www.rubig.com

RÜBIG
DRIVING SUCCESS

Heat Treatment
Industrial Furnaces
Die Forge
Technology

RUBIG GROUP

Since the foundation of RUBIG in 1946, the company has grown from a small drop forging company to a center of excellence for metal processing.

Materials and processing expertise make RUBIG a global leading system supplier of finished components.

The unique synergy potential resulting from the close cooperation between RUBIG Industrial Furnaces, Heat Treatment and Die Forge adds value for customers. Knowledge and experience from all the divisions within the group enables RUBIG to drive the performance of metal. The group employs more than 350 people who serve customers nationally and internationally.

Technology

RUBIG extends its worldwide technology leadership as materials specialist for heat treatments and develops towards being a system supplier for components and products in the metal industry. The process of innovation drives new technologies and product developments. High quality comes as standard.

International

Internationalization is the opportunity to open up new sales markets. As a global player in product and component manufacturing, RUBIG constantly extends its leadership in innovation. This also enables RUBIG to strengthen and expand its Austrian businesses.

Quality management

RUBIG has been working with the materials of steel, aluminium and titanium for many decades. Over this time, RUBIG gathered a considerable amount of knowledge and experience in the fields of forging, manufacturing, hardening technology and systems engineering. The results gained from this symbiotic relationship, combined with the knowledge basis of metallurgy and materials processing, provide the foundations for the development of customer-specific processes, materials testing and damage analyses.

RUBIG HEAT TREATMENT

Heat Treatment of Steel and Aluminium Materials

As the demands on modern products increase by the day, the requirements for all construction materials increase accordingly.
The required property profile of these materials is significantly influenced by the heat treatment processes.
Since the 80s RUBIG Heat Treatment remains a renowned specialist in the heat treatment of steel and aluminium materials.

RUBIG offers ultra-customized solutions through an extensive range of services, from expert materials consulting provided by an in-house materials laboratory to a broad spectrum of processes for any type of heat treatment challenge.

Case Hardening - R.CARB+®

Pack hardening is the most traditional of the thermochemical heat treatment processes. With the HighCarb process, components can be exposed to higher temperatures during usage.

Vacuum Hardening - R.VAC+®

Vacuum hardening is the hardening process for deformation sensitive precision or formed components and tools which require a clean and bright surface. The full potential of the material can be exploited by means of vacuum carburizing or pressure-application processes in combination with helium quenching (HELIVAC®).

Hard Coating - PLASTIT®

In cooperation with customers, RUBIG offers PACVD coating systems for maximum wear and/or corrosion protection of your workpieces. Special developments in the field of high level thicknesses (e.g. 30 µm), internal coatings and coatings of complex geometries are a key part of the service portfolio.

Certificates:
ISO 9001
IQ-Net
VDA 6.1
EN 9100

Plasma Nitriding - PLASNIT®
The first choice for high wear and dynamically stressed components.

Gas Nitriding - R.NIT+®
Gas nitriding offers a high durability and high corrosion resistance, with a high load density.

RUBIG Slovakia
At the production facility in Slovakia, heat treatment technologies such as case hardening, plasma and gas nitriding as well as vacuum hardening and annealing are carried out for the Slovakian market.

Aluminium-Heat Treatment
If you are looking for aluminium components with low distortion and low residual stress, choose Aluminium-Heat Treatments from RUBIG. RUBIG customers benefit from short processing times with premium quality. During heat treatments a high temperature is applied in order to positively affect the material characteristics of aluminium. RUBIG offers different aluminium states such as T4, T5, T6, T7 with different quenching options (e.g. air, polymer, water quenching).

Sectors
Machine engineering, automotive, tooling technology, security technology, leisure, transport, aerospace, health care machinery, motorsports, etc.

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RUBIG INDUSTRIAL FURNACES

Top of Nitriding and Coating

MICROPULS® and GASCON Technology from RUBIG Industrial Furnaces is the premium plasma and coating technology in the heat treatment sector. Partners from across the globe have confidence in RUBIG plasma nitriding technology. Customers benefit from over 25 years of development experience in the field of customized thermal treatment systems for a variety of sectors, from job-shop heat treatment operations to inhouse manufacturing.

MICROPULS® Technology

MICROPULS® technology from RUBIG Industrial Furnaces provides successful and innovative heat treatment solutions in plasma nitriding and plasma coating – driven by powerful MICROPULS® generators.

MICROPULS® EVEREST
The Plasma Nitriding System

Optimized processes enable an exceptional degree of filling and thus the highest possible cost-effectiveness.

MICROPULS® PROCOAT
The Coating System

MICROPULS® Procoat is the optimum system solution in the area of hard coatings.

MICROPULS® DIAMOND Xtended
The DLC Coating System

With the MICROPULS® Diamond Xtended system RUBIG offers one of the most innovative system solutions in the field of DLC coating technology.

Certificates:
ISO 9001
IQ-Net

PLASMA NITRIDING TECHNOLOGY
RÜBIG
POSITIVE ENVIRONMENTAL BALANCE

GASCON Technology

RUBIG Industrial Furnaces's GASCON technology provides highly efficient and advanced gas nitriding. Constructed in a modular way and adapted according to customer needs, these systems convince with their excellent durability and the possibility to control processes by means of nitriding potential.

GASCON K2

The Gas Nitriding System

Discover new highs and previously unknown territory with the new GASCON K2.

Surface Improvement by RUBIG

The RUBIG SIR program represents the development of technology and processes to ensure optimal performance for the surface of tools and components made from steel materials, while respecting the environment. SIR allows a reduction in fine hard machining, offers production time integration, partial nitriding and process combinations, and it ensures a prolonged service life. SIR ensures the lowest emissions, minimal gas consumption and extended product lives. Cost savings of around 20% are realized by eliminating the need for hard fine machining.

SiR SAVES MONEY PROTECTS THE ENVIRONMENT
Surface Improvement by RÜBIG

Sectors

Refinishing, automotive, aerospace, machine engineering, tooling technology, security technology, etc.

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RUBIG DIE FORGE

Safety Through Quality

The die forge division - Franz RÜBIG & Söhne - was established in 1946 and is the founding member of the RUBIG Group. Franz RÜBIG & Söhne has been developing innovative solutions, from blanks to finished products, in cooperation with customers.

All necessary tools are made by the RUBIG's own tool shop in order to ensure top quality and delivery times for all components or allow for last minute changes to shape modifications. In addition to the manufacturing of in-house products (such as linch pins, chain systems and hunting knives) the company's main focuses are in the mass production of drop forgings according to customer specifications and in machining technology. Pre-finished drop forgings can be offered from a single source. RUBIG offers its spectrum of technologies for customer contract processing.

Linch Pins

Linch pins are used to join and secure mechanical components and parts. Therefore, the optimal design and quality of the pins is very important.
RUBIG linch pins are available in more than 80 different types and sizes.

Chain Systems

The ideal chains for a harsh operating environment: The detachable chain, developed and forged by RUBIG, has a particularly beneficial fiber and fabric structure which provides, besides its innovative design, the basis for its durability and toughness. In addition to standard flat link chains series T and series C, RUBIG also manufactures a newly developed heavy duty drive chain - an innovative version of the Vaucanson chain - and all associated sprockets.

Hunting Knives

Craftsmanship enriched with high-tech manufacturing: Die-forged knives made from high quality steels, vacuum tempered, cryo treated and optionally DLC coated. For highly demanding requirements - innovative design and individually processed.

Certificates:
ISO 9001
IQ-Net

Forgings

From blanks to finished products: Thanks to longstanding experience in this field of business, RUBIG can develop the design from sketch to the finished drawing and subsequently carry out reliable cost effective mass production of drop forgings.
The RUBIG tool shop ensures absolute confidentiality and flexibility.

RUBIG Machining Technology

Complete solutions from a single source: For the machining of metal, multifunctional turning-drilling-milling centres are used to manufacture complex components. Franz RÜBIG & Söhne offers turning, drilling, milling, cutting and grinding and automatic workpiece measurement services.

Certified Quality – more than just a commitment

From quality to success: As a family-owned and multinational company, RUBIG aims to maintain relations with customers by satisfying them on a sustainable basis. This is made possible thanks to the high-quality products, attention to detail and a hunch for the needs of customers

Sectors

Agricultural engineering, machine engineering, automotive, commerce, construction, leisure, etc.

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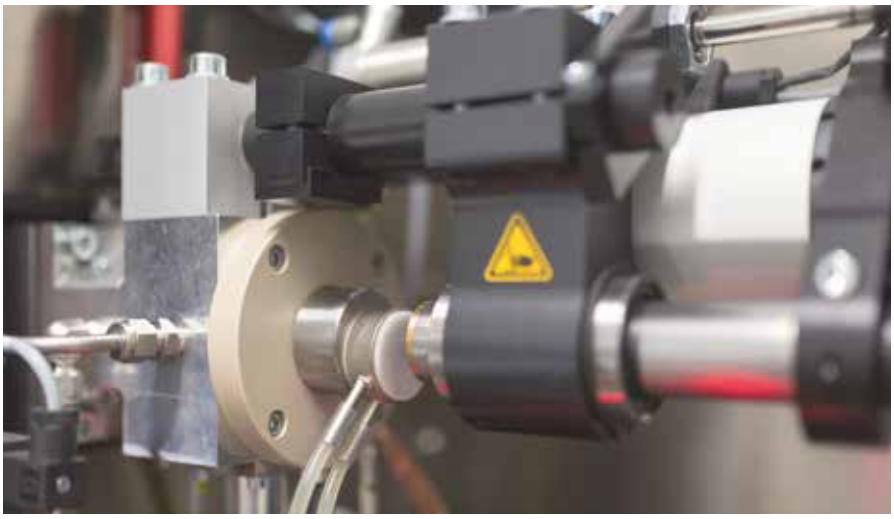


RUBIG COMPETENCE CENTER

A wealth of knowledge from decades of experience

Research and development

RUBIG provides profound expertise in order to improve and optimise customers' components. RUBIG supports finding the appropriate combination of material grade, manufacturing technique and heat treatment suitable and sufficient for special stress and environmental conditions applied in service.

Determination of Chemical Composition

Spark spectrometer metal analysis determines the material grade of unknown metallic materials, or in the case of a material mix-up as well as for incoming inspections. EDX micro analysis narrows down the origin of foreign particles, GDOES is used for the analysis of coatings etc.

Hardness Tests

RUBIG offers macro and micro hardness tests as well as hardness profile and case depth measurements of metallic components and workpieces, hardness tests of thin hard coatings and across weld joints etc.

Retained Austenite & Residual Stress Measurements

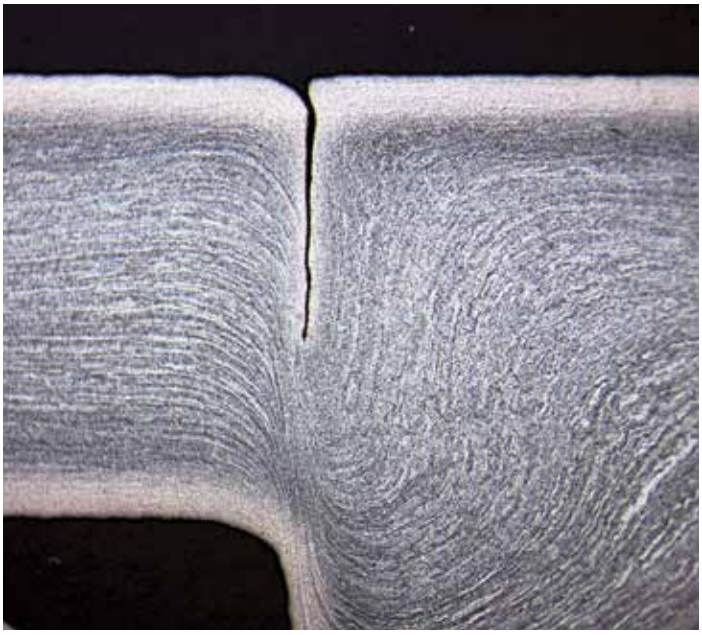
The amount of retained austenite as well as residual stress profile measurement can be determined by means of X-ray diffraction analysis to characterise heat treat quality or to obtain information necessary to improve a component's fatigue strength, or to evaluate inauspicious influences from mechanical manufacturing or EDM etc.

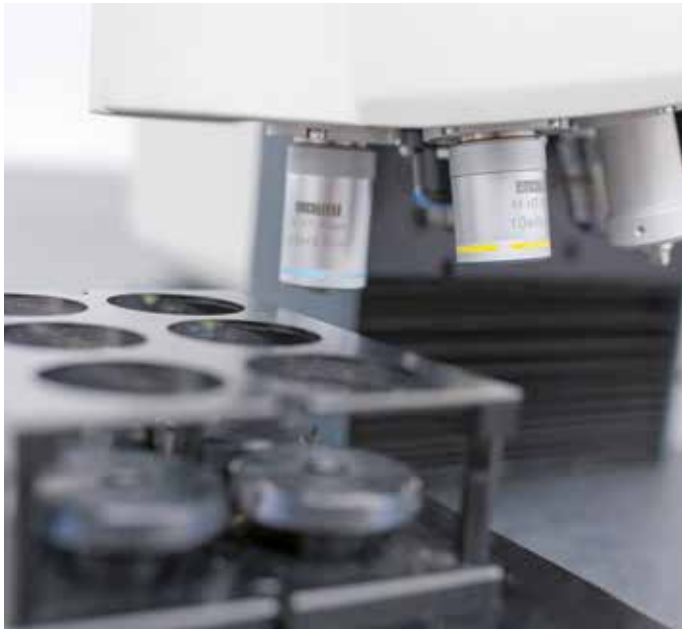
Metallography

Examinations of a material's microstructure can be carried out to characterise basic material properties and heat treated condition, to evaluate noteworthy microstructural defects or other distinctive features etc.

Materials Examinations

RUBIG can provide identification and characterisation of the type of material, manufacturing process and heat treatment of unknown products, quality and final inspections of specified serial parts (conformance tests), metallographic examinations, hardness tests, spectrometer and X-ray diffraction analysis etc. of components with regard to their operational purpose and their behaviour in service etc.





Failure Analysis

Identification of failure mode (type of fracture, hydrogen embrittlement, corrosion, wear etc.) is offered along with possible failure root cause(s) to deduce appropriate remedial measures necessary to improve further developments and to avoid similar failures in future.

Corrosion Tests

RUBIG can assist with analysis and prevention of corrosion-related failures, execution of standardised or specific corrosion tests (salt spray tests, galvanic corrosion tests etc.) to determine actual corrosion resistance of a component or to obtain information necessary to improve its corrosion resistance.

Tutorials, Courses & Trainings

Theory and practical experience in the field of heat treatment are imparted; the seminars are focussed particularly on designers, manufacturers and planning engineers who want to obtain or improve knowledge about this special manufacturing technology.

Sectors

→ Manufacturing companies and engineering offices across all sectors
→ Experts, insurance

Strategic partnerships

→ Steel producers
→ Universities, research institutes, technical colleges,...
→ R&D departments of other companies

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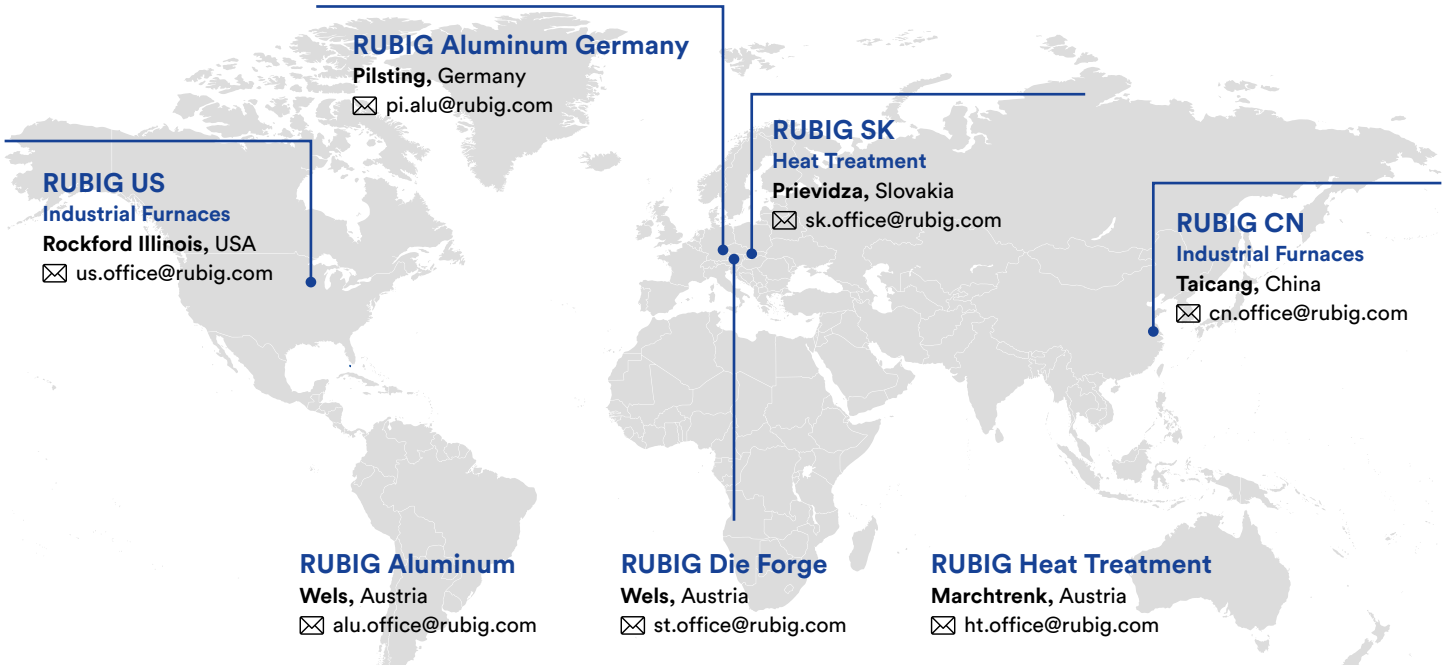

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