

**SUSTAINABILITY REPORT.2009**





## LEGAL NOTICE

The first sustainability report for Montanwerke Brixlegg AG was drawn up in cooperation with the Tyrolean government as part of a research project carried out for the "Sustainability Management" course at the University of Innsbruck. With this as a basis, the main changes are presented in the following sustainability report for 2009.

Responsible for the content of this report: Environmental Officer Werner Kössler (Eng.).

Photos: manun, -neelz-, Dommy, designritter, mikelieser, annelilocke, micjan, Morz Kerl - photocase.com; Maria Pavlova, Raffaello - istockphoto.com; amridesign - fotolia.com.

For the purpose of gender equality in language and communication, any words in this report importing any one gender shall also apply to the other gender.

# CONTENTS

Preface . . . . .	01
Our mission: Innovation . . . . .	02
Our values . . . . .	03
A brief history . . . . .	04
The company . . . . .	05
Organisational structure . . . . .	07
Core competencies . . . . .	09
Products . . . . .	10
Production process . . . . .	12
Pyrometallurgy . . . . .	13
Hydrometallurgy . . . . .	13
Foundry . . . . .	15
Raw materials . . . . .	17
Network . . . . .	18
Management systems . . . . .	23
Quality management . . . . .	23
Environmental management . . . . .	25
The three dimensions of sustainability . . . . .	26
Economics – growth and the economy . . . . .	27
Ecology - nature and the environment . . . . .	29
Social matters – people and society . . . . .	33
Sustainability programme . . . . .	35
Data overview . . . . .	37
Sustainability performance data . . . . .	39



MB  
2802/3 B  
OFN

MB  
2802/3 B  
OFN

## PREFACE



With a history spanning more than 500 years, Montanwerke Brixlegg AG is Austria's only copper producer and one of the leading secondary smelters in Europe.

In line with economic opportunities, our corporate principles include the perception of social responsibility, the careful handling of natural resources and the further reduction of environmental pollution.

Recycling is the safeguarding of finite resources through the recovery of valuable metals. This eliminates the need for landfilling and, by adapting technology, allows for the development of new sources of raw materials.

Geographically the supply market is situated within a radius of approximately 500 km around Brixlegg. It includes Austria, northern Italy, Switzerland and southern Germany. Many Tyrolean scrap metal recyclers and dealers work closely as suppliers and customers with Montanwerke Brixlegg AG.

In the field of copper recycling, the plant in Brixlegg – which currently has 283 employees – is at the cutting edge of technology when it comes to the most important aspects of the refining process. The company should continue to be equipped with the newest technology to ensure it is prepared for all future market developments. The appropriate steps should now be taken to secure and strengthen the Brixlegg site.

Montanwerke Brixlegg AG sees itself as an innovator. To succeed in the face of international competition, the methods of extracting valuable metals are continually being developed further. The safeguarding and further expansion of these standards will be our major tasks for the coming years. These efforts shall be reflected in the company's economic success, in the sustainable protection and creation of jobs, in addition to environmental protection measures.

We are presently taking steps to strengthen the site in Brixlegg in a sustainable way. Moreover, we are positioning us in such a way to play a leading role on the global copper market in the future. Together with my fellow board member, Mr. Robert Stibich, I look forward to the future with a great deal of optimism.

Dr. Walter Durchschlag  
Chairman



## OUR MISSION: INNOVATION

We see ourselves as innovators. Our extractive metallurgy techniques are therefore constantly being improved to make us competitive in the international market.

The sustainable protection and further development of these standards will be our major tasks for the forthcoming years. It is this ambition that will precipitate economic success, the securing of jobs and additional environmental protection efforts.

# OUR VALUES

**OUR VALUES ARE QUALITY, EFFICIENCY AND FLEXIBILITY.**

These values form our code of conduct which allows us to go down this path together and to reach our goals by implementing our strategies quickly and easily.

## QUALITY

**Quality shall be the overall objective!**

In this context, the products, the competency and expertise of the staff members and the management team, the reliability and the delivery reliability regarding all internal and external customer relationships shall be tailored to achieve that objective.

**What this means for us:**

- Open communication
- A complementary approach and joint action
- Consistent advanced vocational training
- Active participation on a daily basis by means of continuous improvement

## EFFICIENCY

**Achieve maximum success by using all the available instruments!**

As a company unit we are responsible to our owners and to ourselves for yielding substantial long-term profits in order to guarantee the successful continuity of the company and jobs.

**What this means for us:**

- Careful use of all resources
- Continuous self-critical analysis of the processes
- Revision and scrutiny of the processes regarding their purpose
- Continuous improvement by means of consistent implementation

## FLEXIBILITY

**Take up the challenge to fulfil new and unknown tasks!**

In the course of that process, calculable failures may certainly happen, but they shall be seen as a chance and motivation for lifelong learning and improvement, and shall be taken as a personal professional challenge.

**What this means for us:**

- Rapid reaction to changing market situations
- Continuous adaptation to the latest technologies
- Satisfying individual customer needs
- Open acceptance of steadily changing job requirements

## A BRIEF HISTORY

- 1463 Copper mill first mentioned in records
- 1640 Up to 20 furnaces in operation
- 1875 Connection to the railway system built in 1858
- 1885 First production of electrolytic copper (Siemens Dynamo Machine)
- 1937 1,900 tonnes of electrolytic copper produced per year
- 1945 The site was destroyed by bombs
- 1957 Construction of a continuous casting plant for the production of round bolts and slabs
- 1985 Establishment of a flue gas desulphurisation plant
- 1988 The first implementation of copper electrolysis using permanent cathodes in Europe
- 1991 Installation of an extraction system: production of around 55,000 tpa of electrolytic copper and 40,000 tpa of copper shapes
- 1995 Capacity expansion of the electrolysis plant to 73,000 tpa
- 1998 Capacity expansion of the anode furnace to 90,000 tpa
- 2000 Capacity expansion of the foundry to 120,000 tpa
- 2002 Major fire on 12th January
- 2002 Commissioning of the sewage treatment plant
- 2003 Construction of the general purpose building
- 2005 Retention pond and settling tank for surface drainage
- 2006 Erection of the FlowBrix plant
- 2007 Austausch der Filteranlage am Flammofen und an der Schlackentrocknung
- 2007 Replacement of the filter system for the anode furnace and the slag dryer
- 2008 Replacement of the filter system in the sampling
- 2009 Launch of the small hydropower station "Alpsteg"
- 2009 Certification of AUVA occupational health and safety management system (the first company in Tyrol)

## THE COMPANY



**Montanwerke Brixlegg AG, with its headquarters in the Tyrol, is the only Austrian copper refinery with over 500 years of tradition. Moreover, it is one of the most important secondary plants in Europe. Montanwerke Brixlegg is a subsidiary of A-TEC Industries AG.**

The Brixlegg copper/silver mill was first mentioned in records in 1463. The Bavarian duke, Louis the Rich, laid the foundations for the plant in the small village of Brixlegg, which at that time still belonged to Bavaria.

Up until the 20th century, the economic development of the smelting works was closely connected to ore mining in the Tyrol. By implementing the industrial refinery electrolysis plant, the increased use of electricity enabled very pure copper to be obtained at an early stage.

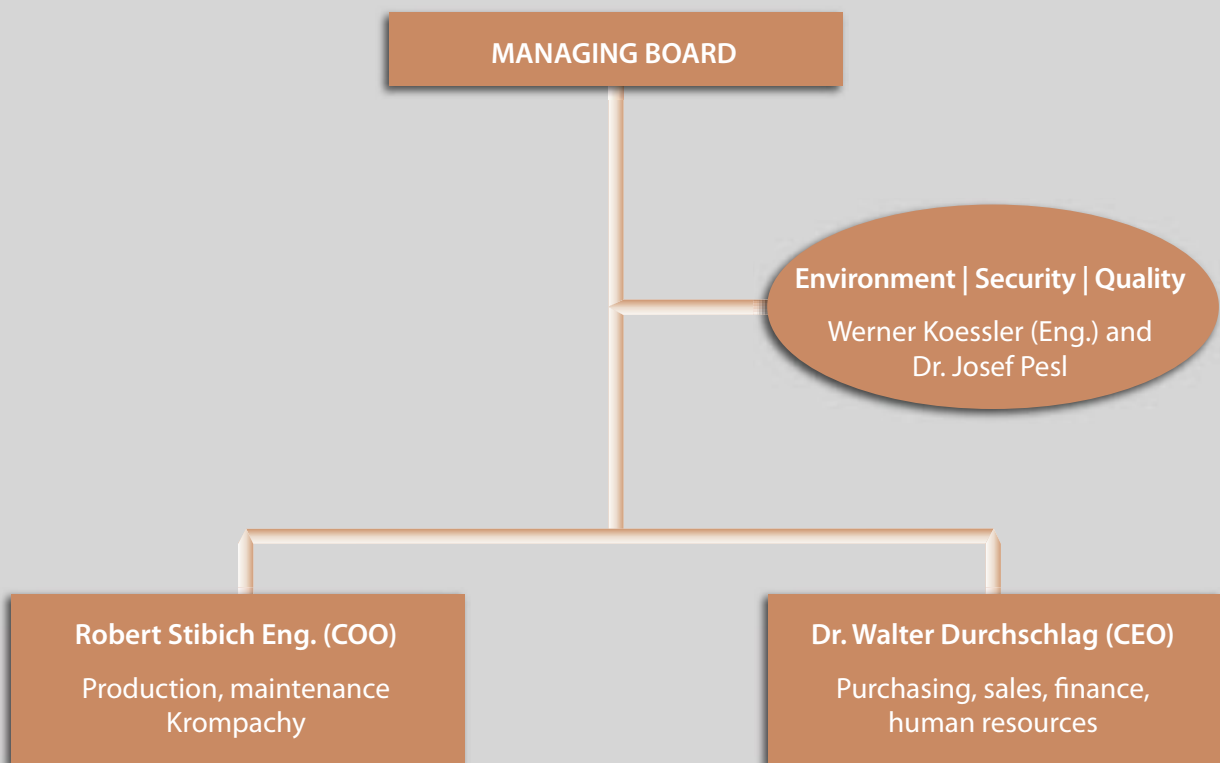
The copper products made in Brixlegg can be found all over Austria. Many roofs were plated with Brixlegg copper, such as that of the Parliament, the Palace of Justice and Schoenbrunn Palace in Vienna. In addition, Brixlegg also provided the mints located in Hall, Vienna, Milan and Venice with metal for coining.

Montanwerke Brixlegg AG was originally founded to refine copper and silver from the surrounding region. Today, it is a recycling company which is specialised in recycling ultra-pure copper in the form of cathodes and shapes.

**Montanwerke Brixlegg AG is proud of its 500-year old tradition and is aware of the responsibility this tradition signifies for the future.**



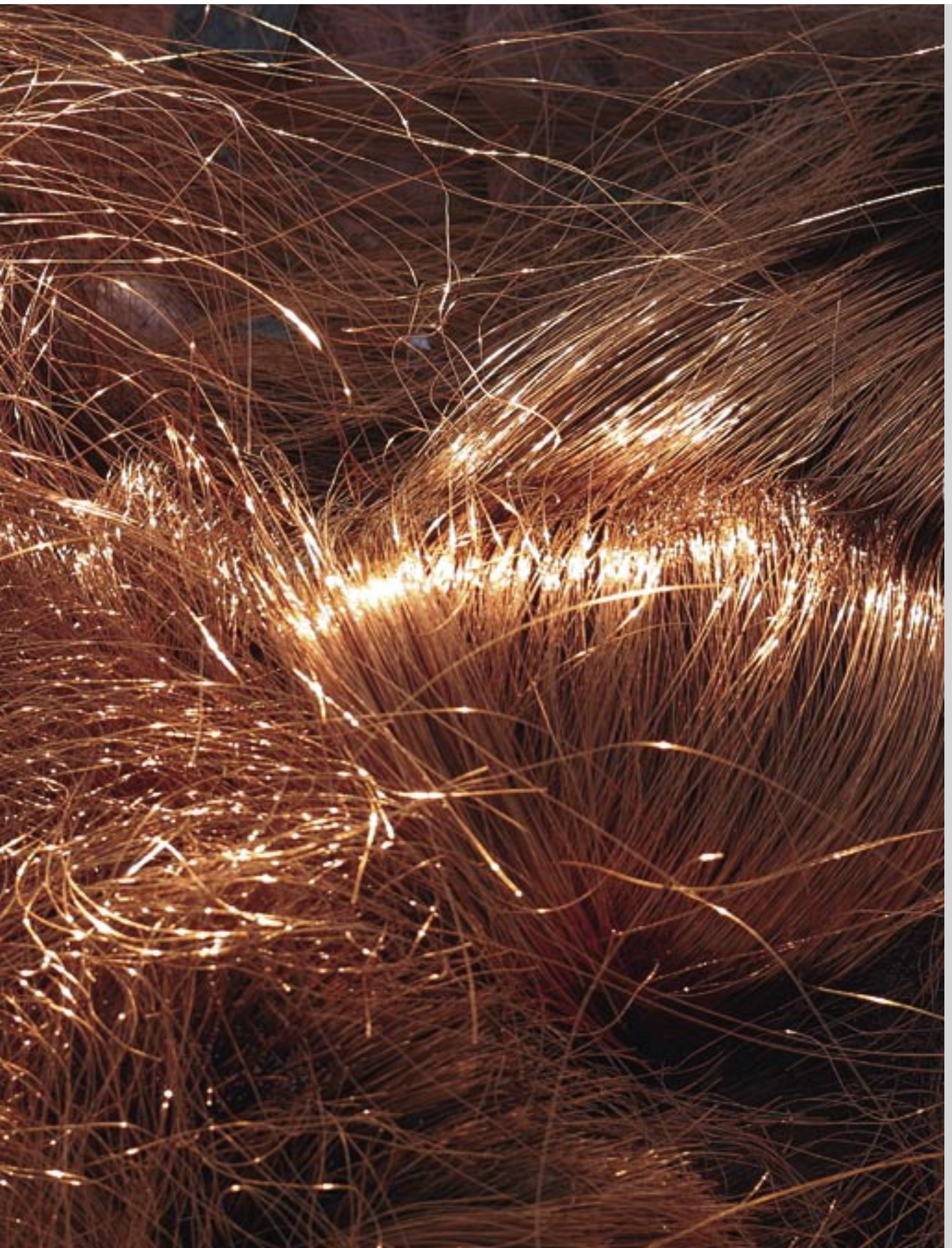
# ORGANISATIONAL STRUCTURE



## ORGANISATION

Montanwerke Brixlegg AG is structured according to functions. The management team has 14 members and reports to the board. Communication is highly efficient due to direct channels of communication.

Montanwerke Brixlegg AG employs 283 staff members at the Brixlegg site and 230 staff members in Kropachy, East Slovakia.



# CORE COMPETENCIES

## METAL RECYCLING

**Metals - especially copper and precious metals - have the quality of perfectly retaining their specific material parameters, even after numerous recycling processes.**

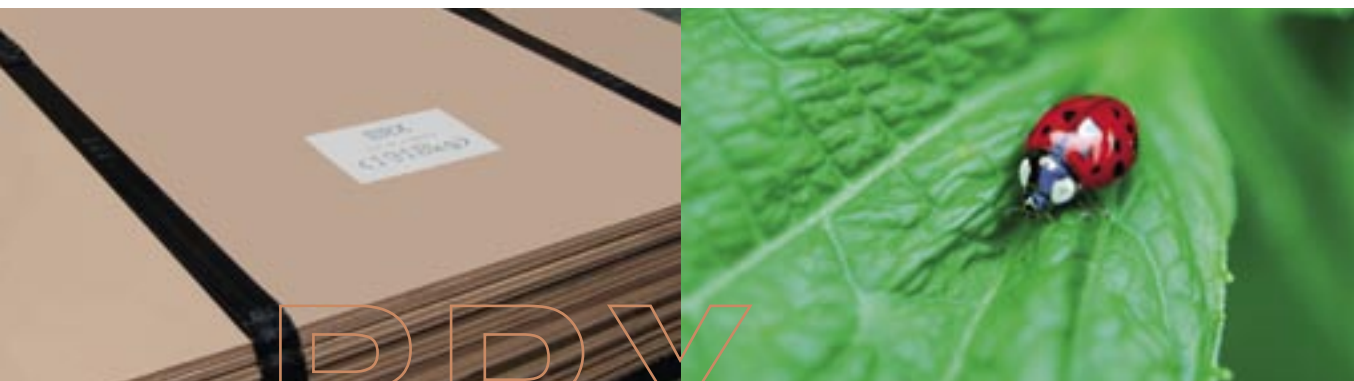
Metals - especially copper and precious metals - have the quality of perfectly retaining their specific material parameters, even after numerous recycling processes.

Thus, collecting and using scrap metals safeguards the raw materials which are essential for our industry, reduces dependence on imports and contributes to the sustainable protection of natural resources. With their technology, recycling companies are meeting appropriate legal requirements.

Scrap metals can be described as a permanent energy source, as the energy which is required for extractive metallurgy is only expended once and is therefore preserved in the metal cycle. In comparison to extracting metal from ore, copper recycling saves about 90% of the energy. Hence, metal collection and recycling ensure that there is no necessity to deposit scrap and other metal residues.

In the case of recycling materials, changes in consumer behaviour have also led to alterations. The use of copper is clearly moving into technological areas such as the electrical and electronics industry and consequently increasing the range of electrical and electronic scrap. Processing technologies for collection, treatment and also recycling must take this fact into account. New state-of-the-art recycling technologies therefore, need to be implemented in good time.

Pure metals, salts, oxides, fungicides and blasting agents are extracted by means of refining from secondary materials containing copper, such as scrap, alloys, residues and solutions. Thus, they are completely recycled and there is no need for disposal. This process generates products which are the feedstock of various fields of application (electrical and construction industry, mechanical engineering and construction, high-tech products, electroplating, agriculture).



BRX

## VARIETY OF THE HIGHEST QUALITY

### PRIMARY PRODUCT

#### COPPER

The Brixlegg site produces about 108,000 tonnes of ultra-pure copper as cathodes annually. The cathodes have a copper content of at least 99.99%.

The products of Montanwerke Brixlegg AG are exceptional because of the diverse ways in which they can be used and their excellent quality. The “BRX” brand, under which the cathodes are registered (“Cathodes Grade A”) at the London Metal Exchange (LME), is renowned worldwide.

# PRODUCTS

## BYPRODUCTS

### PRECIOUS METALS

Extracting precious metals such as gold, silver, platinum and palladium from copper-electrolysis anode sludge forms another central branch of production. Gold of 99.99% purity and silver of 99.97% purity are provided as granules, while other precious metals such as platinum and palladium are provided as mixed cementates.

### GRANOS

This product is made of accumulated iron-silicate slag from the blast furnace. The slag is granulated, classified and put on the market as a fine-grained, sharp-edged product known as "Granos". Granos are used for sandblasting, that is to remove surface coating from metals and wood, for removing rust from steel parts (bridge engineering, shipbuilding, automobile manufacture) and for insulating and draining.

### COPPER OXYCHLORIDE

Copper oxychloride is used as a fungicidal agent in pesticides (prevents the growth of fungi and spores). It is easy to use and very effective.

### FLOWBRIX

Montanwerke Brixlegg AG has developed an aqueous suspension concentrate (Flowbrix) for use as a pesticide which is distinguished by its effectiveness.

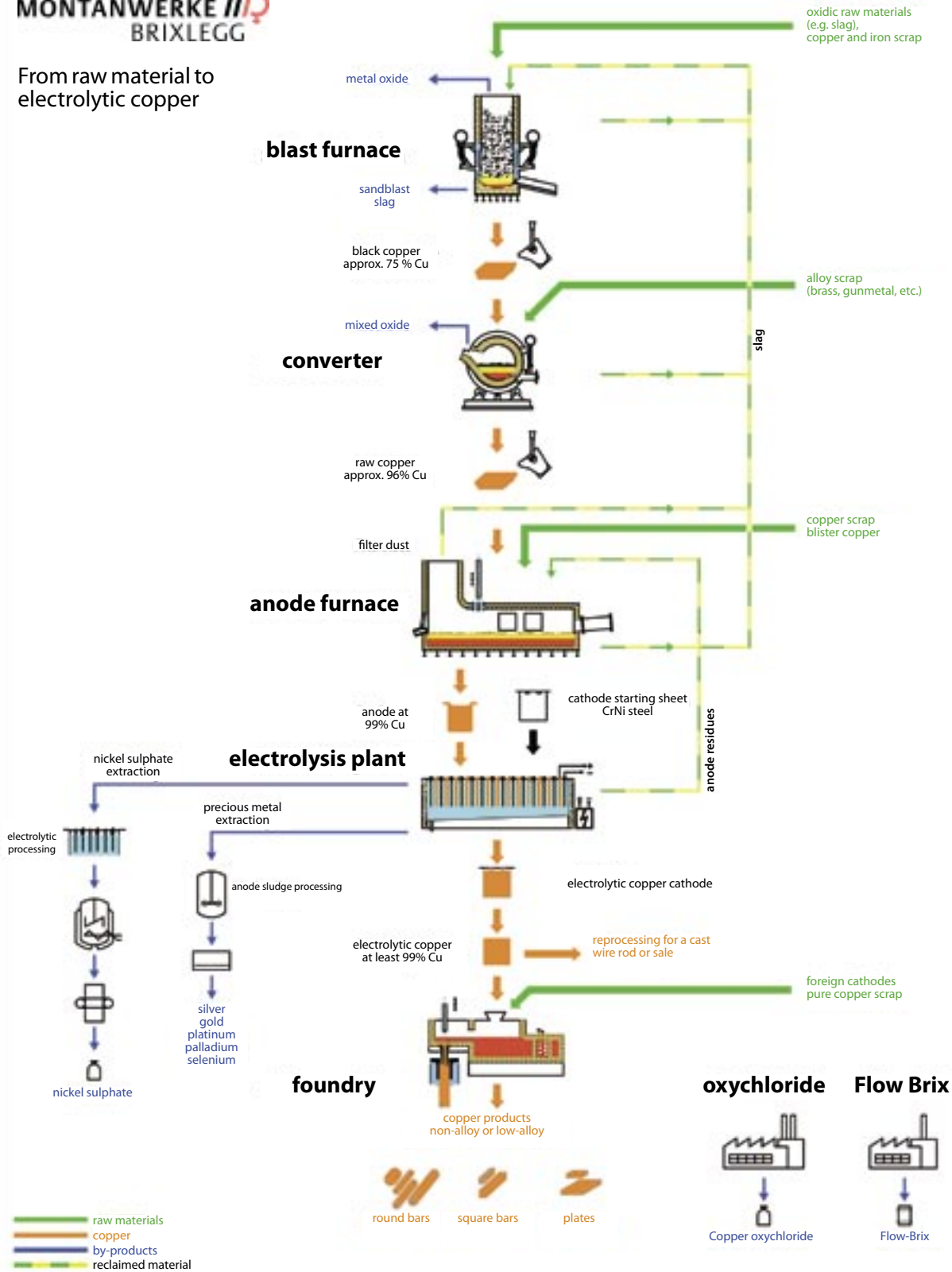
### NICKEL SULPHATE

Nickel sulphate is obtained in pure form from decopperised electrolytes in the refining electrolysis plant. The product is used for nickel plating in the plating industry.

### METAL OXIDES

The filter dusts generated during the pyrometallurgical refining process contain valuable metals such as lead, tin and zinc in the form of oxides. They are sold to metal mills for further processing.

From raw material to electrolytic copper



# PRODUCTION PROCESS

For the most part, pyrometallurgical and hydrometallurgical refining techniques are used on the Brixlegg site.

## PYROMETALLURGY

In the course of the pyrometallurgical refining process, metals are smelted and refined at temperatures of  $> 1,100^{\circ}\text{C}$

Materials with a low-copper content (e.g. shredder copper, Cu-Fe materials) are smelted in the blast furnace together with coke, quartz and lime. The slag is granulated in water and sold as an abrasive. Afterwards, the molten metal, also called black copper with a copper content of 75 %, is further processed in the converter together with alloy materials such as brass, bronze and gunmetal. In the course of this process, lead, tin and zinc are separated as mixed oxides using oxygen. This process produces slag containing copper, which is fed to the blast furnace for recycling.

The molten mass obtained from the converter comprises 95 % copper and is fed into the anode furnace for further refining, using materials such as plate, pipe and wire scrap as well as anode residues from the electrolysis plant. Thus, the molten mass obtained from the anode furnace comprises about 99% copper and is cast to anodes.

## HYDROMETALLURGY

The anodes form the basic product for hydrometallurgical refining, with copper being refined using electromechanical processes. The anode sheets are put into electrolysis cells, which are filled with a sulphuric solution of copper sulphate – the electrolyte.

Precious steel sheets serve as cathodes, on which copper is separated by means of electricity. The copper is extracted mechanically and used as cathode copper for further processing. The extracted copper is distinguished by its high purity – the copper content is about 99.99%.

Besides copper, there are other metallic elements in the anode which either reach the electrolyte (e.g. nickel) or form anode sludge again. Furthermore, specially developed hydrometallurgical process steps are taken to extract ultra-pure precious metals, for instance gold, silver, cementite and platinum/palladium, from anode sludge. Nickel is extracted from the electrolyte as ultra-pure nickel sulphate.



# PRODUCTION PROCESS

## FOUNDRY

Ultra-pure copper scraps (waste delivered by processing companies) and copper cathodes are smelted in a gas-fired blast furnace or in electric furnaces located in the foundry plant. Vertical continuous casting is a process in which strands of 100 to 500 mm in diameter or roller slabs of up to 8 m length are cast discontinuously. In accordance with the respective customer requirements, oxygen, phosphorus, silver and tin are added, which determine the quality of the cast copper.

## NICKEL PLANT

The nickel contained in the electrolyte is refined to pure nickel sulphate in the nickel facility. This is done by vaporising the electrolyte and then concentrating it under vacuum. After several purification stages this pure nickel sulphate solution is finally crystallized to produce chemically pure nickel sulphate of electroplating grade.

## PRECIOUS METALS PLANT

The process developed especially by Montanwerke for the extraction of precious metals from electrolysis anode sludge is a purely hydrometallurgical process. The specially prepared anode sludge is divided in solution reactors in which silver and gold are refined separately. The accumulated gold and silver powder is moulded into silver and gold granules in furnaces.



## RAW MATERIALS

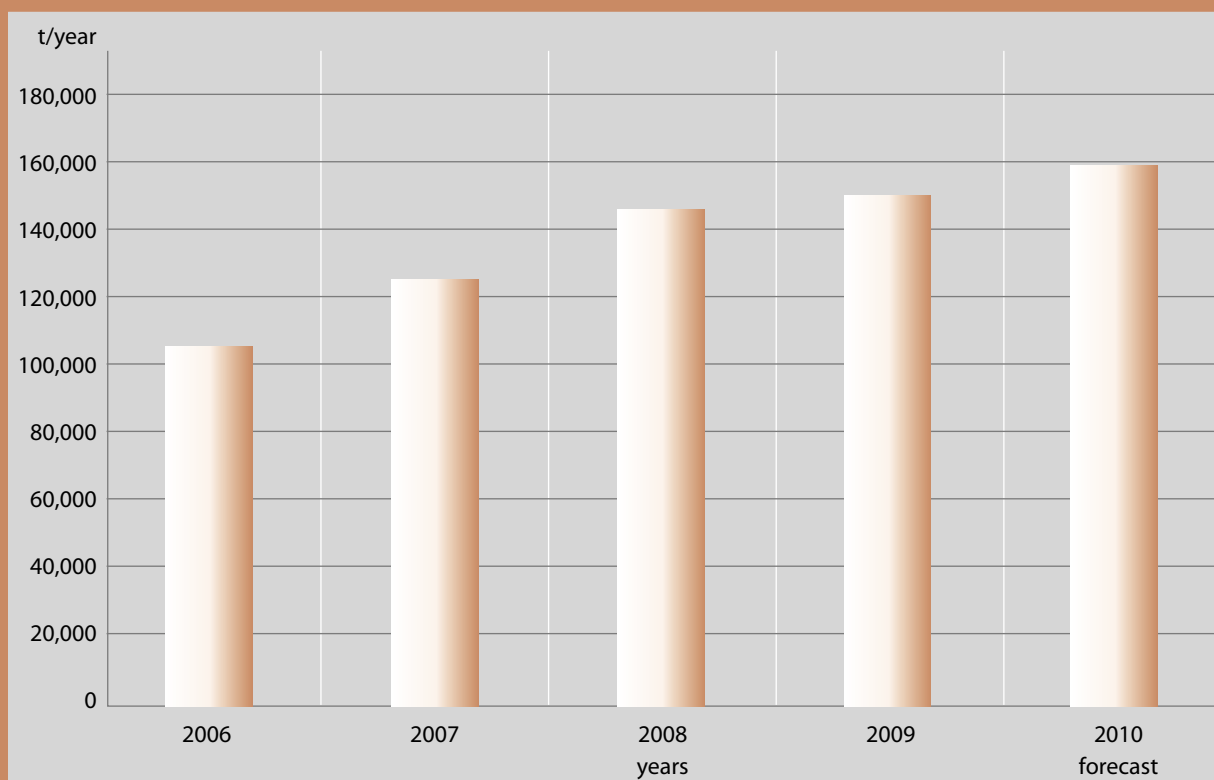
The raw materials used for this production process (approx. 160,000 t/year) are copper-bearing dust, ash, skimmings, shredder material, sludge and return slag with a copper content of 15% to 60 %, and alloy scrap such as brass, bronze, and gunmetal with a copper content of 60% to 80%. Other refining materials, for example copper scrap, wires, metal sheets, heavy copper mouldings, rods, flat copper, friction plates, bars as well as chaffed and stripped electric cables have a copper content of about 80% to 99%. Ultra-pure return scraps, emitted during the semi-finished production process, are used in the foundry without being refined.

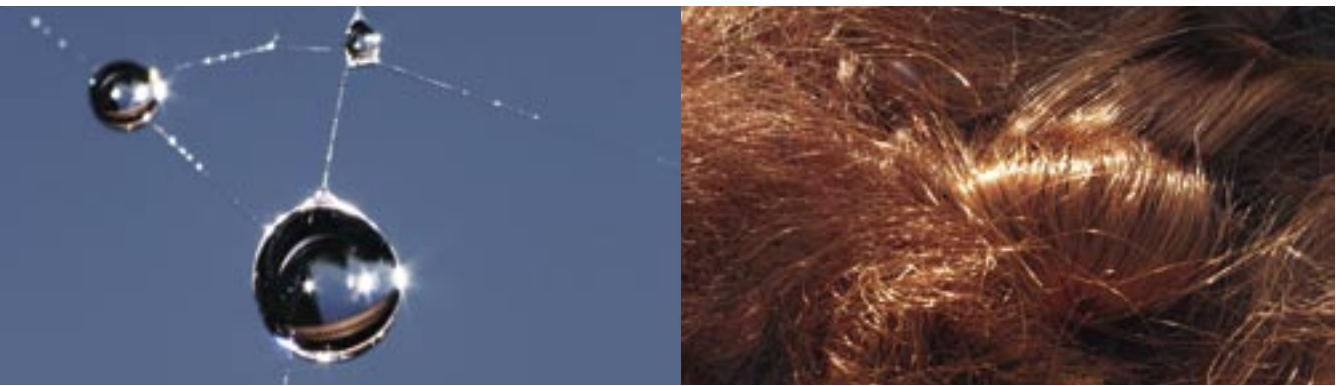
Apart from these solid raw materials, copper chloride solutions, obtained from the electrical industry, are also refined.

Besides copper, the recycled raw materials also contain numerous different metals such as nickel, lead, zinc, tin and precious metals. Following detailed assessment, sampling and analysis of the raw materials supplied and depending on the refining process required, they are inserted into the foundry's blast furnace, converter, anode furnace or smelting furnace.

During the incoming components inspection, it is vital to check the secondary material supplied for hazardous waste such as mercury or cadmium as well as for radioactivity. The inspection is carried out by experts, who decide whether or not to give the go-ahead for processing.

The following chart illustrates the copper material input quantity.



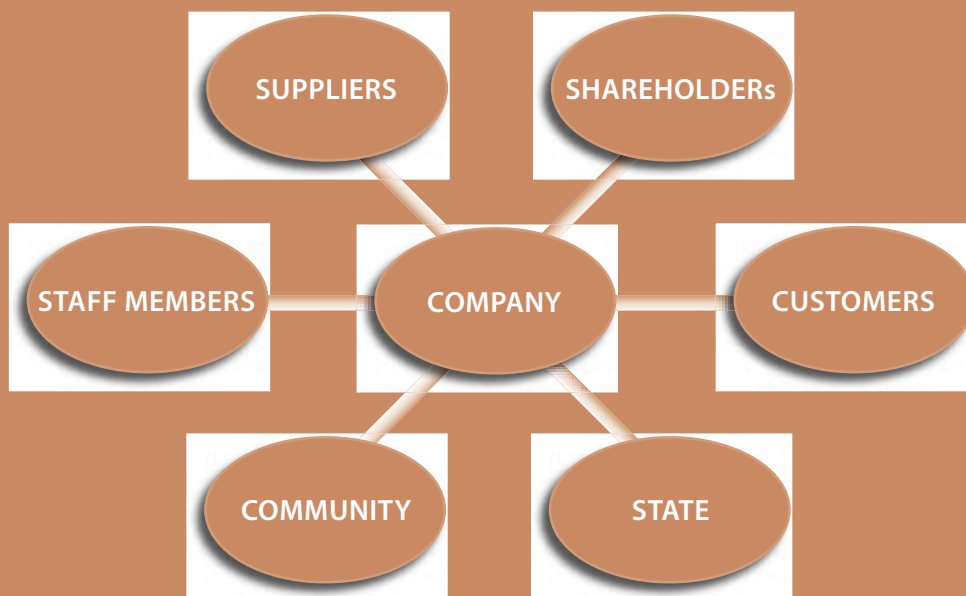


## STAKEHOLDERS

**Stakeholders are people or groups of people who are interested in the events and activities in and around Montanwerke Brixlegg.**

The basic principle of a sustainable company is to identify the requirements and demands of stakeholders. Thus, commitment to sustainability means increasing transparency and credibility.

# NETWORK



## CUSTOMERS

As far as sustainability is concerned, customers and consumers are increasingly discerning. They prefer to buy products made by companies active in a sustainable way. "Sustainable management" assures the customer that a service is being provided in the most efficient, resource-friendly way possible and is in keeping with high social standards. Montanwerke Brixlegg AG has always been a reliable partner for our customers in this respect. As we are committed to fulfilling the needs of our clients, we are able to achieve comprehensive, fair and high-quality solutions for both partners.

<b>Copper:</b>	Electrical, construction, automobile and high-tech industry as well as plant and machine engineering
<b>Precious metals:</b>	Dental and jewellery industry, minting, photo industry
<b>Granos:</b>	Bridge engineering, ship building, steel industry
<b>Nickel sulphate:</b>	Plating industry
<b>Copper oxychloride:</b>	Pesticide manufacturers
<b>Flowbrix:</b>	Fruit and wine growing
<b>Metal oxides:</b>	Smelters

## MARKETS

Montanwerke Brixlegg AG is the only copper refining company in Austria. The products are marked by high brand awareness, excellent quality and various forms and fields of application.

**The brand "BRX" is a trademark for the copper cathodes and is recognized around the world. Billets bear the label "MB". Export accounts for over 80 %.**

## STAFF MEMBERS

Montanwerke Brixlegg offers interesting and safe jobs with a particular emphasis on the health and safety of its staff members. In order to guarantee and steadily improve all aspects of occupational health and safety, responsible experts have been appointed. In addition, all staff members have the opportunity to communicate their suggestions for improvement. We consider the training of our staff members to be an important investment in the future and promote it accordingly. We will also, of course, continue to recruit production personnel from the region. The potential of the qualified and motivated workforce at Montanwerke is one of our most important competitive advantages.

## SUPPLIERS

We require our suppliers, like us, to conserve natural resources and to conform to all of the ecological and social laws and standards. Sustainability should not merely be limited to our company. Hence, long-term contracts and partnerships allow Montanwerke to guarantee a solid foundation for confidence and stability.

## THE OWNERS

A-TEC Industries AG is a private, international industry group based in Vienna and operates in the fields of drive technology, plant engineering, machine construction and metal.

## SHAREHOLDERS

It is our objective to achieve sustainable profit and, thus, guarantee the continued existence of the company in the long term. It is, therefore, vital that all of our services and products are developed and provided with regard to sustainability.

Sustainability is not considered to be a factor for our image; on the contrary, it is to be applied in business and is a strategic, competitive advantage for the future. Active ecological sustainability reduces, among other things, the exploitation of resources. This is shown, for example, through our self-supply of electricity of 25%. This is a considerable advantage in times of steep price increases in raw material and energy costs.

## STATE

Montanwerke Brixlegg AG operates within the framework of local and international regulations and legal provisions. To ensure legal conformity across the board, Montanwerke monitors itself by carrying out internal audits on a regular basis. Moreover, ongoing inspections are also conducted by external authorities such as government agencies, banks, accountants, the TÜV (Technical Inspection Authority) and other inspection authorities.

Thanks to cautious economic management and organic growth, Montanwerke makes a major contribution to social welfare through value creation and the payment of taxes.

## COMMUNITY

Montanwerke Brixlegg AG does everything in its power to share its economic success with the community, especially in the surrounding region. Hence, placing orders with local companies is favoured wherever possible and financial support is provided for non-profit institutions located within the region. Reports on the company's goals and the fulfilment of projects, particularly those relating to environmental protection, appear regularly in the relevant media.

In addition, the company fosters an open dialogue with the community and interested citizens. Montanwerke Brixlegg AG is known far beyond national borders and is a popular destination for field trips. During the year around 500 people came again to visit the site. Besides school classes and student groups, we also welcomed international experts in the recycling industry (IERC - International Recycling Congress Salzburg), participants from the "EMC - European Metallurgical Conference", held this year in Innsbruck, and colleagues from the A-Tec Group. This openness and transparency are proof that we consciously perceive societal concerns.



# MANAGEMENT SYSTEMS

## QUALITY MANAGEMENT

In the field of copper recycling and copper refining, Montanwerke has always used the latest technology. All of the processes and products are certified in compliance with EN ISO 9001-2008. The high standard of quality and the "BRX" brand are both well-known all over the world.

In 2009, approx. two million Euros were invested in research and development, with direct impact on environmental protection resulting from the continuous improvement of techniques and internal operations. The complaint rate is at 0.02 %.

## SAFETY MANAGEMENT

Over the past few years we have worked hard to introduce an occupational health and safety management system, known in Austria as "SGMS". In October 2009, these efforts were rewarded with a successful SGMS certification from AUVA (Austrian institute for accident insurance). Montanwerke Brixlegg AG is proud to be the first company in Tyrol to receive this award.



### **An SGM is a system to help improve**

- Occupational safety
- Health
- Wellbeing

### **The SGM works through the**

- Regular identification and assessment of hazards and risks
- Elimination of the hazards and risks
- Introduction of programmes to promote workplace health

### **An SGM means in the long term**

- Better health and safety in the workplace
- Less stress
- Increased productivity...



# MANAGEMENT SYSTEMS

## ENVIRONMENTAL MANAGEMENT

Lasting conservation of nature for future generations can only be based on sustainable production and consumption patterns. Such patterns are marked by creating material cycles, developing sustainable technologies and increasing energy efficiency.

Montanwerke Brixlegg AG meets these requirements in every respect by taking numerous measures which apply to production processes and products alike. The business purpose is to recycle copper scrap into ultra-pure copper and hence close material cycles. In addition, the emissions released in the production process are well below the permitted limits, due to employment of state-of-the-art filter systems. A team of energy experts works on projects established to achieve more energy efficiency. Ten projects are currently being implemented.

In the copper industry, modern and environmentally friendly technologies are viewed as a competitive advantage, but they also emphasise a company's commitment to environmental issues. The Brixlegg site is exceptional because of the high proportion of internal foundry returns. This awareness is seen as the innovative motivation to develop environmentally sound production techniques. More than three million Euros is invested in internal environmental protection annually.

**The following environmental protection measures were implemented during the period under review in this report:**

- The construction of a new filter system based on the prototype
- Improved capture of emission sources in the pyrometallurgical process
- Enclosing of storage spaces to restrain the diffuse emissions
- Fog nozzles for dust control
- Head office emission data collection and analysis
- Installation of a filter system for the water purification process

The ISO 14001:2004 certification of the environmental management system guarantees that the requirements of comprehensive environmental protection have been met, and the set goals have been achieved according to a clearly determined system. Thus a regular external conformity assessment is assured. Montanwerke Brixlegg AG is also a quality seal award winner for being a sustainably operating company in the province of Tyrol and was also certified as a "Waste Management Facility". Each year, the operation of ventilators, compressors and pumps for exhaust air filtration systems require approximately 7,000,000 kWh of electricity which corresponds to an expenditure of approximately 700,000 Euros. A total of 650,000 Nm<sup>3</sup> of exhaust air are cleaned in the filter system per hour.





## THE THREE DIMENSIONS OF SUSTAINABILITY

**Sustainability means using the resources currently required in such a way that the needs of future generations can still be met.**

The original meaning of the term has its roots in forestry, meaning that trees would only be felled at a rate at which they could grow again. Today, however, sustainability does not only refer to ecological aspects but is based on the balance of the economy, ecology and social aspects. These three pillars should not be viewed in isolation, but rather as an interdisciplinary model which is followed on equal terms.

# GROWTH AND THE ECONOMY

## ECONOMICS: GROWTH AND THE ECONOMY

The economic pillar of sustainability primarily aims at the continuity of a company, with economic success supporting the achievement of this goal.

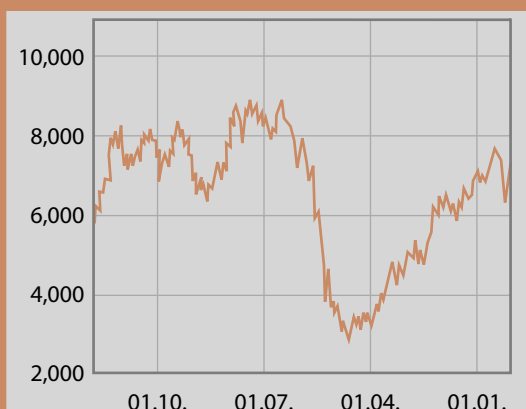
Montanwerke Brixlegg AG looks back over a very long and eventful history, in which it had to survive several economic crises, technological failures and wars. At the end of 2008, the company was under severe pressure as a result of irrational speculation and the impact of the financial crisis. In 2008, market prices were tumbling, the price of copper hit rock bottom, which had consequent effects on the copper recycling industry. Supported by the financial power of its parent company, A-Tec Industries, Montanwerke Brixlegg AG was able to operate the production facilities in Brixlegg above the industry average and safeguard every job.

Turnover in the financial year of 2009 amounted to approximately 480 million Euros. The EBITDA amounted to 50 million Euros. In view of economic conditions, we can be highly satisfied with the figures for the year 2009. Total investments in Montanwerke Brixlegg AG, including subsidiaries, amounted to approximately 2 million Euros.

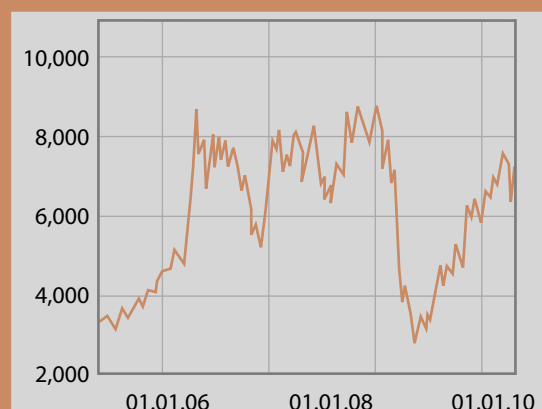
The price of copper is fixed on the London Metal Exchange. It can not be influenced by a single company. In fact it is imperative for the company to keep production costs as low as possible. This is only achievable if you have the latest technology adapted for the specific raw material. Due to the consumption-related changes in the range of recycling materials, the technology for processing them must also be adapted.

In this economic environment, it is important to set the technological course to sustain the future of the site. With this in mind, the construction of a refinery designed especially for the processing of electrical and electronic scrap metal is planned for Brixlegg.

Copper stock chart (1 year)



Copper stock chart (5 years)





# NATURE AND THE ENVIRONMENT



## ECOLOGY: NATURE AND THE ENVIRONMENT

The ecological pillar of sustainability is based on the integration of environmental objectives into a company's strategy, as well as into its planning, organisation and auditing procedures.

## ENVIRONMENTAL PROTECTION AS A BUSINESS GOAL

Environmental protection has always been a major component of the industrial activities of Montanwerke Brixlegg AG. The company has made substantial investments to keep exhaust air and wastewater clean and to support waste management, which emphasises the company's commitment to environmental protection.

In view of the global environmental impact and a rising public awareness of environmental concerns, the management board of Montanwerke Brixlegg AG advocate continuous improvement in environmental performance. Moreover, Montanwerke Brixlegg AG is prepared to face the future challenges in a professional manner, particularly with regard to the requirements of "sustainability".

## ENVIRONMENTAL OFFICER

Montanwerke Brixlegg AG explicitly acknowledges its responsibility to improve environmental performance. Our environmental officer, Mr. Werner Koessler, reports directly to the board and has a wide range of tasks. He has been an expert in the field of environment and sustainability for many years.

We actively seek open dialogue. You can contact our environmental officer, Mr. Werner Koessler, on +43 5337 6151 170 or at [werner.koessler@montanwerke-brixlegg.com](mailto:werner.koessler@montanwerke-brixlegg.com)

## ANNUAL INPUT QUANTITY AND ENERGY CONSUMPTION

### Recycling = environmental protection

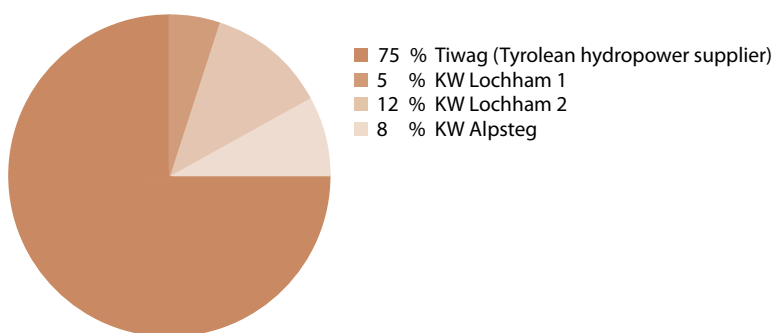
Scrap	approx. 160,000 t
Electricity	63,000,000 kWh
Natural gas	13,000,000 Nm <sup>3</sup>
Operating and cooling water	2,000,000 m <sup>3</sup>

### ELECTRICITY

The **electrolysis plant** is definitely the **most energy-intensive** section in the production area, where anode copper (99% purity) is electrochemically refined into cathode copper (100% purity). This process is environmentally neutral.

Montanwerke Brixlegg AG is able to cover **more than 25% of the electricity consumption itself**. In addition, the company operates three small hydropower stations known as Lochham 1, Lochham 2 and Alpsteg. The ability to generate electricity from hydropower is one of the ecological site advantages of Montanwerke Brixlegg AG.

### ELECTRICITY SUPPLY IN 2009



# NATURE AND THE ENVIRONMENT



## NATURAL GAS

In order to generate the appropriate temperature for the melting process in the furnaces, 13 million Nm<sup>3</sup> of natural gas is used on average per year. The actual quantity of natural gas required for refining copper scrap is approximately 120 m<sup>3</sup> per produced tonne of pure copper. In contrast to production using primary materials, 86% of the energy can be saved. Energy saving is the best and most efficient method of climate protection. The less energy used, the lower the impact on the environment. Extensive documentation on this subject is available at [www.metalle-pro-klima.de](http://www.metalle-pro-klima.de).

Greenhouse gases, for instance carbon dioxide, play a significant role in global warming. Due to its chemical composition, natural gas is the fossil fuel with the lowest carbon content and the highest hydrogen proportion. The higher the carbon content, the higher the carbon dioxide emissions later. This means that burning natural gas produces up to 30 % less carbon dioxide emissions than burning liquid fuels, and even 50% less than solid fuels (also see: comparison of CO<sub>2</sub> emissions of fossil fuels). As natural gas comprises almost no other properties, neither carbon black and dust, nor nitrogen and sulphur oxides are released on combustion.

In order to increase our energy efficiency further, a team of experts was set up to consistently analyse weak spots and implement the appropriate measures for improvement.

### **The following projects were realised during the period under review in this report:**

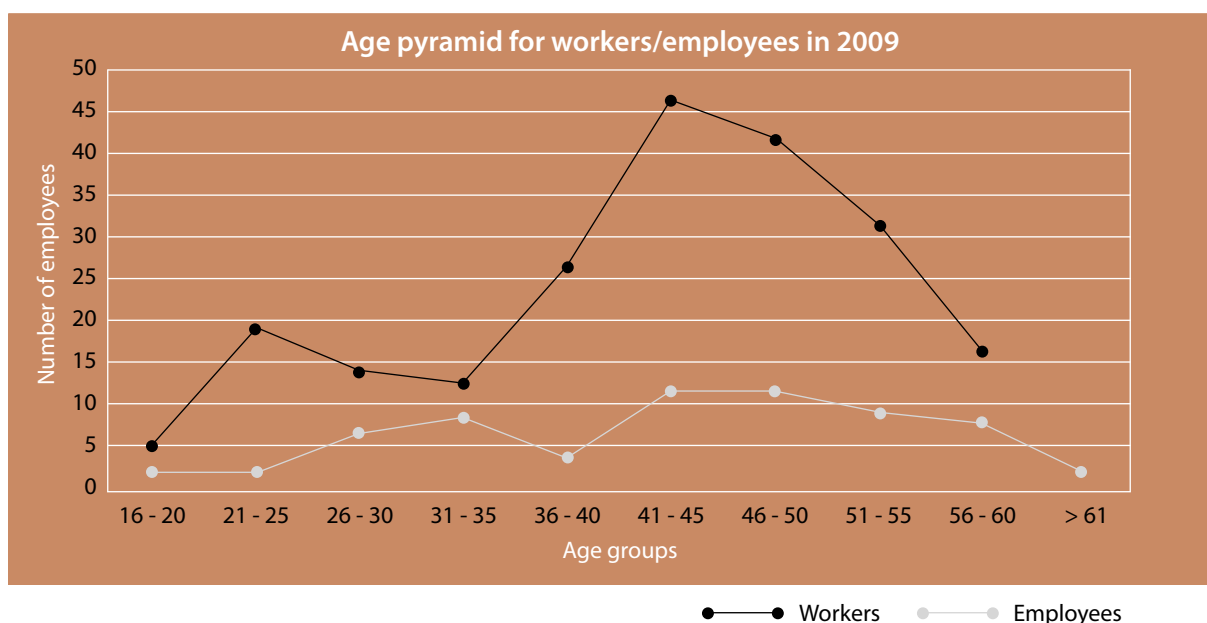
- Increase in the capacity of energy storage
- Waste heat utilisation at compressor facilities
- Compressed air usage optimisation
- Launch of a small hydropower station
- Preparations for the CO<sub>2</sub> emissions trading (starting 2013).

## SOCIAL MATTERS: PEOPLE AND SOCIETY

The social pillar of sustainability aims at preserving and expanding the existing social protection systems. Thus staff members are predominantly affected by this pillar. The potential and motivation of employees can be boosted using vocational training measures. However, job security and safety at work play an important role here.

At the end of 2009, Montanwerke Brixlegg AG employed 276 staff members and 7 apprentices. The following table provides information on the state of employment, gender and origin of employees.

	Employee (m)	Employee (f)	Worker (m)	Worker (f)	Total
Austria	43	17	211	2	273
Abroad	1	2	7	-	10
Full time	44	10	211	1	266
Part time	1	8	2 ATZ	1	12
Apprentices	-	1	4	-	5



# PEOPLE AND SOCIETY



## STAFF MEMBERS – PARTNERS OF OUR COMPANY

The average period of employment is 15 years. 51 staff members have already been working for the company for over 30 years. This is an indicator of sustainable management in human resources. The company is aware that the experience and expertise of all the staff members are decisive factors for success, which is why opportunities for vocational training are offered regularly. Moreover, we offer apprentices jobs in various departments and promote a sustainable transfer of knowledge and in-house expertise.

Employment period	283
0 - 10	110
11 - 20	48
21 - 30	74
31 - 40	51
over 40	-

## Safety in the workplace is of major concern to Montanwerke Brixlegg AG.

Last year there were 13 work-related incidents. Further efforts to reduce the accident rate are planned. Lost time as a result of these injuries amounted to just over 1,300 hours. By comparison, 434,000 hours were worked and 180,000 t of copper were smelted; extremely good figures in terms of the industry average.

In order to ensure a further, sustained reduction in the accident rate, the health and safety management system (SGMS) from AUVA has been integrated. Additional measures are also listed in the sustainability programme. Certification was awarded in autumn 2009.





# SUSTAINABILITY PROGRAMME

ECONOMY	MEASURES	RESPONSIBILITY	TIMEFRAME
Strengthen market position	Presentations at trade fairs symposia	SD	ongoing
Install processing technology	Commission new refining aggregates	COO	2013

ECOLOGY	MEASURES	RESPONSIBILITY	TIMEFRAME
Reduce sewage emissions	Separate discharge of polluted water	EO	2013
Reduce fugitive emissions	Enclosure of the plant/ increased extraction	EO	2010

SOCIAL MATTERS	MEASURES	RESPONSIBILITY	TIMEFRAME
Increase near-miss reporting	Information campaigns	SE	2010 - 2013
Improve corporate identity	Appraisal interviews/ training	HRM	2010

COO = Chief Operating Officer, SD = Sales Department, EO = Environmental Officer, HRM = Human Resources Manager, SE = Safety Expert



## DATA OVERVIEW

### THE MONTANWERKE BRIXLEGG AG SUBGROUP COMPRISES:

- Montanwerke Brixlegg AG: 283 staff members
- Krompachy (Eastern Slovakia): 230 staff members

### Certifications:

ISO 9001/2000 (Quality Management)

ISO 14001/2004 (Environmental Management)

Waste Management Facility

SGMS from AUVA (occupational health and safety management)

### Awarded as:

- **Sustainable company in the Tyrol**

This seal is awarded by the Tyrolean government in cooperation with the Chamber of Commerce and based on a strict audit procedure.



## SUSTAINABILITY PERFORMANCE DATA

	2007	2008	2009
<b>FIGURES ECONOMY</b>			amount in K €
Turnover	558,774	590,816	478,663
EBITDA	15,073	-46,125	49,489
Investments	16,826	4,337	2,028
Anode production	80,184	93,476	93,912
Cathode production	81,372	106,668	96,240
Shape production	97,209	94,901	82,969

<b>FIGURES ECOLOGY</b>			
Electricity consumption	63 Mio. kWh	74 Mio. kWh	67 Mio. kWh
Self-generated electricity	13 Mio. kWh	12 Mio. kWh	18 Mio. kWh
Natural gas consumption	13.1 Mio. Nm <sup>3</sup>	14 Mio. Nm <sup>3</sup>	13.6 Mio. Nm <sup>3</sup>
Water consumption	2.2 Mio. m <sup>3</sup>	2.3 Mio. m <sup>3</sup>	2 Mio. m <sup>3</sup>
Waste accumulation/trade waste	15.9 t	21.6 t	14.8 t
Emissions according to EPER			
• Cu	0.380 t	0.370 t	0.330 t
• Zn	0.470 t	0.450 t	0.410 t
• Pb	0.280 t	0.250 t	0.250 t
Environmental Information Act	Emission limits were not exceeded		

<b>FIGURES SOCIAL MATTERS</b>			amount in K €
Donations, partnerships	80	186	263
Expenditure for training (internal/external)	72	101	37
Voluntary employee benefits	79	40	82
• Activities for staff members			
• Health care			
• Occupational health and safety protection			

