AFARAK

ELEKTROWERK WEISWEILER GmbH

FERROCHROME PERFECTION. SINCE 1917.

High-performance and a global leader

Since its founding in 1917, Elektrowerk Weisweiler (EWW) has grown to become the world's leading manufacturer of low-carbon ferrochrome specialties (LC FeCr). With approximately 145 employees, we produce at our Eschweiler-Weisweiler site near Aachen up to 32,000 tons of high-quality ferrochrome annually and supply both the superalloy industry (aerospace, power generation, chemicals, and medical technology), as well as steel and stainless steel mills, foundries, and forges.

As part of the publicly traded Finnish Afarak Group SE we benefit from a strong international network. The chromite ores we process come from our own mines in Turkiye, which allows us to ensure a consistently high quality of raw materials. Our certifications (ISO 9001 Quality Management, DIN EN ISO 50001 Energy Management System) as well as our membership in the Gütegemeinschaft Metallhüttenschlacke e. V. underscore our high standards of sustainability and quality.





Our solutions: customized, efficient, sustainable

Our particular strength lies in our specialization in special alloys that meet the highest technical requirements. While mass-produced products still dominated in the 1960s and 1970s, we now focus on demanding specialty applications. In addition, through our “Analytical Services” division, we offer a wide range of analytical services in our in-house laboratory.

In a continuous process of transformation, we are setting the course for a sustainable future through numerous innovations e.g., through the use of environmentally friendly energy, consistent and continuous process optimization, as well as the development and implementation of additional niche market processes for sustainable diversification. In doing so, we have a clear goal in mind: zero-waste production, in which no waste is left behind, and all materials are used to their fullest potential for high-quality products and sustainable solutions for the world of tomorrow.





Our Products and Services:

- Low-Carbon Ferrochrome
- Alloy Powders
- Specialty Products
- Analytical Services
- CRS Construction Material Mix
- Recycling of Standard Scrap

History:

1917
Founded as a division of GFE Düsseldorf

From 1973
Independent company
within the Metallurg Group

2004–2012
Part of Kermas Group Ltd.

Since 2012
Member of the Afarak Group SE



Our Ferrochrome Grades

LLL-FeCr
(low nitrogen, phosphorus, silicon, and carbon content):
Used in the superalloy industry, e.g., for aircraft and stationary turbines

ELC-FeCr
(0.015–0.025% carbon):
Primarily used in chromium-containing steels and superalloys

High-chromium FeCr
(with low cobalt and nickel content):
Specifically for use in nuclear applications

Standard FeCr
(0.03–0.1% carbon):
Primarily for use in chromium-containing steels

Nitrogen-containing
FeCr (3–4% nitrogen):
For nitride-containing chromium steels







Oetelshofen – Nachhaltige Kalkproduktion seit 1900

OETELSHOFEN KALK
Seit 1900: Unabhängigkeit verpflichtet.

Seit über 125 Jahren fördert Oetelshofen im Steinbruch Osterholz Kalkstein und verarbeitet ihn zu erstklassigen Branntkalk-Produkten für die heimische Industrie und alle metallurgischen Prozesse. Unsere Arbeit vereint Tradition, modernste Technik und nachhaltiges Handeln, um die Qualität und Umweltfreundlichkeit unserer Produktion zu gewährleisten.

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vertrieb@oetelshofen.de
Tel.: 02058 8910
www.oetelshofen.de



High-performance technology for high capacities

We are the global market leader in the production of low-carbon ferrochrome (special grades) and stand out thanks to our many years of experience and a high production capacity of up to 32,000 tons per year. We use three different types of furnaces that are precisely tailored to various requirements:

- 17-MW rotary hearth furnace for the large-scale production of LC FeCr
- 5-MW electric arc furnace for special alloys and recycling processes
- 1-MW induction furnace for nitrided ferrochrome, recycling processes, and the production of special alloys



Thanks to this equipment, we can respond flexibly to customer requests and ensure consistently high quality across all product lines. In the coming years, we plan to gradually transition our energy supply to sustainable energy sources.

wagner.
Instandsetzer aus Leidenschaft

wagner GmbH
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52249 Eschweiler

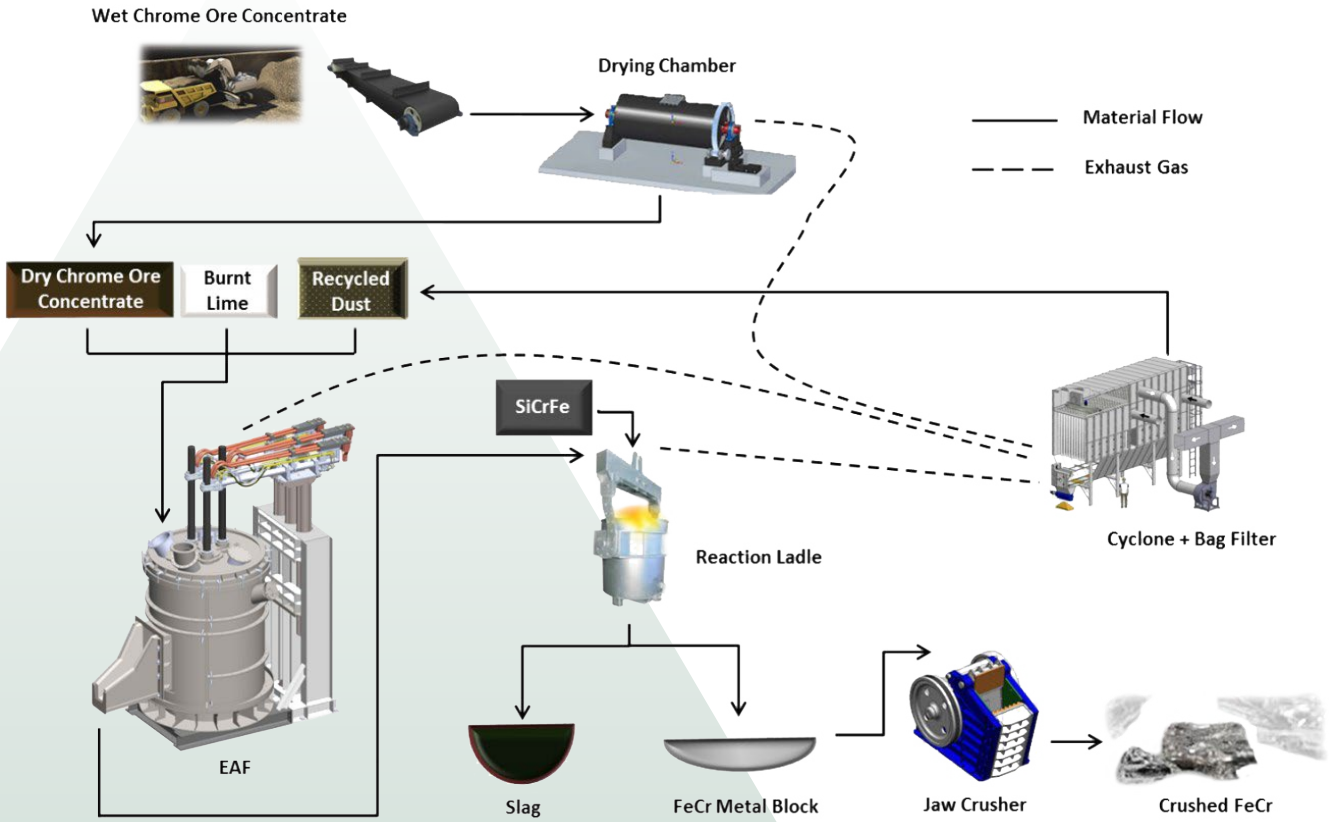
Industrielösungen
Instandsetzung
Vor-Ort-Bearbeitung
In-House-Leistungen

LC FeCr – The Production Process

The production of low-carbon ferrochrome (LC FeCr) involves several coordinated steps. The process begins with high-quality chromite ores, which are processed and melted in an electric arc furnace.

In a special metallothermic process step, the LC FeCr and a calcium silicate slag are then produced, resulting in the desired quality grades (e.g., LLL, ELC). The key factor here is the precise adjustment of the chemical composition for the respective applications.

The final product is then crushed into various sizes according to customer specifications, properly packaged, and delivered worldwide to customers in the superalloy and stainless steel industries. The process ensures the highest purity, consistent quality, and sustainable use of raw materials.



GVA Krefeld

FRANZ SCHAIN GMBH & CO. KG
Ihr Partner für Industrielogistik



RHEINFELDEN CARBON

RHEINFELDEN CARBON – Ihr Spezialist für maßgeschneiderte Elektrodenmassen



Hersteller der ersten ungiftigen Elektrodenmasse, erfolgreich eingeführt in Lichtbogenöfen

Unsere Produkte

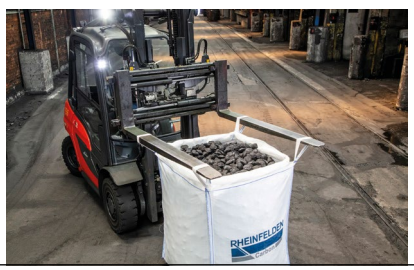
- Klassische Soederberg Elektrodenmassen (ELPA) in Briketts oder Zylindern
- Kalzinierter Anthrazit
- Verschlussstöpsel
- Warmstampfmassen (REPA 2)

Unsere Eco-Produkte

Unsere Innovation für eine umweltfreundlichere & grünere Industrie

- Limak: Elektrodenmasse mit PAK-freiem Bindemittel
- Elpa Eco: Elektrodenmasse mit reduziertem Schadstoffgehalt

Mail: carbon@rheinfelden-carbon.eu
www.rheinfelden-carbon.eu



GRINDALLOY® – Innovative Metal and Alloy Powders

Under the name GRINDALLOY®, we have expanded our product portfolio to include custom-made metal and alloy powders for a wide range of industrial applications. With over 100 years of metallurgical experience and specialized processes, our powder solutions are precisely tailored to the chemical and physical requirements of our customers from filler materials for the welding industry to metallurgical processes and specialty applications. We continuously optimize our processes and develop new specifications and products in collaboration with our customers.

GRINDALLOY
Advanced Powder Metallurgy



Lösungen für die
Energieverteilung und -versorgung

ELATEC
POWER DISTRIBUTION



Schaltanlagen | Kompensationsanlagen
Sonderprodukte | Engineering



Rudolf-Diesel-Strasse 6, 54329 Konz, Tel. +49 6501 9494-0, office@elatec.net, **www.elatec.net**



Certified quality

Depending on the type of metal or alloy, we use specialized, gentle grinding processes that enable us to process a wide range of materials to the highest quality standards. Of course, all production steps are continuously monitored using state-of-the-art testing methods in our in-house laboratory.

Speziallegierungen, Metalle und Gießereibedarf für Einkäufer mit besonderen Anforderungen

Seit über 100 Jahren steht die GfE-MIR GmbH für Qualität und Zuverlässigkeit im Metallhandel. Mit einem breiten Sortiment an Speziallegierungen, Metallen und Gießereibedarf bedienen wir Kunden aus der Stahl-, Metall- und Elektroindustrie sowie der Luft- und Raumfahrt.

- ✓ Speziallegierungen & Metalle
- ✓ Gießereibedarf & Fülldrahtprodukte
- ✓ Individuelle Verpackung & termingerechte Lieferung
- ✓ Nachhaltige Produktion gemäß Scope 1 des Greenhouse Gas Protocol



Kontaktieren Sie uns
Ihr Team für Gießereien

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40212 Düsseldorf

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Diversity across a wide range of industries

Our product portfolio ranges from classic ferroalloys such as LC FeCr, HC FeCr, FeMo, FeNb, FeB, FeV, etc., to highly specialized powder solutions, which we melt ourselves, such as NiTiAL or FeAl.

Whether heat-resistant materials for power generation, powder-based additives for the production of welding electrodes, or custom-made solutions GRINDALLOY® stands for consistent quality, flexibility, and reliability. This allows us to offer our customers well-designed solutions that are precisely tailored to their specific product requirements.



Ihr Partner für industrielle Elektrotechnik & Prozessoptimierung

E.I.M.G®

Seit 1973 bieten wir maßgeschneiderte elektrotechnische Lösungen für Industrie, Energie und Wasser. Mit Qualität, Erfahrung und Leidenschaft schaffen wir effiziente Prozesse, intelligente Systeme und nachhaltige Technologien – damit Sie sich auf Ihr Kerngeschäft konzentrieren können.

- ✓ Industrielle Antriebs- & Anlagentechnik
- ✓ Energieeffiziente Technologien & IoT-Lösungen
- ✓ Automatisierungstechnik und Prozessoptimierung
- ✓ Wartung, Service & Qualitätsmanagement



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www.Eimg.de



Service and Sales

Elektrowerk Weisweiler GmbH operates on an international scale to ensure timely support and delivery of custom-manufactured products. We place particular emphasis on fast, straightforward solutions and a highly personalized customer relationship with individualized support.

Our alloy powders

- **In-house alloys:**
  LC FeCr, LC FeCrN, NiTiAl, FeAl, SiMnAl, Sigma FeCr
- **Other alloys:** FeV, FeMo, FeNb, FeSiCr, FeW or HC FeMn among others

PETER DEDERICHS GmbH
BAUUNTERNEHMEN • ESCHWEILER

Wir realisieren zuverlässige Bauprojekte
im Hoch- und Tiefbau sowie Spezialtiefbau
und Kanalbau.

Jülicher Straße 97–101 | 52249 Eschweiler (Rhld.) | Tel. 02403 4040
info@peter-dederichs.de | www.peter-dederichs.de





Accurate analyses for informed decisions

We have extensive experience in inorganic chemistry and, through our “Analytical Services”, laboratory offerings, provide reliable analyses of metals, alloys, mineral raw materials, aggregates, and foundry products. Our goal is to provide fast and accurate answers to analytical questions — for industry, universities, and engineering firms.

To this end, we use a wide range of sophisticated analytical methods that combine modern instrumental techniques with proven classical methods. This enables us to select the optimal analytical strategy for every requirement.



Baucons
Sanitär- & Heizungstechnik
Meisterbetrieb
Sachverständigenbüro
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www.baucons-heimbüchel.de

An Overview of Analytical Methods

ICP-OES (Inductively Coupled Plasma Optical Emission Spectroscopy):

- Determination of trace elements in the ppm range
- Very fast multi-element analysis
- Ideal for metals, alloys and mineral samples

Elemental analysis by hot gas carrier extraction and combustion:

- Precise determination of C, S, O, N, and H
- Essential for quality control in metallurgy and alloy production
- High reproducibility and compliance with standards

X-ray Fluorescence Analysis (XRF):

- Non-destructive analysis of solid samples
- Fast results for major and trace elements
- Flexible for use with many types of materials

Traditional wet chemistry in accordance with relevant ISO and DIN standards:

- Proven standard methods for major components
- High accuracy even for difficult elements
- An important complement to modern instrumental Methods



KARL KÖLLNER
Versicherungsmakler GmbH
An Aon Company

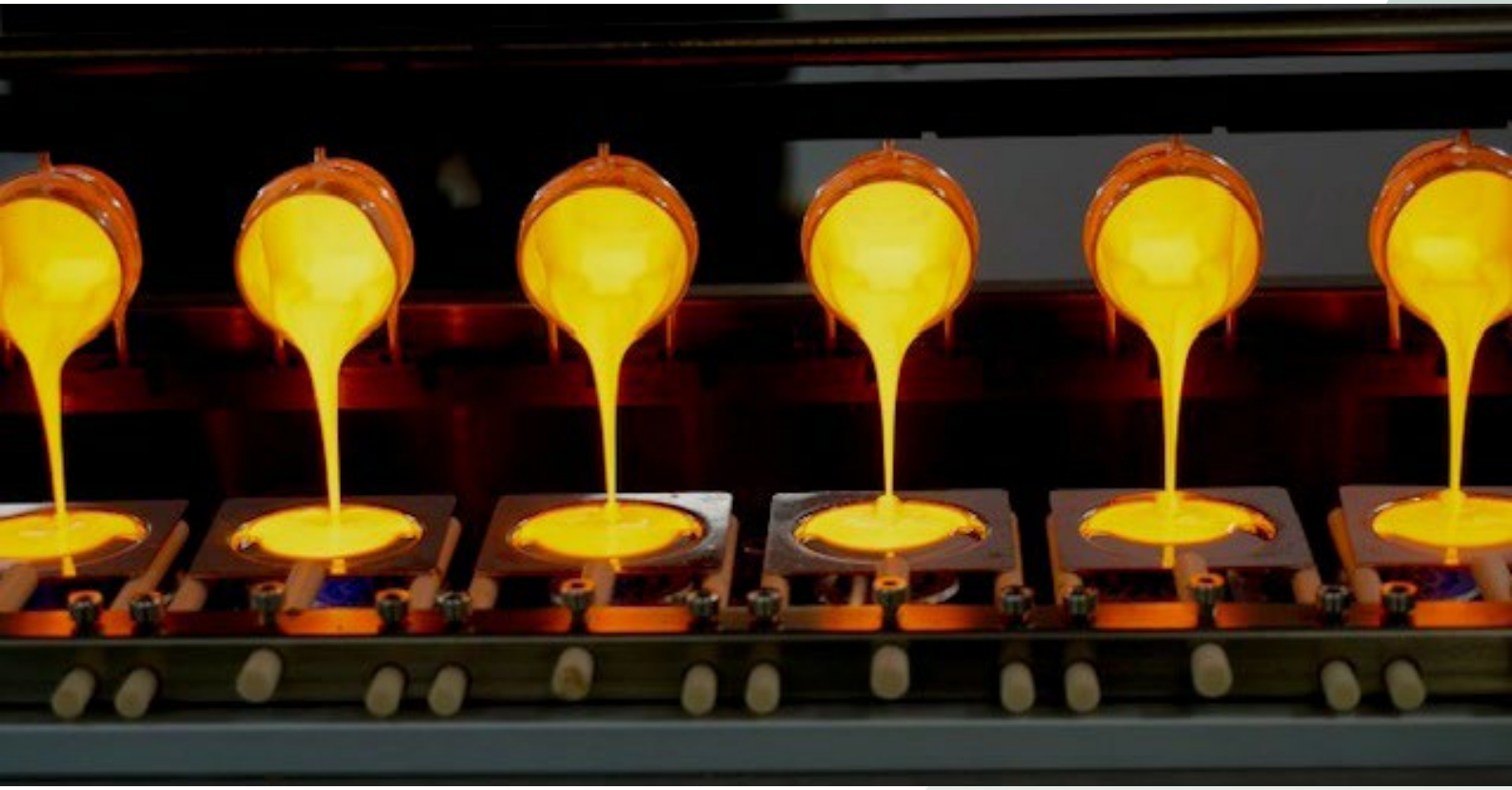
KARL KÖLLNER
Marine Insurance Brokers
An Aon Company

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040 37 49 54 0

Quality Control and Contract Analysis

In our aerospace-certified analytical laboratory, we not only ensure the quality of our own products, but also offer our expertise for independent contract analysis. Of course, all procedures are carried out in accordance with relevant guidelines and standards. We also contribute our expertise to the VDEH Chemists' Committee, DIN standards committees, and other working groups. Furthermore, we collaborate on the production of certified reference materials that are used worldwide.



Ihr Partner in Sachen Finanzen
Jeder Mensch hat etwas, das ihn antreibt.
Wir freuen uns auf SIE.
Wir machen den Weg frei.
Raiffeisen-Bank
Die Eschweiler Bank
Internet: www.rb-eschweiler.de

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Customized support

From the analysis of metallic materials and mineral raw materials to elemental determination in inorganic matrices, and on to production and incoming inspections for metallurgical companies and their suppliers we offer a wide range of analytical services, extending to trace analysis and the measurement of relevant environmental parameters. Our practical and reliable analyses thus provide a solid foundation for quality assurance, research and development, as well as for purchasing decisions.





Sampling/ Sample preparation

Analytical Service is happy to handle the sampling and/or sample preparation of the material to be analyzed directly at the customer's site and/or the deposit. Our samplers travel daily throughout Europe on behalf of our customers to provide our international clients with a prompt and impartial overview of the goods.

The Analytical Service employs publicly appointed and sworn experts in the sampling and analysis of ferroalloys, ores, raw materials, and auxiliary materials who are happy to share their many years of expertise with our clients.

Josef Kuhlen GmbH
EINFACH GUT VERPACKT
IBC-Container · Fässer · Kanister · Paletten

FPS Flexible Packaging Solutions



Calcium silicate slag as a sustainable building material

In the production of low-carbon ferrochrome, we generate up to 75,000 tons of calcium silicate slag annually. Over 75% of this is used as a quality-controlled construction material mixture (CRS). CRS replaces approximately 56,000 tons of natural stone each year and thus makes an important contribution to resource conservation and the circular economy.

The slag is produced at temperatures of up to 1,800 °C during the smelting process from chromite ore and other aggregates in the manufacturing process. Through the targeted use of aggregates, it achieves consistently high quality and a dimensionally stable, durable structure with high compressive strength as well as resistance to environmental influences. CRS construction material mixtures continue to harden over the course of their service life, causing the load-bearing capacity to increase further in the long term.

PLANUNG I RÜCKBAU I ROHBAU I UMBAU I SCHLÜSSELFERTIG

LENZIG SYSTEMBAU

AM KÖNIGSBUSCH 32 I 52379 LANGERWEHE I WWW.SYSTEMBAU-LENZIG.DE
INFO@SYSTEMBAU-LENZIG.DE I 02423 / 3157 I 0176 32474405

Versatile applications

CRS is used in road, path, and earthworks e.g., as a base course with or without a binder, in the subbase of asphalt and concrete, for noise barriers, or as bedding material in canal construction.

Even large-scale projects such as the construction of the “Tivoli” soccer stadium in Aachen, sections of the A4 highway, and logistics and industrial centers have been successfully completed using CRS.

CRS Benefits at a Glance:

- Resource-efficient and sustainable
- High durability and weather resistance
- Consistent quality through quality assurance (RAL)
- Available year-round



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• Maschinen
• Antriebstechnik
• Befestigungstechnik
• Betriebseinrichtungen
• SKF Vertragshändler

Ingenieurbüro
Dipl.-Ing. Elmar Körfer
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EWW Project:

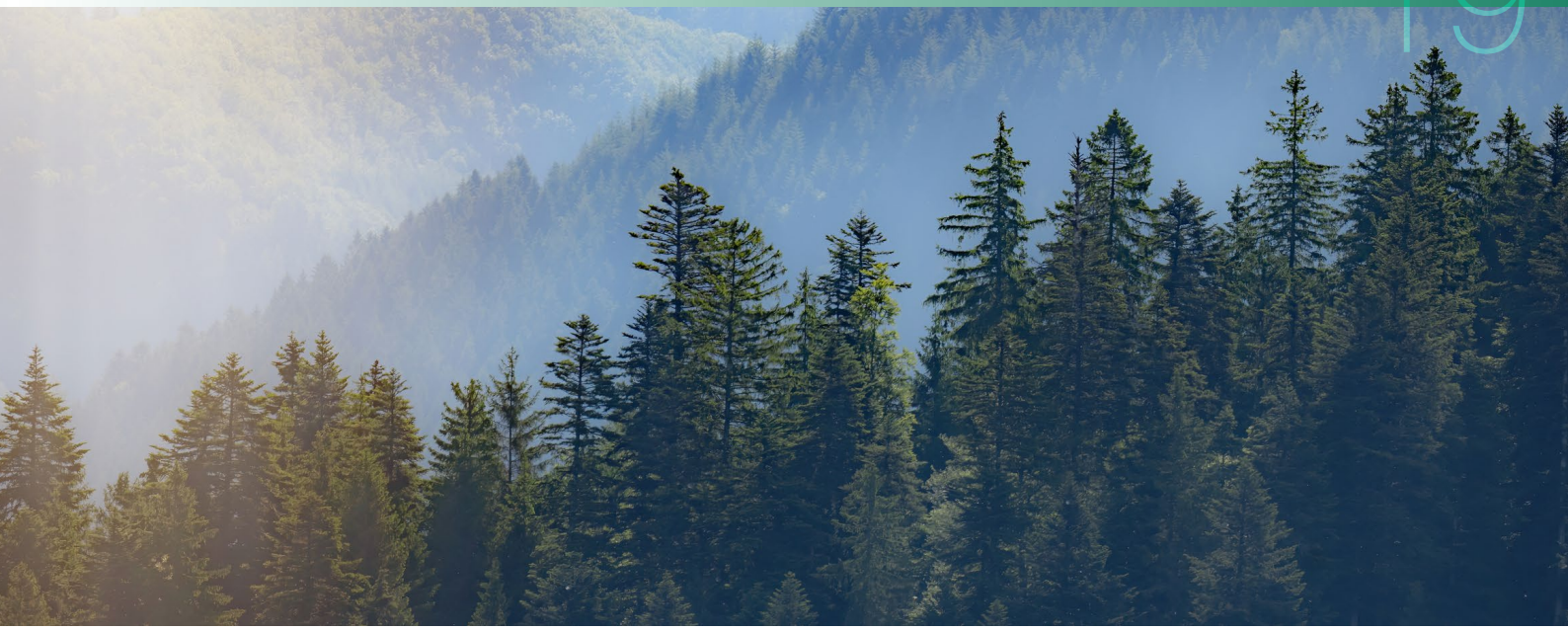
Slag as a Raw Material in the Construction Industry

As a result of many years of development work, Elektrowerk Weisweiler GmbH has developed an innovative metallurgical process for treating the slag produced during ferrochrome production. The goal is to produce a product that can be used, particularly in the building materials industry, as a component for various binders. In this process, the hot slag generated as a byproduct of ferrochrome production is processed directly, specifically modified, and then cooled in a controlled manner to produce Hüttenglas® or other (partially) reactive products. The innovation in slag treatment in our process lies in the minimization of undesirable accompanying elements and the reduction of heavy metal oxides through a unique metallurgical process step. This process conserves valuable resources and significantly reduces dependence on primary raw materials such as limestone or clay. At the same time, it opens up new application possibilities for industrial by-products in the spirit of a sustainable and future-oriented circular economy.

By utilizing all by-products from metallurgy a circular process is created in which no residual materials remain. Through this holistic recovery within the production process, we will make an important contribution to climate protection and a more sustainable construction industry in the future.







Achieving zero-waste operations through sustainable solutions

The production of (partially) reactive components is a significant milestone on the path to our stated goal of becoming a zero-waste operation by 2030 and thus the world's most sustainable manufacturer of low-carbon ferrochrome. Our goal is a completely waste-free operation in which all materials remain within the production process or are passed on to other industries as high-quality products.

In parallel, we will focus in the future on the ideally complete use of green energy (solar, wind, biomass) as well as on more efficient processes, e.g., through the use of process waste heat for ore drying. In addition, we are collaborating with universities on various research projects focused on niche processes in the areas of recycling and sustainable production processes.



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Ihr Profi für Dach, Fassade & Wartung – seit 1932

RÜTTEN INDUSTRIEBEDACHUNG

Ob Sanierung, Neubau oder Notdienst – Industriebedachung Rütten steht seit über 90 Jahren für Qualität, Zuverlässigkeit und bundesweite Erfahrung im Dach- und Fassadenbau. Für Industrie, Handel und auch private Bauherren sind wir Ihr kompetenter Ansprechpartner rund ums Dach.

Folgen **Sie uns auf** Social Media

- √ **Industriebedachungen & Flachdachsysteme**
- √ **Fassadenverkleidungen & Sanierungen**
- √ **Wartung, Instandhaltung & Notfalldienst**
- √ **PV-Montage, Dachausbau & Klempnerarbeiten**



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