

Springs

Gear and motor construction

Rollers

# EXCELLENCE O

IN GRINDING

Rails

Foundries

Turbines

Machinery and tool construction

Skiing

### OUR TRADITIONS AND VALUES HAVE MADE US STRONG – SINCE 1880

THELEICO has been a family-run company for over 130 years. It started manufacturing ceramic-bonded grinding tools back in 1924. Resinoid-bonded abrasives and wheels were added to the range of products in 1935. Today, the company is one of the leading manufacturers in the field of grinding technology. THELEICO owes this position not only to its wealth of experience and the comprehensive expertise of its entire staff, but also to the values which are actively practiced throughout the company and that is what makes THELEICO reliable. Not only in its structured processes, but also as a dependable partner to customers and suppliers

as well as to its employees. Moreover, its high equity ratio guarantees its high degree of financial independence. THELEICO is also consistent in the quality of its products, in the expertise of its employees and in its constant striving for growth. We keep our promises. THELEICO is a highly flexible company that is continuously expanding its range of competences, searching for and finding solutions for new challenges and open for new ways to do things better than before. We valiantly stride ahead, courageously facing new markets, launching innovations and being receptive to new technologies. That is how THELEICO has forged ahead and progressed since 1880.



Founder & Managing Director Theodor Leisse (1880–1914).



Our Managing Director, Frank Grans.



Reception at the company headquarters.





The brand identity of THELEICO® Schleiftechnik GmbH & Co. KG.

The foyer of our administration building.



Microscopic structure testing.

### EXCELLENCE IN DEVELOPMENT

THELEICO has had one objective for generations which is to make grinding processes increasingly effective and efficient. That is why we specialise in the development and manufacture of state-of-the-art grinding wheels and abrasives. Our products have a wide range of applications. We serve customers not only in the automotive industry and in the field of machinery and tool construction, but also in steelworks, foundries and companies operating in the energy industry. Customers in the sports industry as well as the wood, glass and plastics industries also place their trust in us. By developing formulae with new grinding grain qualities, bonding systems and pore structures, THELEICO has successfully made an impact in the most diverse industries, time and again.

Today, we supply customers in 42 countries with our high-quality products "made in Germany". In recent years we have made great investments in production, research and development at our headquarters in Meschede, Sauerland. Our CNC-controlled systems guarantee optimised production processes and methods. As a customer, you benefit daily from our extensive knowledge, since our entire experience is reflected in the products and services we provide – outstanding quality, needs-based and individual. You can fully rely on the grinding wheels and service provided by Theleico. That is our guarantee.

REM analysis.



Safety testing.



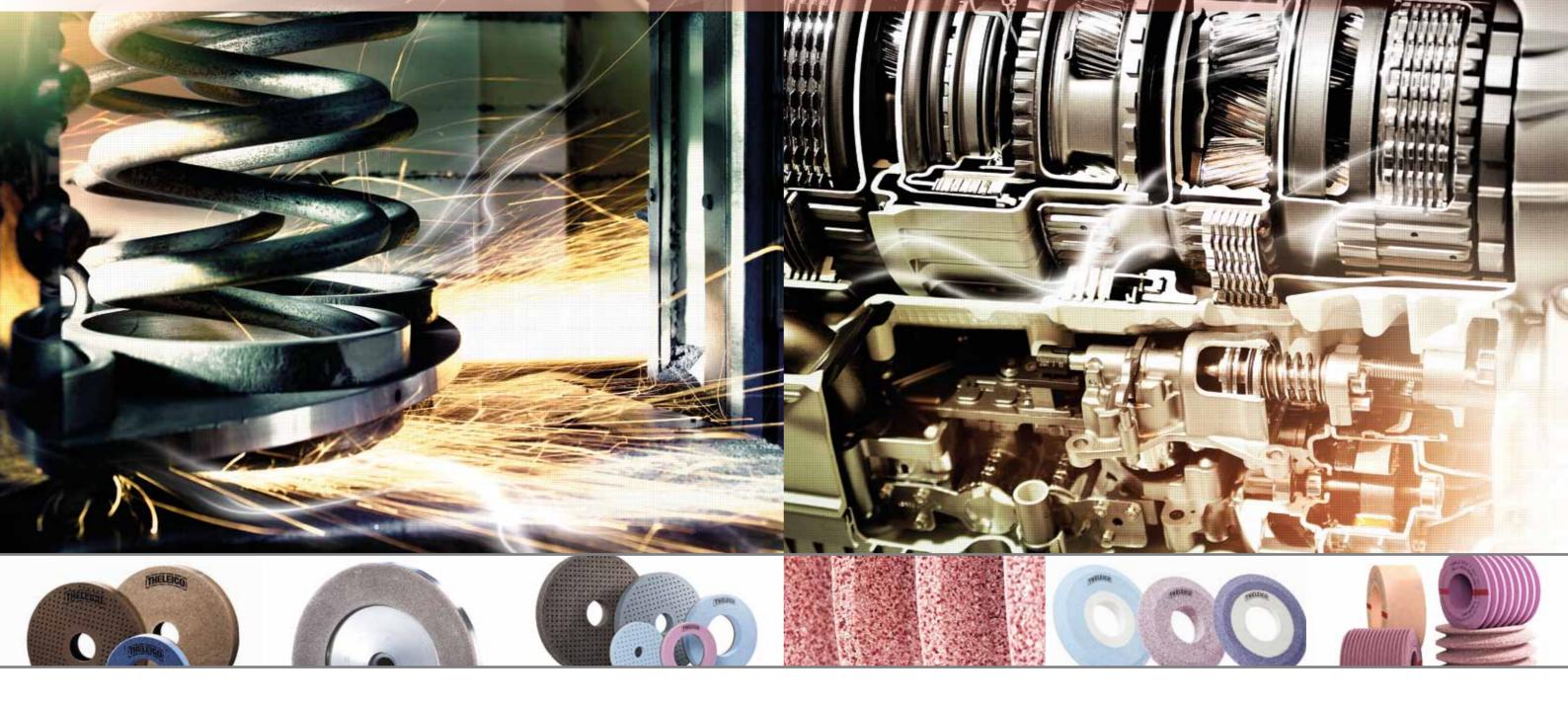
Quality control.



Hardness testing.



Design.



#### **EXCELLENCE FOR SPRINGS**

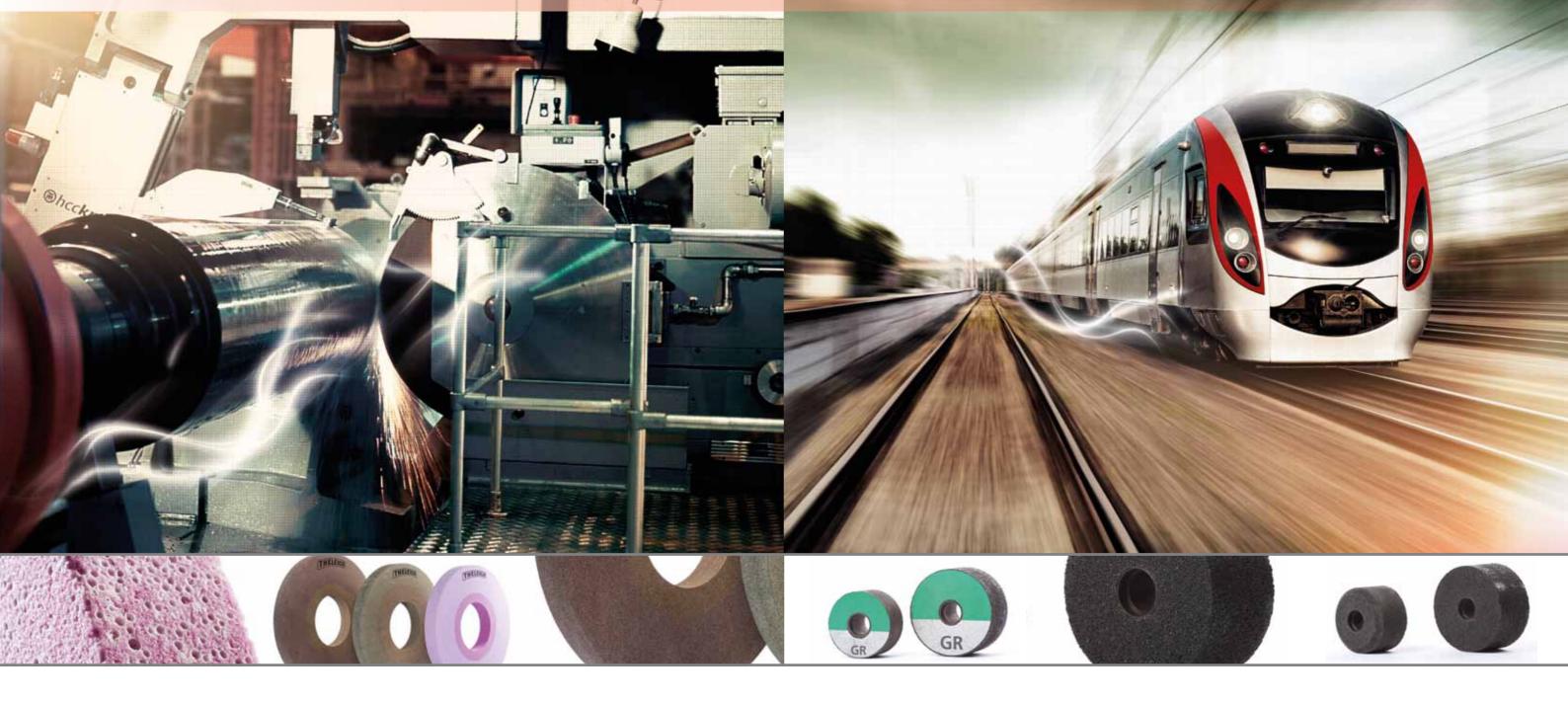
THELEICO manufactures outstanding products for the grinding of all types of springs and materials available on the market. Our grinding wheels and abrasives are excellently suited for the single-sided and double-sided face grinding of spring ends. Our products can be used for dry or wet grinding applications, depending on the diameter of the spring and the diameter of the wire.

Our many years of experience in the processing of pressure springs with various grinding methods make THELEICO a reliable partner, consultant and manufacturer in the field of grinding technology. Our challenge is to fulfil your requirements and special applications by providing you with customer-tailored solutions.

## EXCELLENCE FOR GEAR AND MOTOR CONSTRUCTION

THELEICO manufactures grinding tools for all conventional gear grinding machinery. Our products' range of application covers automotive transmission systems, marine propulsion units and wind turbine gears. Our customers from the fields of industrial gear and motor construction can completely rely on the precision and high quality of the grinding tools we manufacture.

THELEICO guarantees the fast processing of your orders in line with your requirements, and manufactures the grinding tools individually to suit your specifications. We only use high-quality raw materials to manufacture THELEICO products, hence improving grinding parameters and reducing your production costs.



#### **EXCELLENCE FOR ROLLERS**

THELEICO provides grinding technology solutions of the utmost quality and precision for processing rollers in hot- and cold-rolling mills. We manufacture grinding tools that are ideal for use throughout the entire process chain, including roughing, semi-finish and finish grind, as well as the polish grind of all models of roller.

THELEICO grinding tools are manufactured in a broad array of designs. They are suitable for all types of steel, cast, plastic, rubber and granite rollers. Our extensive knowledge in this industry and various processes make us a competent partner you can fully rely on.

#### **EXCELLENCE FOR RAILS**

For our customers in the field of rail and track construction, we manufacture special tools for rail grinding applications — both stationary grinding machinery and mobile equipment. THELEICO grinding tools can be used for a wide variety of rail grinding machinery, as well as for preventive grinding, so-called high-speed grinding.

Our grinding tools work reliably at high speeds on all kinds of mobile systems. We guarantee the long service life of our products. We can quickly adapt our production capacities and serve you within a short time.



#### **EXCELLENCE FOR FOUNDRIES**

THELEICO also gives foundries the finishing touch. We deliver customised solutions for the manufacturers of castings. We supply you with the right tools for grinding cast steel, grey cast iron and all types of special alloys. THELEICO manufactures suitable grinding wheels and abrasives for these purposes – and can deliver promptly and reliably, thanks to its high production capacities. Our

products are reliable, long-lasting and precisely designed to meet your requirements. We develop customer-specific grinding tools exactly designed to match your product specifications. When it comes to quality testing and quality assurance, we work in accordance with strict internationally acknowledged safety standards and criteria.

#### **EXCELLENCE FOR TURBINES**

For the manufacturers of turbines, THELEICO produces grinding tools of outstanding precision that guarantee extremely high profile and dimensional accuracy. Our innovative pore technology enables us to manufacture highly porous grinding tools that are ideally suitable for surface grinding, infeed grin-

ding and profile grinding in the full section method. Our high-quality grinding tools are the ideal applications for all standard turbine materials. We guarantee you an excellent degree of reliability, high removal rate and long service life.



### EXCELLENCE FOR MACHINERY AND TOOL CONSTRUCTION

A wide range of grinding methods are used in the field of machinery and tool construction. THELEICO grinding tools provide you with the desired precision as well as the necessary removal rates and surfaces and are precisely designed for processing materials such as HSS, SM, VHM, ceramics and other materials. THELEICO can supply you with all the necessary grinding wheel qualities, forms and sizes, including special forms, to

help you manufacture your tools in surface grinding, circular grinding, profile and tool grinding in a precise, reproducible fashion. THELEICO grinding tools will impress you with their long service life, high chip removal rates, profile holding and cool grinding. These features will help you boost your productivity and reduce your costs. Take advantage of our many years' experience in this field!

#### **EXCELLENCE FOR SKIING**

THELEICO grinding tools give the edges of your skis the perfect finish. We provide customised products and solutions for the manufacturers of winter sports equipment such as skis and snowboards. THELEICO manufactures grinding tools for all standard production and service stations. Our extensive, specialised and process knowledge

in this field is your guarantee of efficient, smooth processing, enabling you to optimise your workflows and reduce your manufacturing costs. Our strictly monitored quality and service management systems contribute towards the consistently high quality of your products. Our support and service teams are available to you at all times.



#### **EXCELLENCE IN PROCESS**

THELEICO specialises in the following product groups:

- » Ceramic-bonded grinding tools
- » Synthetic-bonded grinding tools
- » Super-abrasive grinding tools (CBN/diamond)
- » Trimming tools

We manufacture approximately 250,000 grinding tools per year, all custom-made to suit our customers' individual needs. Employees with many years of experience guarantee a high degree of process expertise and stateof-the-art CNC equipment ensures reproducible products of outstanding quality. Constant, high-quality sources of raw materials ensure consistent high productivity.

### GRINDING WHEELS -MARKS OF QUALITY

Abrasive media Aluminium oxide (Al <sub>2</sub> O <sub>3</sub> ), silicon carbide (SiC), super-abrasive (CBN / diamond)	<b>Graining</b> Description of the grinding grain size.	<b>Hardness</b> Resistance of the grain to break-out from the structure.	Structure Describes the abrasive concentration and the distribution of the grinding grain, bond and pore space.	<b>Bond</b> Holds together the grains in the abrasive structure.
Regular corundum 10A-19A	<b>very coarse</b> 8, 10, 12	very soft D, E, F, G	<b>dense</b> 0, 1	V/VM ceramic
Sintered corundum 21A-28A 121A-128A 221A-228A 321A-328A	<b>coarse</b> 14, 16, 20, 24	soft H, I, J, K	dense 2, 3	<b>B/BF</b> synthetic resin
Semi-friable corundum 30A-39A	<b>medium</b> 30, 36, 40, 46, 54, 60	medium L, M, N, O	<b>medium</b> 4, 5	<b>Mg</b> Magnesite
Fused corundum white and pink 40A, 42A	fine 70, 80, 90, 100, 120	<b>hard</b> P, Q, R, S	<b>open</b> 6, 7	
Fused corundum combination 45A, 47A	<b>very fine</b> 150, 180, 220, 240	<b>very hard</b> T, U, V, W	very open 8, 9	
Fused corundum ruby-red 44A-48A	<b>dust fine</b> 280, 320, 360, 400, 500, 600, 800, 1000	<b>extremely hard</b> X, Y, Z	<b>porous</b> 10, 11	
Monocrystalline corundum 46A, 49A			highly porous 12, 13, 14, 15	
<b>Zirconium corundum</b> 50A-73A				
Silicon carbide dark 80C-84C		Example:		







media

Graining

Hardness

Structure

As grinding is usually performed towards the end of a production process, the manufacturing costs are greatly influenced by the quality of an abrasive. High-quality precision tools by THELEICO

reduce your failure rate, make your grinding process more efficient, and increase the quality of your products.

THELEICO guarantees you certified international standards.

Silicon carbide

Silicon carbide/

zirconium corundum

green 85C-89C

90C-97C

CBN 1B-99B Diamond

1D-99D















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