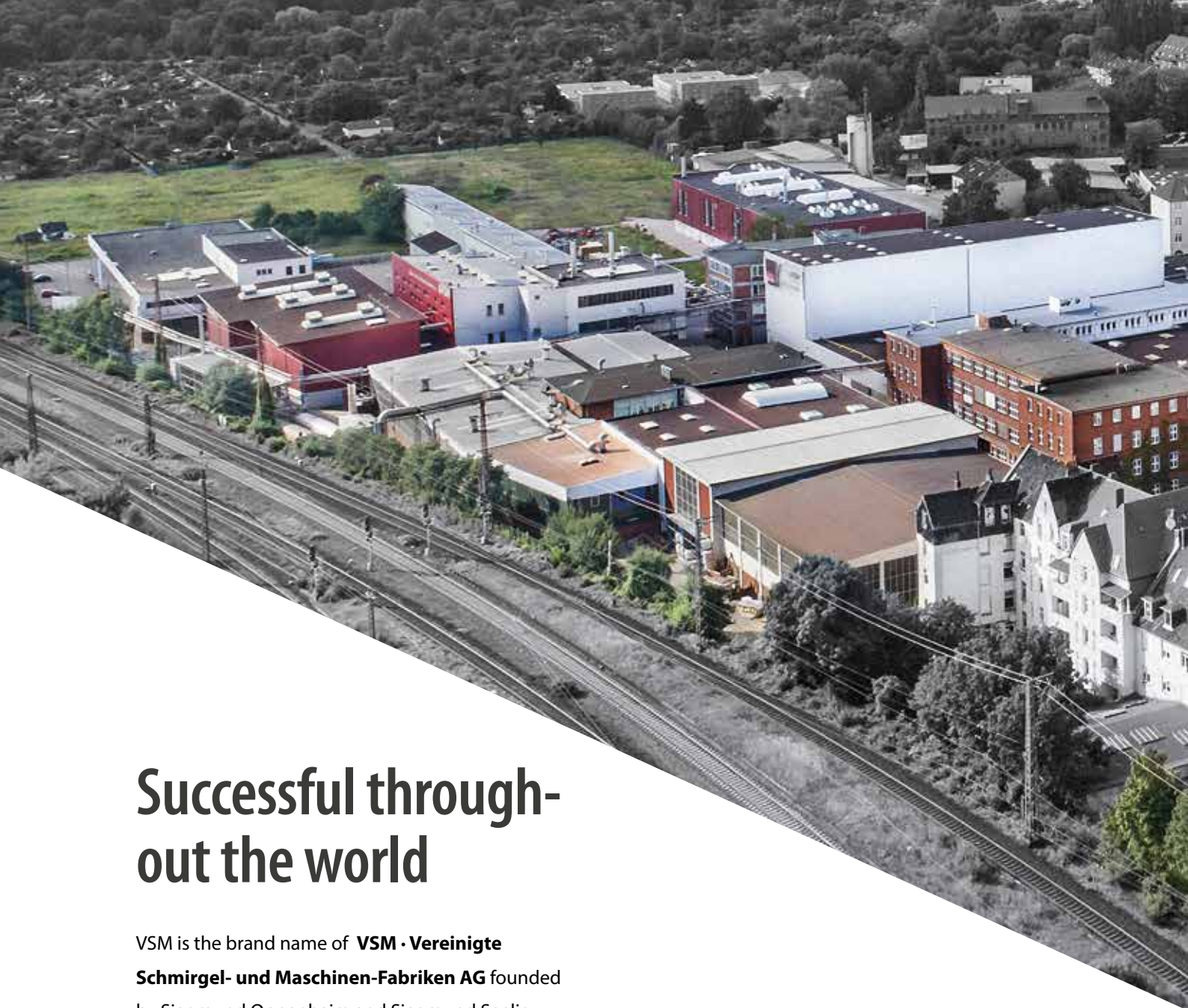


OUR PROFILE

**Quality abrasives
made in Germany**



Successful throughout the world

VSM is the brand name of **VSM - Vereinigte Schmirgel- und Maschinen-Fabriken AG** founded by Siegmund Oppenheim and Siegmund Seeligmann in 1864, and became a public limited company in 1898. Its headquarters is located in Hanover, Germany, where the company was founded. VSM has more than 750 employees worldwide.

With 150 years of experience in the manufacturing of quality abrasives, VSM is one of the global leaders in the abrasives market. Specialised in premium grinding solutions for the metal and wood industries, VSM's market activities are based on a company strategy which focuses on the success of its customers. Satisfied customers are the only benchmark for our company's performance. International VSM subsidiaries and a global distribution network ensure that manufacturers can get our full support in every region of the world.





- ▲ *Subsidiary*
- ▲ *Export partner*

Our products



Leading manufacturers of advanced products rely on the high quality of VSM abrasives for welded seams to sheet metal processing to car body parts and even castings. With more than 150 years of experience in this field, VSM understands the grinding process like no one else. Whether serial production or products made to specification, VSM abrasives ensure quick stock removal and leave you with a workpiece that has a perfect surface finish.



Jumbos



Wide Belts Rolls



Narrow Belts Discs



Ceramic grain



Cloth finishing



Products for converters: Slit rolls for the production of flap discs and flap wheels

Finished products for end users

More than 200 different high-grade product series are manufactured in Hanover. They are made into jumbo rolls, which are further processed to make rolls, belts, discs and sheets. The VSM product portfolio comprises the following product lines:

For high stock removal

- > VSM DIAMOND / CBN
- > VSM ACTIROX
- > VSM CERAMICS Plus
- > VSM CERAMICS
- > VSM ZIRCONIA ALUMINA
- > VSM SILICON CARBIDE
- > VSM ALUMINIUM OXIDE

For perfect finishing

- > VSM ILUMERON
- > VSM COMPACTGRAIN Plus
- > VSM COMPACTGRAIN
- > VSM NON-WOVEN

There are various types of **backing materials** we use from cloths, vulcanised fibres and paper to non-wovens, tailored to the abrasive grit and the specific application.

Semi-finished products for converters

VSM supply tailor-made primary products. The product portfolio comprises:

- > Different types of VSM ceramic grain for manufacturers of bonded abrasives
- > High-quality fabrics are impregnated and coated with special finishes to condition the fabric for the manufacture of abrasives
- > Coated abrasives for the manufacture of abrasive tools such as flap wheels and flap discs

VSM grain technologies in the spotlight

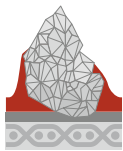
Top grain technologies for high stock removal rates

VSM ACTIROX



- > **Geometrically formed ceramic grain**
- > Maximum stock removal and a faster cut for superalloys and stainless steels
- > Cool grinding extends the service life thanks to VSM TOP SIZE

VSM CERAMICS Plus · (CER Plus)



- > **Optimised self-sharpening effect** when processing high-alloyed steels ensures very high stock removal rates
- > Reduced temperature in the contact area
- > Significantly extended service life

VSM CERAMICS · (CER)



- > Top product with **self-sharpening effect** for processing non-alloyed steels and stainless steels
- > High removal rate
- > Cool grinding allows longer contact times

Top grain technologies for perfect surface finishes

VSM ILUMERON



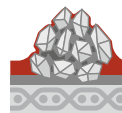
- > **Full faced coated long-term abrasive** with special bonding
- > For fine and consistent surfaces with high gloss levels
- > Developed primarily for processing stainless steels, superalloys and non-alloyed steels

VSM COMPACTGRAIN Plus · (COM Plus)



- > **Long-term abrasive** that wears uniformly down to the backing material and achieves a consistent surface finish
- > Optimised reserve grain capacity
- > Improved bonding properties
- > Continuous self-sharpening thanks to the granulate structure

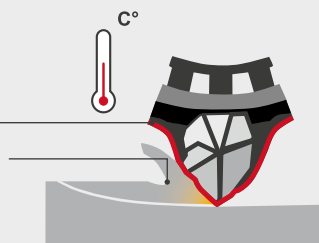
VSM COMPACTGRAIN · (COM)



- > **Long-term abrasive** achieves reproducible surface finishes and consistent roughness
- > Uniform stock removal
- > Continuous self-sharpening thanks to the granulate structure

VSM grinding-active additional layers

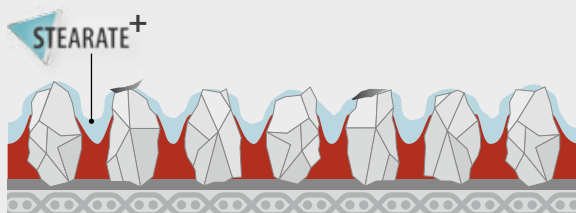
VSM TOP SIZE
Less heat generated in the grinding zone ("cool grinding")



VSM TOP SIZE is recommended for dry machining heat-resistant stainless steels and non-ferrous metals. The grinding-active additional layer improves the cutting performance whilst reducing the temperature in the contact zone. This significantly extends the service life of the abrasive.

VSM STEARATE Plus and **VSM STEARATE** significantly reduce chip adhesion when processing non-ferrous metals and thus also reduce clogging of the abrasive. The service life is assured and extended so dramatically that excellent stock removal is achieved even after longer periods of use.

NEW



VSM STEARATE Plus



This is what VSM stands for

Quality

For 150 years VSM has stood for quality made in Germany. To ensure that we can live up to these high demands, we continuously improve our abrasives. By doing this we can deliver to our customers what they expect from us.

“VSM offers innovative products at a consistently high quality.”

This is what our customers can rely on:

Prime surface quality

- > A high quality finish
- > A more uniform scratch pattern
- > A trouble-free process flow

High stock removal

- > Shorter processing times
- > Heating of the workpiece is restricted
- > Lower manufacturing costs

Extended service life

- > More cost-efficient grinding
- > Fewer tool changes
- > Reduced tooling costs

Competence

Our competence helps to optimise our customers grinding processes.

As well as focusing on research and development, VSM has been investing into improving its production facilities to work with state-of-the-art equipment at its Hanover location. Nothing is left to chance. VSM relies on a high degree of vertical integration in order to ensure complete control of all variables, at all stages of the production. We are able to apply state-of-the-art methods for the manufacturing of our preliminary products and the selection of innovative raw materials.

“VSM intentionally focuses on making only coated abrasives.”

The continuous development and improvement of our products is our main concern in an attempt to providing the very best solutions for our customers. This is something our customers can rely on.

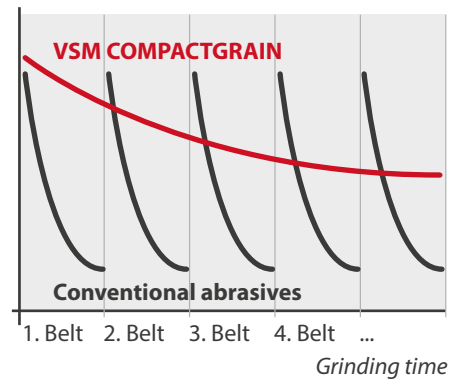
Customer orientation

An application-specific, in depth knowledge is another hallmark of the company, which enables VSM to always come up with suitable solutions for the individually tailored processes of our customers. We point out viable perspectives and assist our customers in optimizing their grinding processes. For this purpose, VSM has application engineers worldwide.

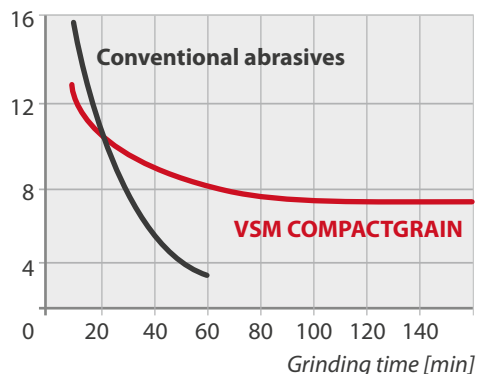
Our application engineers analyse processes on site on our customers' premises or in our own VSM Technical Center (TC) in Hanover. Our application engineers not only analyse the abrasives themselves in order to improve them, they also include the workpiece and the machines in their analysis. This includes the analysis of machine parameters, contact wheels and emulsions. Our recommendations also cover technical adjustments of machines. Trial runs of manufacturing operations, short-term training and presentations are all part of our service offer.

The innovative VSM COMPACTGRAIN compared to conventional types of grain:

Surface roughness



Stock removal per time unit [g/min.]





Quality abrasives made in Germany

VSM provides quality abrasives which boast outstanding performance levels and make exceptional results possible. VSM concentrates on the surface treatment of metal and wood materials. Our target customers are in industry and the specialist trade.

The consistently high quality of VSM abrasives is ensured by the high degree of vertical integration. Important preliminary products such as the backing cloth, resinoid bonds and abrasive grains are produced and processed in-house, in Hanover. The quality is consistently monitored at all stages

of the production process. VSM has been certified to ISO standard 9001 for many years.

Quality and safety of our abrasives as a matter of principle... for our users as well as for us!

This is what our customers worldwide rely on!

As a member of oSa and FEPA, VSM always meets the required high standards.



More than **150** years

Company founded in 1864 in Hanover-Hainholz

More than 150 years' experience in the production of coated abrasives.

More than **800**  employees

More than 800 employees are working on behalf of our customers worldwide each day.



VSM worldwide

VSM is operating in more than 70 countries with international subsidiaries and numerous partners.



Certified and recognized worldwide



Extremely high level of safety

All VSM abrasives have been certified by internationally recognized testing bodies for many years and therefore conform to the highest safety standards.



Internal research and development

High vertical integration

VSM has its own internal grain and cloth production and develops almost all of its preliminary products itself. This enables us to achieve a consistently high quality of abrasives.

Made in **Germany**



Headquarters in Hanover

VSM stands for competence, quality and customer orientation.

Our global sales network with **numerous subsidiaries** and **expert sales partners** ensures proximity to our customers. Further addresses and details can be found on our website at www.vsmabrasives.com

Our customers

VSM abrasives are suitable for almost any application. These applications may involve many different materials such as metal, wood, glass, stone and plastics.



Fittings



Tools



Vehicles and car bodies



Sinks



Mountings



Cast parts and forgings



Windows and doors



Coils



Medical implants and instruments



Wood fibre boards



Furniture



Parquet



Tubes



Specialised products



Steel sheets



Mechanical engineering



Stainless steel



Wire



Stamped, molded and forged parts



Plant and tank construction



Aero, steam and water turbines



Industrial glass



Leather



Hydraulic cylinders

A worldwide leader in abrasives.



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