Welcome to the
Aurubis Capital Market Day 2016

September 30, 2016
| Welcome | Angela Seidler |
| Keynote | Jürgen Schachler |
| Supply Strategy & SCM | Christophe Koenig |
| Pirdop Shutdown | Ivailo Vatev |
| Concentrate and Scrap Markets | Christophe Koenig |
| Sulphuric Acid Markets | Peter Harrisson (CRU) |
| Sales Market for Copper | Somayeh Hakimi |
| Rod/Shapes/FRP | Stefan Gröner, Hans Rosenstock, Stefan Boel |
| Earnings Improvement Project | Thomas Bünger |
| Closing remarks | Jürgen Schachler |
Aurubis’ strengths include productivity, efficiency, environmental protection and processing expertise.

Aurubis: an integrated copper producer

**BU Primary Copper**
- Cathodes
- Sulphuric acid
- Precious metals
- Tramp metals

**BU Copper Products**
- Cathodes
- Wire rod
- Shapes
- Flat rolled products
- Specialty profiles

Raw materials
- Concentrate
- Blister
- Scrap no. 1
- Copper scrap
- E-scrap

Processors and end users
- Concentrate processors
- Wire rod processors
- Shape processors
- Flat rolled products processors
- Specialty processors
Aurubis has developed into a leading international copper producer over the past 150 years.
Aurubis is a world leader in the copper value chain

<table>
<thead>
<tr>
<th>Production Type</th>
<th>FY 2014/15</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentrate processing</td>
<td>2,294,000 t</td>
<td>No. 2 worldwide</td>
</tr>
<tr>
<td>Copper scrap processing</td>
<td>294,000 t</td>
<td>No. 1 worldwide</td>
</tr>
<tr>
<td>Cathode production</td>
<td>1,138,000 t</td>
<td>No. 3 worldwide</td>
</tr>
<tr>
<td>Rod production</td>
<td>764,000 t</td>
<td>No. 1 worldwide</td>
</tr>
<tr>
<td>Shape production</td>
<td>170,000 t</td>
<td>No. 1 in Europe</td>
</tr>
<tr>
<td>Strip production</td>
<td>216,000 t</td>
<td>No. 1 worldwide</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional Products</th>
<th>FY 2014/15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulphuric acid production</td>
<td>2,200,000 t</td>
</tr>
<tr>
<td>Gold production</td>
<td>45 t</td>
</tr>
<tr>
<td>Silver production</td>
<td>958 t</td>
</tr>
</tbody>
</table>
Aurubis’ strong market positions in key segments of the copper industry chain

**Mines and recycling markets**
- Copper production
- Copper processing
- Processors and end users

- TC/RCs, treatment and refining charges
- Surcharges
- Cost position
- Cost position
- Metal recovery
- Quality
- Complex raw materials
- Proximity to market
- Sustainability
- Sustainability
- Cathode quality
- Customer service
- Innovation
- Innovation

Aurubis’ key success factors
Strong Group KPIs at Aurubis

Operating EBT and ROCE development

Operating EBT (in € million)

<table>
<thead>
<tr>
<th>Year</th>
<th>EBT</th>
<th>ROCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>05/06</td>
<td>103</td>
<td>16.8%</td>
</tr>
<tr>
<td>06/07</td>
<td>251</td>
<td>26.2%</td>
</tr>
<tr>
<td>07/08</td>
<td>341</td>
<td>21.7%</td>
</tr>
<tr>
<td>08/09</td>
<td>32</td>
<td>-1.9%</td>
</tr>
<tr>
<td>09/10</td>
<td>159</td>
<td>25.5%</td>
</tr>
<tr>
<td>10/11</td>
<td>292</td>
<td>23.9%</td>
</tr>
<tr>
<td>11/12</td>
<td>296</td>
<td>20.5%</td>
</tr>
<tr>
<td>12/13</td>
<td>114</td>
<td>7.0%</td>
</tr>
<tr>
<td>13/14</td>
<td>137</td>
<td>8.5%</td>
</tr>
<tr>
<td>14/15</td>
<td>343</td>
<td>18.7%</td>
</tr>
</tbody>
</table>
## Major trends that are important for Aurubis’ business

<table>
<thead>
<tr>
<th>Trend</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rising Copper Demand</strong></td>
<td>Global expansion of copper production capacity underway</td>
</tr>
<tr>
<td>Global refined copper demand will increase, compensating for substitution effects</td>
<td></td>
</tr>
<tr>
<td><strong>Multipolar Business World</strong></td>
<td>Demand for global delivery and international production platforms</td>
</tr>
<tr>
<td>Emerging countries (especially China) will outpace Western countries</td>
<td></td>
</tr>
<tr>
<td><strong>More Complex Materials</strong></td>
<td>Requires extensive production know-how, innovative technologies and customized solutions for suppliers</td>
</tr>
<tr>
<td>Rising no. of elements and decreasing metal content in primary and secondary raw materials</td>
<td></td>
</tr>
<tr>
<td><strong>Increasing Recycling Efforts</strong></td>
<td>Recycling capacity and capability with high technical standards needed to meet customer and supplier requirements</td>
</tr>
<tr>
<td>Volume and complexity of recycling materials will rise</td>
<td></td>
</tr>
<tr>
<td><strong>Growing Sustainability Ambitions</strong></td>
<td>Sustainable activities balancing economy, environment and people</td>
</tr>
<tr>
<td>Shifting customer values towards sustainability</td>
<td></td>
</tr>
</tbody>
</table>
The Copper Universe

- Mines/concentrates
- Smelters
- Scrap
- Demand

Flow of stocks

Macro economy/currencies

Investor activities
Sustainability is a fundamental component of the Aurubis strategy

» We put the highest possible effort into
  1. Environmental protection
  2. Occupational safety
  3. Responsible use of primary and secondary material

» We have been committed to the internationally recognized United Nations Global Compact since December 2014

» In addition to the basic principles of the International Labour Organization (ILO), this standard includes the areas of human rights, the environment and anti-corruption

» Sustainable investment: environmentally friendly and resource-efficient – “Prime Status” classification from oekom Research AG
Safety is fundamental to our business

LTIFR\(_{(1-n)}\): Lost Time Injury Frequency Rate
(Incidents/accidents with loss of time of one complete shift or more, per million h worked)
The target must be a far-reaching, closed value chain and increasing sustainability

The EU Commission’s “Circular Economy Package” from December 2015 highlights the fact that Europe’s ability to base growth and progress on innovations from the circular economy will lead to increased due diligence in the use of primary resources.
We will determine our own way forward

- Open for new growth options
- Utilization of growth options
- Strengthening of existing business
- Excellence in recycling
- Technological leadership in metal production

Continuous improvement
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<th>Presenter</th>
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<td></td>
<td>Rosenstock, Stefan</td>
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The changes in the external environment have been profound in the last 15 years

- Increasing impurities
- Increasing mining costs and CAPEX
- Miniaturization and shorter life cycles of products
- Sustainability requirements
- Transparency requirements of the supply chain
- Reporting requirements

Market players

Major changes in competition landscape and trade flows

Raw material

Regulation

15 years ago

now
Aurubis has developed into a global organization leveraging synergies between the plants

15 years ago

4 different non-integrated companies

Simple or limited flows between production sites

» 9 elements being continuously monitored

Today

9 major production sites in 6 countries

4 smelters
4 tankhouses

Increase of flows between sites and further processing of intermediate products

» Benchmark in environmental protection
» 40 elements being continuously monitored

The changes provide an opportunity for Aurubis to leverage its capabilities and global portfolio.
Aurubis’ supply chain has been successfully facing the past challenges and is ready for the future

- Raw materials will continue to become more complex
- Our drive towards managing complexity required a development in our way of managing our supply chain
- Aurubis’ chosen path of a strategy based on developing capabilities to treat a variety of complex raw materials that follow different market drivers has been a recipe for success and stability.

- The increasing complexity of raw materials combined with stricter regulation is an opportunity for Aurubis.
- Changes in the way we manage our flows and our supply chain led to a change in the organization, in our data management and a drive towards algorithmic optimization.
- The optimization is not only to maximize the use of our capacities but also first and foremost to maximize the use of our capabilities.
The SCM tactics derived from our strategy are the basis for our actions and development

MANAGE SOLUTIONS

Key competences: production planning, metallurgical know-how, advanced process decision-making

Optimize margin end-to-end and optimize NWC

OFFER SOLUTIONS

Key competences: commercial know-how, customer services

Proactively market our solutions

DEVELOP NEW SOLUTIONS

Key competences: project management

Identify new markets and push new solutions
The general conditions of our SCM have been checked and adjusted.
The tactics derived from our SCM strategy are the basis for our actions and development

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<th>MANAGE SOLUTIONS</th>
<th>Optimize margin end-to-end and optimize NWC</th>
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Managing our current portfolio of raw materials:
Continuous optimization of the input mix and of the flow chart

» Managing our flow charts in an **optimal value-based** way means maximizing the use of our capacities AND capabilities

» Key objective in purchasing is to maximize our delta to benchmark terms, fully leveraging our competitive advantages

» The purchasing strategy and goals are formulated to allow for the opportunity of optimization, taking uncertainties into account

» Decision support tools have been developed to support the optimization of our input mix flexibility and purchasing decisions
Our project SCOPE (Supply Chain Optimization and Excellence) helps to manage complexity in Production Portfolio Planning with analytical tools.

Complexity in Production Portfolio Planning
(Example: primary copper production)

Inherent high combinatorial complexity makes an Advanced Analytics approach necessary to enable value-based end-to-end planning and to support planners’ experience.
The tactics derived from our SCM strategy are the basis for our actions and development

**MANAGE SOLUTIONS**

Optimize margin end-to-end and optimize NWC

**Key competences:** production planning, metallurgical know-how, advanced process decision-making

**OFFER SOLUTIONS**

Proactively market our solutions

**Key competences:** commercial know-how, customer services

**DEVELOP NEW SOLUTIONS**

Identify new markets and push new solutions

**Key competences:** project management
Offering our solutions and our capacities

Our purchasing markets are segmented in 2 types of raw materials:

1. Typical supplier-customer relationship for commodity material/volume-driven
   - Driven by our processing capacities
   - Mostly driven by the market

2. Solution provider for non-commodity or more complex materials/capability-driven
   - Driven by our processing capabilities/margin-driven
   - Driven by our USP/competitive advantages
   - Driven by close customer relationships with a selected number of industrial/mining companies
The tactics derived from our SCM strategy are the basis for our actions and development

**MANAGE SOLUTIONS**

Optimize margin end-to-end and optimize NWC

**Key competences:** production planning, metallurgical know-how, advanced process decision-making

**OFFER SOLUTIONS**

Proactively market our solutions

**Key competences:** commercial know-how, customer services

**DEVELOP NEW SOLUTIONS**

Identify new markets and push new solutions

**Key competences:** project management
Maintaining our competitive advantages in terms of capabilities is key to sustaining the success of Aurubis, which means:

» Being able to be the first mover developing solutions for the mining and industrial applications’ recycling challenges in the medium and long term

» New solutions are based on the systematic identification of possible future trends and close coordination between SCM, R&D and Production
Example of developed solution: The CESL Cu-As technology – sustainable processing of high-As copper concentrate

» Since 2010, Aurubis and Teck have jointly developed a technology to sustainably process copper concentrate with very high arsenic content, which could not be fed into smelters

» In a hydrometallurgical process (autoclave) the copper is leached, while arsenic is precipitated simultaneously into a stable non-hazardous mineral

» High-quality copper cathode is the main product

» Gold and silver are recovered with additional technology

» Long-term stability of the arsenic residue has been proven in a 4-year test

» The technology has been successfully validated on more than 20 concentrates with arsenic content up to 12 % and a patent has been granted

» The CESL Cu-As technology is ready to be applied in production

» Aurubis and Teck are assessing a commercial-scale CESL Cu-As refinery
# Aurubis Capital Market Day

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Aurubis Bulgaria – main facts

Key figures 2014/15
Location Pirdop
Number of employees 824
Part of Aurubis Group since 2008
Concentrate throughput 1,190,000 t
Scrap throughput 59,000 t
Cathode copper 232,000 t
Sulphuric acid 1,217,000 t

Total investments
€ 235 million (Jan 2008 – June 2016)

Share in the Bulgarian economy
9 % of total national exports
9 % of total national exports to EU
5 % of total imports of goods and services

Aurubis Bulgaria is the leading copper producer and recycler in Southeastern Europe
On top of excellent standards, additional improvements in environmental protection are planned at the Pirdop site

SO₂ emissions of primary copper smelters (in kg SO₂ per t of copper output)

<table>
<thead>
<tr>
<th>Smelter</th>
<th>SO₂ Emissions (kg SO₂ per t of copper)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamburg site</td>
<td>4</td>
</tr>
<tr>
<td>Pirdop site</td>
<td>6</td>
</tr>
<tr>
<td>Copper smelters:</td>
<td></td>
</tr>
<tr>
<td>- European avg.</td>
<td>43</td>
</tr>
<tr>
<td>- International avg.</td>
<td>104</td>
</tr>
</tbody>
</table>

- About € 160 million has been invested in environmental protection measures since 2000
- Capital expenditure program “Aurubis Bulgaria 2014” to improve production and reduce emissions comprised investments of more than € 26 million in environmental protection measures
- New off-gas treatment facility commissioned in late 2015
- Additional investment of € 6.4 million for the construction of a new surface water cleaning facility, commissioned in 2014
- Regular dialogue with neighbors at our information centers in Pirdop and Zlatitsa
- Cooperation with environmental associations in environmental protection projects, e.g. environmental training for schoolchildren

Aurubis has achieved outstanding successes in environmental and climate protection and is currently one of the world’s most environmentally friendly copper producers

Source: Wood Mackenzie, 2016 / internal data, Aurubis (preliminary)
Large-scale shutdown completed within budget

<table>
<thead>
<tr>
<th></th>
<th>Plan</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total budget (€ mill.)</td>
<td>43.8</td>
<td>43.7</td>
</tr>
<tr>
<td>Duration (days)</td>
<td>50</td>
<td>54</td>
</tr>
<tr>
<td>EBIT impact</td>
<td>25</td>
<td>29</td>
</tr>
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</table>

» Largest renovation project for the plant: replacement and overhaul of 11 units
» 52 companies and 1,200 workers involved
» No accidents: strict safety measures with professional consultants
» Faster ramp-up period compensating the slight delays in the project duration
» EBIT effect:
  › Higher actual TC/RC than planned
  › Longer duration but faster ramp-up
Positive impact of the shutdown on operations

- Repair and replacement of main aggregates (last shutdown in 2007)
- Environmental measures in waste heat boiler and acid plant; launch of off-gas treatment plant
- Capacity optimization leading to a 170,000 t increase in concentrate throughput p.a.
Comprehensive work program at smelter and acid plant fully implemented

- Complete re-bricking of the flash smelting furnace and anode furnaces
- Replacement/extension in the following sections of the smelter and acid plant:
  - Dryer section (dryers, water head tank, dry concentrate bin)
  - Replacement of main aggregates of waste heat boiler
  - Anode casting wheel
  - Acid plant: replacement of cooling tower, drying tower, converter vessel and catalyst
Shutdown and Fit for Future project (FFF) – Scheduled activities related to the future capacity optimization

» Modification of foundations for two of the converters in relation to the removable converter project: capacity optimization with 170,000 t p.a. of concentrate reaching 1.47 million t p.a.

» Modifications in acid plant

» Knowledge transfer within Aurubis: the concept was originally developed in Hamburg and implemented in Pirdop
Pirdop benefited from the Hamburg shutdown experience in 2013 by the exchange of know-how within the Group

» Extensive know-how sharing on shutdown activities
» Result is improved processes in:
  › Managing subcontractors’ post-project claims
  › Faster demolition work and scaffolding
  › Better budget controlling
  › Regular safety procedures implemented, resulting in more excellence
Improved perspectives for Aurubis Bulgaria: increased throughput capacities at even better environmental standards

» FFF project – maximizing capacity to 1.47 million t p.a.: the leading European smelter in concentrate throughout

» Ability to process more complex concentrates:
  » Improved fluorine capacity
  » Improved arsenic throughput capacity

» Precious metal-rich concentrates

» Slag cooling project:
  » Fewer SO₂ emissions from slag cooling
  » Cu losses in waste reduced
Improved perspectives for Aurubis Bulgaria: increased throughput capabilities at even better environmental standards (cont.)

- Consolidation of logistics activities in the port of Bourgas
  - Improved concentrate intake facilities
  - Lower Cu losses (positive EBIT and environmental impact)

**Capacity usage** (selected years)
(in 1,000 t of fresh concentrate)

**Cost evolution** (selected years)
(cash cost in €/t of smelted concentrate)

Aurubis will further improve the position of its Bulgarian operation as one of the most efficient plants in the copper industry
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**Aurubis is the second largest buyer of custom concentrates worldwide (7.9% market share)**

Copper production from custom Cu concentrates (2015; per 1,000 t Cu content*)

<table>
<thead>
<tr>
<th>Company</th>
<th>Copper Production (per 1,000 t Cu content*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tongling (CN)</td>
<td>706</td>
</tr>
<tr>
<td>Glencore Xstrata (CH)</td>
<td>585</td>
</tr>
<tr>
<td>Aurubis</td>
<td>631</td>
</tr>
<tr>
<td>Jiangxi Copper Co. (CN)</td>
<td>514</td>
</tr>
<tr>
<td>JX Holdings (JP)</td>
<td>479</td>
</tr>
<tr>
<td>Sumitomo Metal Mining (JP)</td>
<td>462</td>
</tr>
<tr>
<td>Mitsubishi Materials (JP)</td>
<td>391</td>
</tr>
<tr>
<td>Sterlite Industries (IN)</td>
<td>344</td>
</tr>
<tr>
<td>Birla Copper (IN)</td>
<td>343</td>
</tr>
<tr>
<td>Daye Nonferrous Metals (CN)</td>
<td>262</td>
</tr>
</tbody>
</table>

* Copper production from concentrates from non-controlled mines

Source: Wood Mackenzie 02/2016, Aurubis Annual Report 14/15
The global copper supply/demand balance is in favor of smelters in the short term

Copper production from mining and secondary materials
(Cu in concentrate & leach, in kt)

Refined copper consumption forecast
(Cu in concentrate & leach, in kt)

Additional projects will start up production before 2025 and replenish the supply pipeline.
The risks of closure posed by a low copper price have been decreasing lately.

Global copper mine cash cost (2016)

- **Ø 2016**: 125.1 US cts/lb Cu

The increase in copper concentrate supply has been driven by custom mines in which Aurubis is a player.

Copper concentrate allocation forecast (paid Cu – in million t)

Forecasts include base case and probable projects

The increase in Cu production from secondary materials in China is a positive trend for European producers.

Global copper refinery production (in kt Cu including production from scrap)

Global copper refinery production from secondary materials (in kt Cu)

Aurubis treats more than 730 kt of all kinds of recycling materials p.a.

Hamburg
› Copper scrap
› Intermediates
› E-scrap
› Others

Olen
› Copper scrap

Fehrbellin
› Cable scrap

Lünen
› Copper scrap
› Alloy scrap
› Shredder materials
› Industrial residues
› E-scrap
› Copper-iron material
› Others

Pirdop
› Copper scrap
Global copper scrap market will increase over the next decades

Overall theoretical recycling potential in 2010-2020 of ~50 mill. t of copper content

Average lifetime of all copper products is estimated to be ~30 years with a range of:
- Consumer electronics 2-4 years
- Automotive 10-15 years
- Building 60 up to 80 years

Source: Fraunhofer ISI, Global Copper Flow Model; Aurubis
Overall, copper scrap will increase; however, “quality” of copper scrap will change

<table>
<thead>
<tr>
<th>CU content</th>
<th>Scrap category</th>
<th>Life cycle</th>
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<tbody>
<tr>
<td>1950 low</td>
<td>No2 Shredder WEEE</td>
<td>60-80 years</td>
</tr>
<tr>
<td>2015 high*</td>
<td></td>
<td></td>
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<tr>
<td>-&gt; Trend for substitution</td>
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<tr>
<th>CU content</th>
<th>Scrap category</th>
<th>Life cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990 ~9 kg/car</td>
<td>No2 Shredder WEEE</td>
<td>10-15 years</td>
</tr>
<tr>
<td>2015 ~ 25 kg/car</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CU content</th>
<th>Scrap category</th>
<th>Life cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>No2 Circuit boards WEEE</td>
<td>2-4 years</td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Increase of copper in buildings due to replacement of lead tubes, installation of central heating systems and substantial electricity supply (beginning 1970s)
Complexity of recycling will increase over the next decades

E-scrap

A complex mix of

- Ag, Au, Pt, Pd
- Cu, Ni, Sn, Al
- Fe, Pb, Sb, Bi
- In, Be, Hg, Cd
- As, Br, Cl, F
- Rare earth elements
- Plastics/organics
- Glass/ceramic

» Complex material, especially EOL electronics (end of life), combines values from different metals and/or other materials

» Decreasing copper content (miniaturization and new technologies/production process efficiency) and increase of other elements require a successful management of impurities

» Upcoming “new applications” (complex materials) require “new recycling technologies”

Multi-metal recycling is required to enable input of complex raw materials and high metal recovery
Aurubis already processes a variety of different and also complex recycling materials

<table>
<thead>
<tr>
<th>Raw Material</th>
<th>Processing</th>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper scrap</td>
<td></td>
<td>Copper cathode Grade A</td>
</tr>
<tr>
<td>Residues</td>
<td></td>
<td>Nickel-sulfate</td>
</tr>
<tr>
<td>Shredder materials</td>
<td></td>
<td>SnPb alloy</td>
</tr>
<tr>
<td>Printed circuit boards</td>
<td></td>
<td>Precious metals</td>
</tr>
<tr>
<td>Copper-iron</td>
<td></td>
<td>KRS Oxide</td>
</tr>
<tr>
<td>Slimes</td>
<td></td>
<td>Ferro-silicate sand</td>
</tr>
<tr>
<td>E-scrap</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Closing the loop is necessary and actively pursued by Aurubis but will not replace the need for Cu from primary material in the near future.
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Pirdop Shutdown
Concentrate and Scrap Markets
Sulphuric Acid Markets
Sales Market for Copper
Rod/Shapes/FRP
Earnings Improvement Project
Closing remarks

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Aurubis: an integrated copper producer

Raw materials
- Concentrate
- Blister
- Scrap no. 1
- Copper scrap
- E-scrap

BU Primary Copper
- Cathodes
- Sulphuric acid
- Precious metals
- Tramp metals

BU Copper Products
- Cathodes
- Wire rod
- Shapes
- Flat rolled products
- Specialty profiles

Processors and end users
- Concentrate processors
- Blister processors
- Scrap no. 1 processors
- Copper scrap processors
- E-scrap processors

Aurubis Capital Market Day 2016
### International cathode production (in 1,000 t)

<table>
<thead>
<tr>
<th>Company</th>
<th>Production (1,000 t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Codelco (CL)</td>
<td>1,450</td>
</tr>
<tr>
<td>Freeport McMoran (US)</td>
<td>1,208</td>
</tr>
<tr>
<td><strong>Aurubis</strong></td>
<td><strong>1,138</strong></td>
</tr>
<tr>
<td>Jiangxi (CN)</td>
<td>1,094</td>
</tr>
<tr>
<td>Glencore Xstrata (CH)</td>
<td>1,032</td>
</tr>
<tr>
<td>Tongling (CN)</td>
<td>1,008</td>
</tr>
<tr>
<td>Southern Copper (PE)</td>
<td>729</td>
</tr>
<tr>
<td>JX Holdings (JP)</td>
<td>677</td>
</tr>
<tr>
<td>Sumitomo (JP)</td>
<td>639</td>
</tr>
<tr>
<td>BHP Billiton (USA)</td>
<td>609</td>
</tr>
</tbody>
</table>

Our key missions as Business Line Marketing Cathodes

» Aurubis produces approx. 1.14 million t of cathodes in 4 refineries in 3 European countries:
  » Germany (Hamburg, Lünen);
  » Belgium (Olen);
  » Bulgaria (Pirdop)
» We buy external cathodes globally
» We sell to internal and external customers:
  » Internal customers: 4 Rod plants in 3 European countries (Hamburg, Emmerich, Olen, Avellino), 1 Shapes plant in Hamburg and FRP plants
  » External customers: diversified customer portfolio in different regions worldwide
» We balance cathode production and rod production within our different sites
» We ensure optimized stock levels and cathode flows within the Aurubis Group through our trading activities
» We follow our marketing strategies and proactively adjust them to new trends, global economic developments and market fluctuations
Copper demand by regions 2016 (in million t)  
Copper surplus / deficit 2016

Aurubis is in the middle of key cathode consumption areas

Source: CRU April 2016
Regional premium arbitrages and logistics costs drive our sales strategies

Aurubis cathodes currently have 5 main sales regions

- Western Europe
- Southeastern Europe
- Turkey
- MENA
- Asia
Adverse premiums and low logistics costs in China support premium optimization for Aurubis cathode sales
China remains a big importer of refined copper

Chinese refined copper supply / demand (in 1,000 t)

- "Import gap"
- Refined production
- Net refined consumption *

* Net refined consumption: consumption w/o government purchases

Source: CRU, Apr 2016
Significant import deficit remains in Europe and Asia in 2020

- Copper demand by regions 2020 (in million t)
- Copper surplus / deficit 2020

Total demand 2020: 23.7 million t
Global output 2020: 23.2 million t*

(∗ adjusted: incl. committed greenfield projects and disruption allowance)

Source: CRU April 2016
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Jürgen Schachler
Aurubis is no. 1 worldwide in Rod production and no. 1 in Europe for Shapes

### Rod production (in 1,000 t)

<table>
<thead>
<tr>
<th>Year</th>
<th>10/11</th>
<th>11/12</th>
<th>12/13</th>
<th>13/14</th>
<th>14/15</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>785</td>
<td>646</td>
<td>608</td>
<td>742</td>
<td>764</td>
</tr>
</tbody>
</table>

### Shapes production (in 1,000 t)

<table>
<thead>
<tr>
<th>Year</th>
<th>10/11</th>
<th>11/12</th>
<th>12/13</th>
<th>13/14</th>
<th>14/15</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>197</td>
<td>164</td>
<td>149</td>
<td>183</td>
<td>170</td>
</tr>
</tbody>
</table>
European demand for copper semis is expected to continue to rise.

Copper wire rod and copper shapes are the pre-product for nearly all copper applications.

Source: CRU Copper Market Outlook 07/2016, figures excl. Russia
Most copper applications start with wire rod

Cable, magnet wire and automotive are the main application sectors
AURUBIS ROD is renowned for its capabilities, environmental standards and product development

Capabilities
» Flexibility due to size – 4 wire rod plants in Europe
» Customer focus – 360° support
» Highest product quality
» Renowned for reliability

Environment
» Latest filter technologies installed to clean the shaft furnace off-gases
» Closed environment
» Direct water cooling system
» EHS benchmark

Research & product development
» Benchmarking among the four lines
» Alcohol pickling
» Wax-free rod
» Jumbo coils
» Alloys for special applications

European market leader with 29% share
Key facts about AURUBIS ROD (2015) market shares

Industry split

- Magnet wire: 24%
- Automotive: 16%
- Energy cable: 60%

Volume by customer group

- Medium-sized customers: 13%
- Small customers: 17%
- Spot business: 2%
- Key customers: 69%

Deliveries by region

- Total Europe: 85%
- Middle East: 5%
- Africa: 4%
- Rest: 6%

AURUBIS ROD is delivered to over 200 active customers in over 50 countries
Copper cakes for rolled products and piece parts

Different copper grades as well as individual geometries are crucial
Copper billets for tubes, forgings and sections

Aurubis has focused early on specialties for industrial applications
AURUBIS SHAPES is quality leader and renowned for tailor-made high-performance alloys

**Capabilities**
- Flexibility and reliability
- Highest piece weights and quality standards for both billets and cakes
- Oxygen-free benchmark
- Own technologies

**Environment**
- Latest filter technologies installed to clean the shaft furnace off-gases
- Closed direct water cooling system
- EHS benchmark

**Research & product development**
- Cooperation with universities
- Simulation of solidification process
- Development of new Cu grades and high-performance alloys based on Cu-OFE

Major European market player with 16% market share
Key facts about AURUBIS SHAPES (2015)

Industry split
- Automotive: 4%
- Construction: 4%
- Electronics/electrical engineering: 52%
- Industry, mech. engineering, plant construction: 27%
- Telecomm.: 13%

Volume by customer group
- Key customers: 88%
- Small customers: 6%
- Spot business: 3%

Deliveries by region
- Germany: 90%
- Italy: 5%
- Rest of the world: 5%

AURUBIS SHAPES are shipped to 60 active customers in 18 countries
<table>
<thead>
<tr>
<th>Session</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome</td>
<td>Angela Seidler</td>
</tr>
<tr>
<td>Keynote</td>
<td>Jürgen Schachler</td>
</tr>
<tr>
<td>Supply Strategy &amp; SCM</td>
<td>Christophe Koenig</td>
</tr>
<tr>
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<td>Peter Harrisson (CRU)</td>
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<td>Somayeh Hakimi</td>
</tr>
<tr>
<td>Rod/Shapes/FRP</td>
<td>Stefan Gröner, Hans Rosenstock, Stefan Boel</td>
</tr>
<tr>
<td>Earnings Improvement Project</td>
<td>Thomas Bünger</td>
</tr>
<tr>
<td>Closing remarks</td>
<td>Jürgen Schachler</td>
</tr>
</tbody>
</table>
Customer industries require approximately 4.7 million tons of flat rolled products per year.

World demand 2015 (Flat Rolled Products in million t)

Copper production → Copper fabrication → Applications / customer industries / end use

- Building & construction
- Cable
- Electrical industry
- Electronic devices
- Engine cooling
- General engineering
- Distribution

Source: CRU, Aurubis estimates
Business driven by the need for electrical and thermal conductivity or by copper’s appearance

<table>
<thead>
<tr>
<th>Industry</th>
<th>Applications</th>
<th>Drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building &amp; construction</td>
<td>Roofing &amp; façade systems, Climate control</td>
<td>Residential &amp; commercial building investment, GDP</td>
</tr>
<tr>
<td>Cable</td>
<td>Power cable, RF and optical communication</td>
<td>Infrastructure investments (power grids, communication networks, renewable energy), Industrial production</td>
</tr>
<tr>
<td>Electrical industry</td>
<td>Transformers, Power control systems, Power connectors &amp; switches</td>
<td>Automotive production (on-board electronics, electric vehicles), GDP, technical development</td>
</tr>
<tr>
<td>Electronic devices</td>
<td>Automotive connectors, Consumer electronics, White goods</td>
<td>Commodity prices (investments in mining, oil and gas, substitution), Infrastructure investments</td>
</tr>
<tr>
<td>Engine cooling</td>
<td>Heat exchangers for mining trucks, construction equipment, trains &amp; mobile power generation</td>
<td>Industrial production, GDP</td>
</tr>
<tr>
<td>General engineering</td>
<td>Deep drawn products, fashion, stamped parts, cooling elements, printing plates</td>
<td>GDP</td>
</tr>
</tbody>
</table>
Aurubis Flat Rolled Products serves more than 2,500 customers in all key market segments

Segment distribution 2015 (volume-based)

Building & constr. 16%
Engine cooling 13%
Automotive connectors 11%
General engineering 9%
Electrical industry 8%
Cable 5%
Electrical industry 8%
Other 18%
Distribution 19%
Other 18%

Source: CRU, Aurubis internal sales data

Well-diversified segment portfolio
Global market demand for flat rolled products continues to grow

Global market size by region (in 1,000 t)

Source: CRU, Aurubis estimates

Expected CAGR 2016-2020 around 2-2.5%

Source: CRU, Aurubis estimates
Global presence with focus on Europe and North America

- **Buffalo, NY (US)**
- **Chicago, IL (US)**
- **Niagara Falls, NY (US)**
- **Hamburg (DE)**
- **Zutphen (NL)**
- **Birmingham (GB)**
- **Stolberg (DE)**
- **Mortara (IT)**
- **Västerås (SE)**
- **Finspång (SE)**
- **Pori (FI)**
- **Dolný Kubín (SK)**
- **Prague (CZ)**
- **Saint Petersburg (RU)**
- **Shanghai (CN)**
- **Hong Kong (CN)**
- **Dubai (UA)**

**Description**
- Plant
- Slitting center
- Sales office
- Cooperation partner

**Tinning**
- Electroplating line
- Hot-dip tinning line
Aurubis Flat Rolled Products serves more than 2,500 customers around the world

Market share 2015 and regional distribution of sales (volume-based)

<table>
<thead>
<tr>
<th>Region</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>4.4%</td>
</tr>
<tr>
<td>North America</td>
<td>22%</td>
</tr>
<tr>
<td>Europe</td>
<td>11%</td>
</tr>
<tr>
<td>Asia</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

Source: CRU, Aurubis internal sales data

Stable position in home markets
Aurubis is one of the leading rolled products producers worldwide

Copper and copper alloy plate, sheet, strip & foil output from producers worldwide 2015 (in 1,000 t)

- Poongsan (KR): 215
- Aurubis: 206
- Wieland (DE): 175
- Chinalco (CN): 170
- Mitsubishi Shindo (JP): 145
- KME (DE): 130
- Global Brass and Copper (US): 118
- Anhui Jingcheng (CN): 115

- Only company with integrated production in both Europe and North America
- Only company with strong market positions in both Europe and North America
- Global sales and service network
- Comprehensive customer base with long-term relationships, covering both global and regional customers

Source: Aurubis information and estimates
Strong connections with other Aurubis Business Lines

Flows on behalf of BL Flat Rolled Products, approximate values

- Cathodes sourced internally and externally
- Cast strip
- Pre-rolled strip
- 206,000 t rolled products

Aurubis BL R&S Hamburg → Cake → Schwermetall (50% JV) → Pre-rolled strip → Aurubis BL FRP → Customers

- Own process scrap, purchased scrap and scrap from customers

Business Line Flat Rolled Products is an integral part of the Aurubis copper and alloy ecosystem
Aurubis has many competitive advantages in the flat rolled products markets

**Local & global**
- International production footprint
- Global sales and service network
- Own service centers

**The right products**
- Comprehensive product portfolio
  - Alloys and dimensions
  - Surface plating
- Technical competence
  - Internal processes
  - Customers’ processes
- Certified quality systems (ISO, ISO-TS)

**Customer-focused**
- Customer-specific product development
- Logistics solutions
  - Vendor-managed inventories
  - Just-in-time programs
- Metal services
  - Price information & hedging services
  - Closing the loop – scrap handling

**Stable**
- Strong industrial ownership
- Strong raw material market position

Making Aurubis one of the best positioned manufacturers of Flat Rolled Products in the world
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Keynote
Jürgen Schachler

Supply Strategy & SCM
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Thomas Bünger

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Jürgen Schachler
Continuous improvement is mandatory for Aurubis as a high-standard copper smelting and refining company

Smelter revenues vs. cash cost (in UScts/lb, 2015 $)

- Standard TC/RCs are determined by global supply/demand balance for primary and secondary materials
- Terms for standard by-products only allow limited differentiation
- Cash cost development is driven by global and regional cost drivers and productivity
- Smelting and refining business does not allow cost inflation to be passed on structurally
- Improvement of revenue base as well as cost efficiency is key for Aurubis to stay in a leading position
  - Earnings Improvement Project (EVP) in Hamburg and Lünen
  - Fit for Future in Pirdop

EVP is a comprehensive project to improve revenue and cost performance sustainably and on a long-term basis

Source: WoodMac
Earnings Improvement Project: Sustainable increase in results by improving our business processes in Hamburg and Lünen

» In times of adverse market conditions for concentrates, copper scrap and sulphuric acid, we have limited influence

» At the same time, our German entities in particular are subject to global and regional cost drivers

» By improving our results, we gain the freedom to finance projects

» The focus is on analyzing our business processes in Hamburg and Lünen with the objective of improving margins and reducing costs

» The goal is to reduce complexity and improve Aurubis’ competitiveness further
The improvement of earnings results from value stream management in three focus areas

Value stream management

Material management and economic control
- Purchasing primary and secondary material
- Procurement processes
- Material sampling and analysis

Production
- Production
- Production planning and controlling
- Process simulation

Maintenance
- Preventive maintenance
- Spare part and material stock planning
- Maintenance services

Project targets: Improvement of earnings situation, continuous process management, reduction of complexity, data quality and structures
The improvement of earnings results from value stream management in three focus areas

Material management and economic control
- Purchasing primary and secondary material
- Procurement processes
- Material sampling and analysis

Production
- Production
- Production planning and controlling
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Maintenance
- Preventive maintenance
- Spare part and material stock planning
- Maintenance services

Example
- Reducing lead time for sampling and analysis for specific high-value-bearing materials

Example
- Increasing efficiency in removing shortcuts

Example
- Maintenance order management and resource planning
- Continuous improvement of equipment availability

In line with EVP, we have updated our operational management system and tools to safeguard continuous improvement and avoid non-sustainable one-time effects
Improvements in our operations management system are supporting the sustainable implementation of measures

Main fields of action

- Occupational safety, order and cleanliness
- Workplace organization/material flow/layout
- Production planning and organization
- Structure/segmentation/standardization
- KPIs and visualization
- Quality in the production process
- Equipment availability (main focus production)

The goal is to increase efficiency in the production areas significantly and sustainably
Earnings Improvement Project: Aurubis expects effects within the target range

Estimated result improvement

» Estimated long-term result effects are fully within the target range

» Effects on Aurubis profit in current fiscal year also in line with expectations

» Project effects to be realized in operational, commercial and other functional areas

» Effects include revenue and cost-related improvements

» Sustainable implementation supported by integration of project measures into operational management and continuous improvement

Note: Estimated effect on Aurubis AG EBIT

Realization of improvement measures is integrated in our operational management and provides a strong basis for further continuous improvement
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Earnings Improvement Project
Closing remarks
Aurubis confirms earnings forecast for 2015/16

We confirm our forecast for FY 2015/16 and expect both operating EBT and operating ROCE to be significantly lower compared to the previous year.
Key internal Step Up projects

Earnings Improvement Project
in Hamburg und Lünen

Project Scope
(Supply Chain OPtimization and Excellence)

Project FCM
(Future Complex Metallurgy)

Project MSO
(Metallurgical Slag Optimization)
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Financial calendar

- Annual Report 2015/16  
  December 14, 2016
- Quarterly Report First 3 Months 2016/17  
  February 13, 2017
- Annual General Meeting 2017  
  March 2, 2017
Disclaimer

Forward-looking statements

This document contains forward-looking statements that involve risks and uncertainties, including statements about Aurubis’ plans, objectives, expectations and intentions. Readers are cautioned that forward-looking statements include known and unknown risks and are subject to significant business, economic and competitive uncertainties and contingencies, many of which are beyond the control of Aurubis. Should one or more of these risks, uncertainties or contingencies materialize, or should any underlying assumptions prove incorrect, actual results could vary materially from those anticipated, expected, estimated or projected.