



Introducing the enhanced  
Business Line  
Aurubis Flat Rolled Products & Specialty  
Wire



Aurubis – the Group

The copper market trends

Aurubis Flat Rolled Products

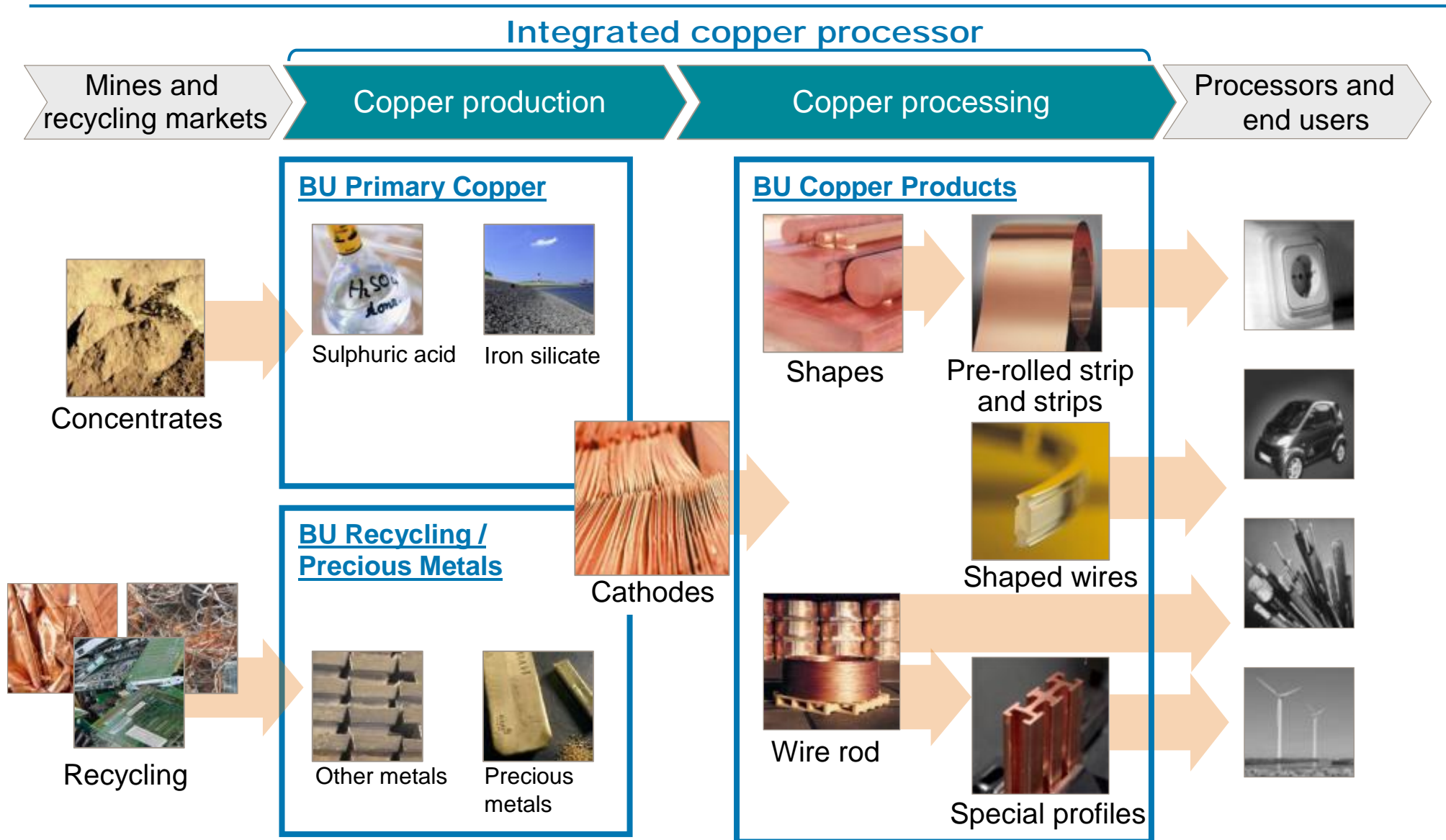


- » Founded in 1866 as Norddeutsche Affinerie AG in Hamburg
- » IPO in 1998
- » Renamed in 2009 after the acquisition of Cumerio

**Aurum + Rubrum = the red gold = Aurubis**

- » 16 production sites in 11 European countries and North America with about 6,200 employees
- » Second largest producer of copper cathodes in the world with an annual output of about 1.1 million tonnes of copper cathodes
- » No. 1 copper recycler in the world
- » Largest wire rod producer in the world
- » One of the world's leading copper foil and flat rolled product manufacturers
- » Production of approx. 1.3 million tonnes of different copper products
- » Global leader in environmental protection

# Aurubis, an integrated copper producer



Aurubis has about 6,300 employees in 16 production sites in 11 European countries and the USA



## Production sites & slitting centers

Copper production

Copper fabrication



### BU Primary Copper

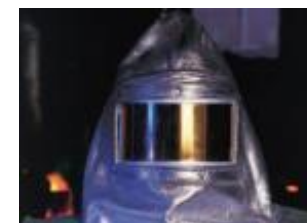
- » Hamburg D
- » Pirdop BG
- » Olen B
- » Rothenbach D

### BU Recycling / Precious Metals

- » Lunen D
- » Olen B
- » Hamburg D
- » Fehrbellin D

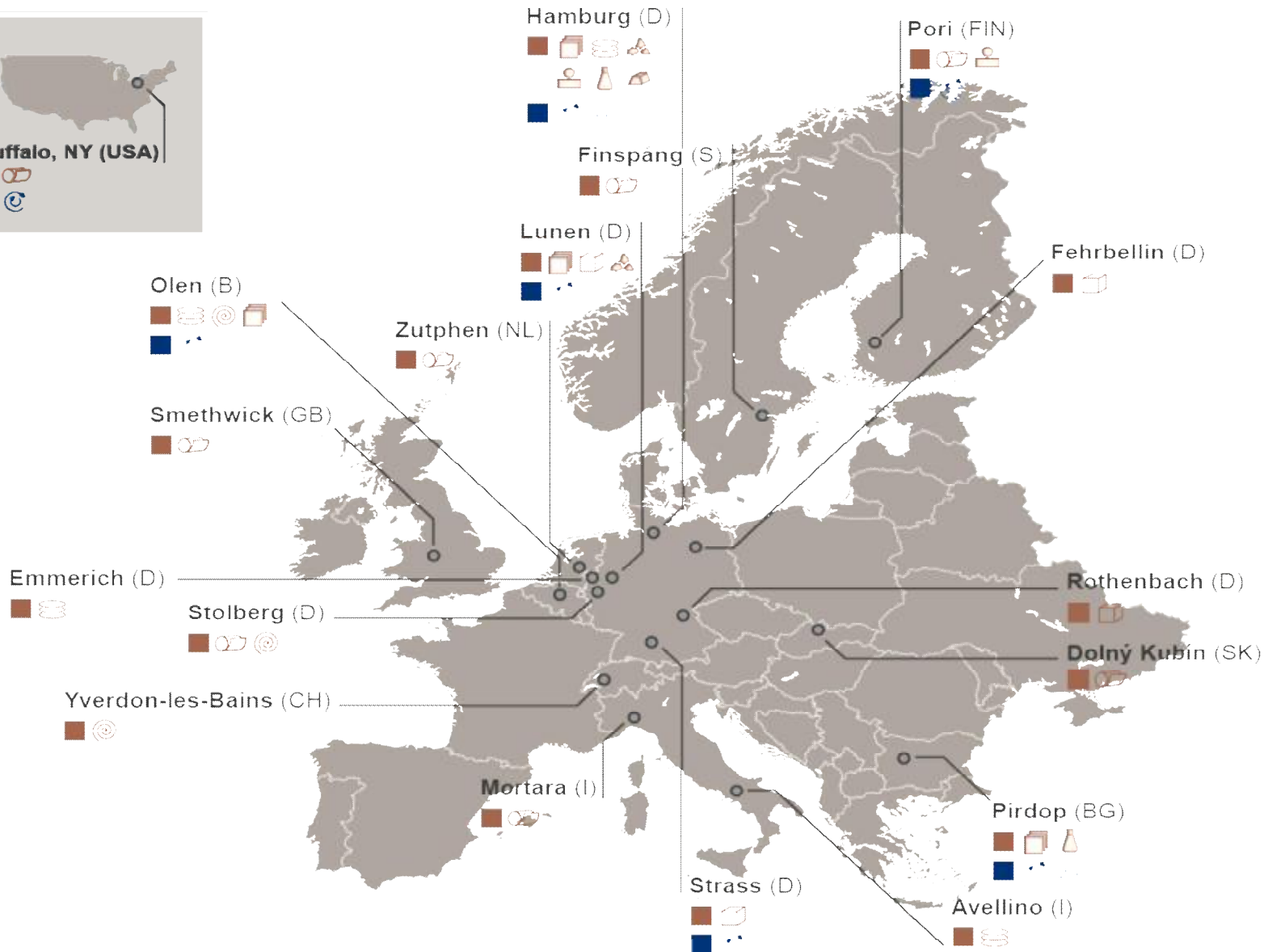
### BU Copper Products

- » Hamburg D
- » Olen B
- » Emmerich D
- » Avellino I
- » Stolberg D
- » Buffalo USA
- » Pori FIN
- » Finspång S
- » Zutphen NL
- » Mortara I
- » Yverdon- les-Bains CH
- » Smethwick GB
- » Dolný Kubín SK



Aurubis has also an extensive service and sales network in more than 20 countries (Europe, Asia and North America)

# Production sites & Service Center – worldwide

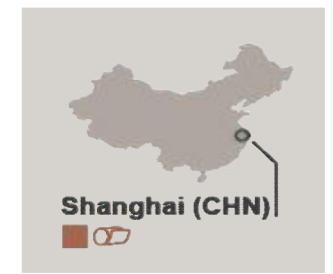


**Copper products**

- Strips / Foils
- Cathodes
- Precious metals
- Wire rod
- Sulphuric acid
- Continuous cast shapes
- Iron silicate
- Other metals
- Speciality rod/ profiles, shaped wire

**Raw materials**

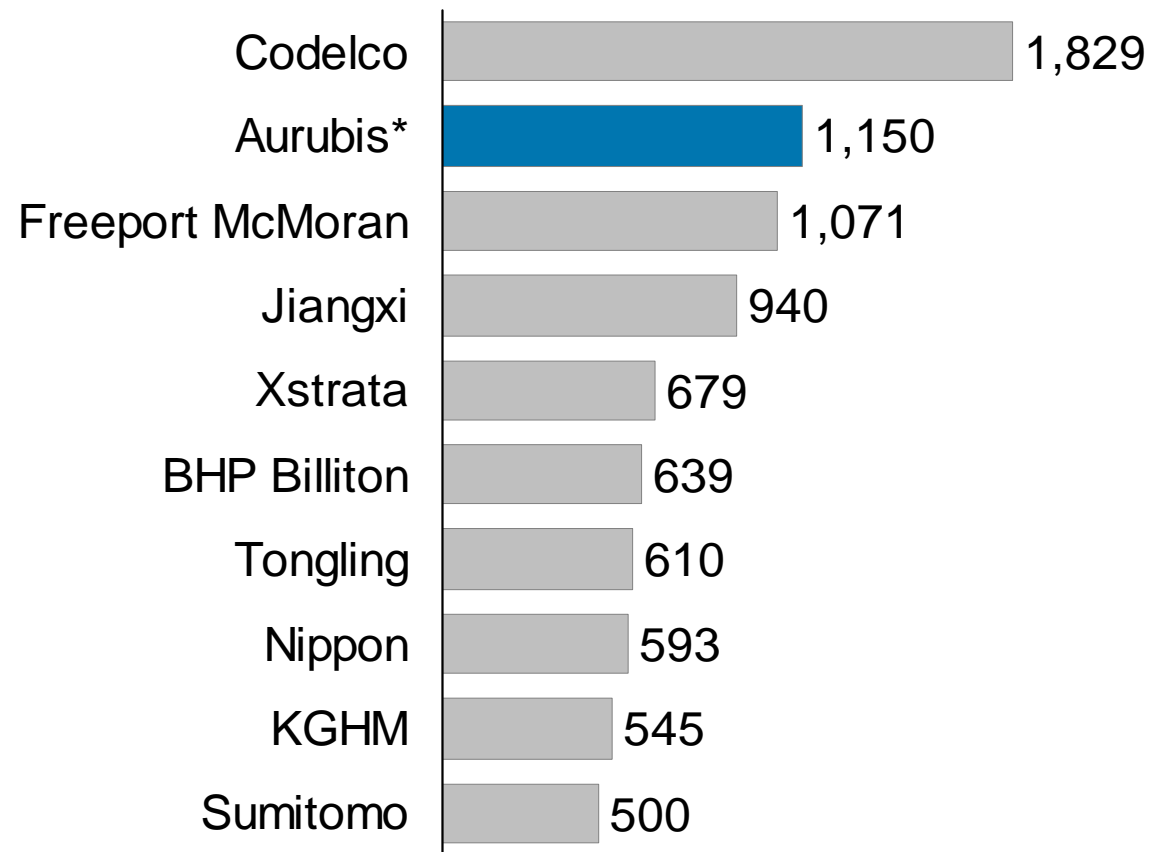
- Concentrates
- Recycling material



# Aurubis is an internationally leading cathode producer



Global copper output from refineries  
(in 1,000 t)



\* Fiscal year 2010/11 est  
Source: Wood Macquenzie, Copper Sep 2011

# Aurubis is the leading global copper recycling company



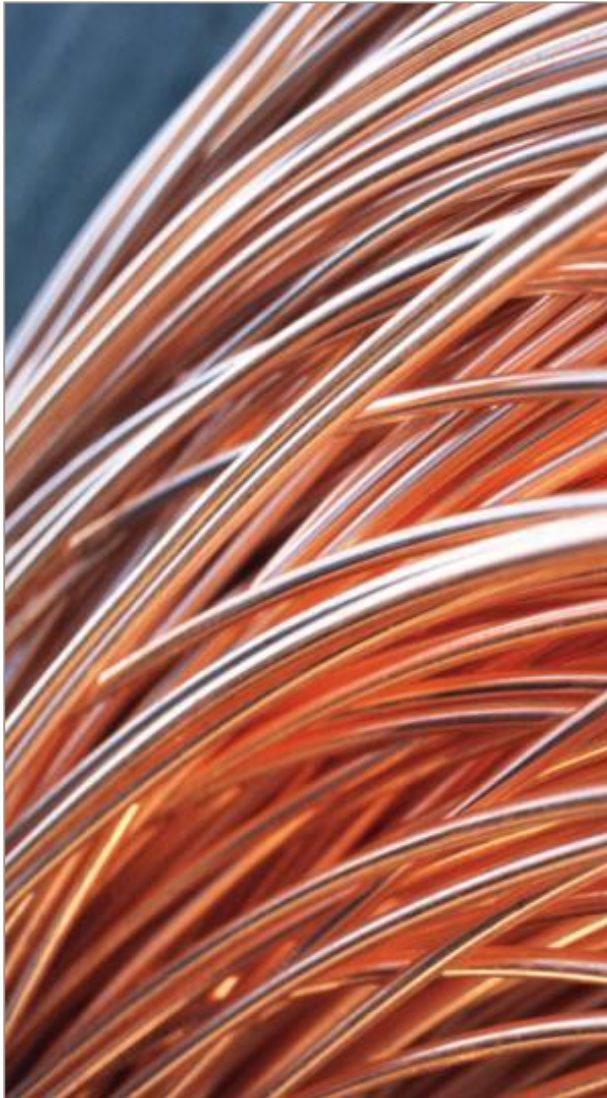
Company / volumes (in t*)	Copper scrap	Total recycling
<b>Aurubis</b>	<b>300,000</b>	<b>600,000</b>
Metallo Chimique (incl. Elmet)	26,000	300,000
Boliden	35,000	190,000
MW Brixlegg (incl. Krompachy)	90,000	160,000
Xstrata Copper	25,000	105,000
Sumitomo Metal Mining	50,000	n.a.
Jiangxi Copper	200,000	n.a.
Tongling Nonferrous Metals	100,000	n.a.
Various other Chinese refiners	- 900,000 (Cu content) -	

- » Treatment of a wide range of copper-bearing recycling materials
- » Efficient, environmentally friendly recycling technologies (pre-processing plants, state-of-the-art smelting technology, multi-metal recovery)

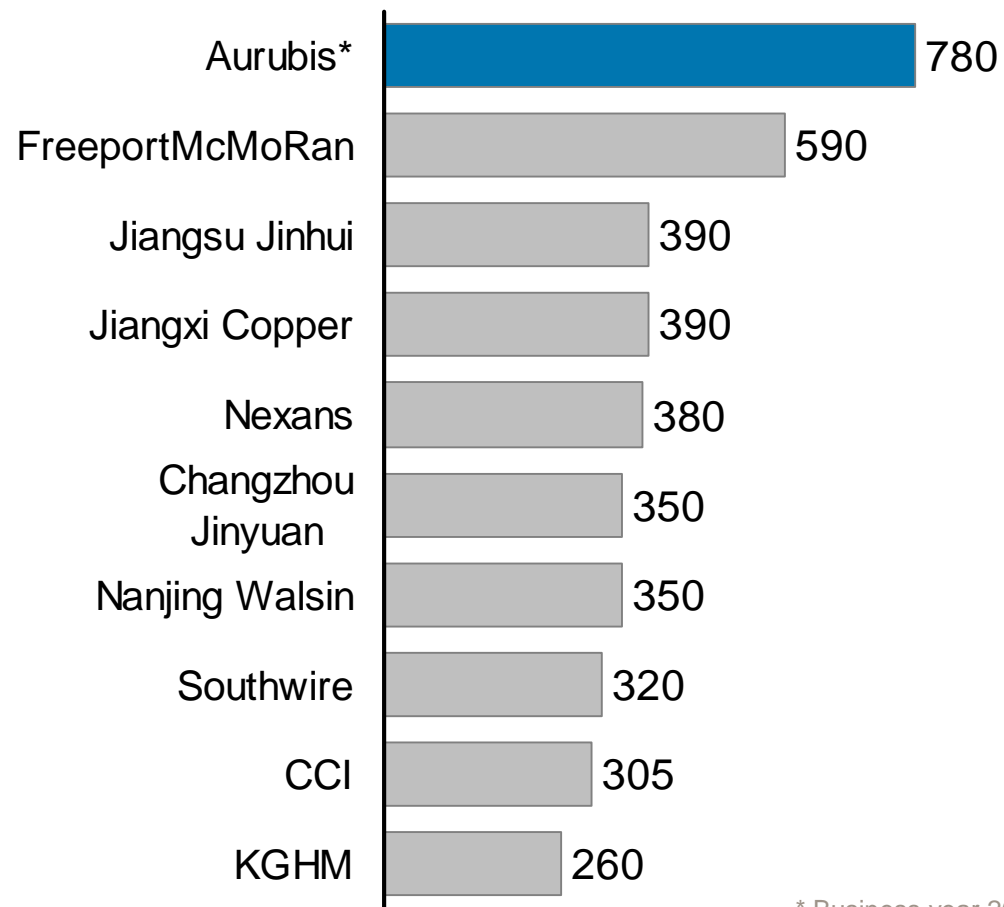
\* data based on 2010 figures (Aurubis estimates)



# Leading wire rod producer with competence and customer proximity



Global wire rod production  
(in 1,000 t)

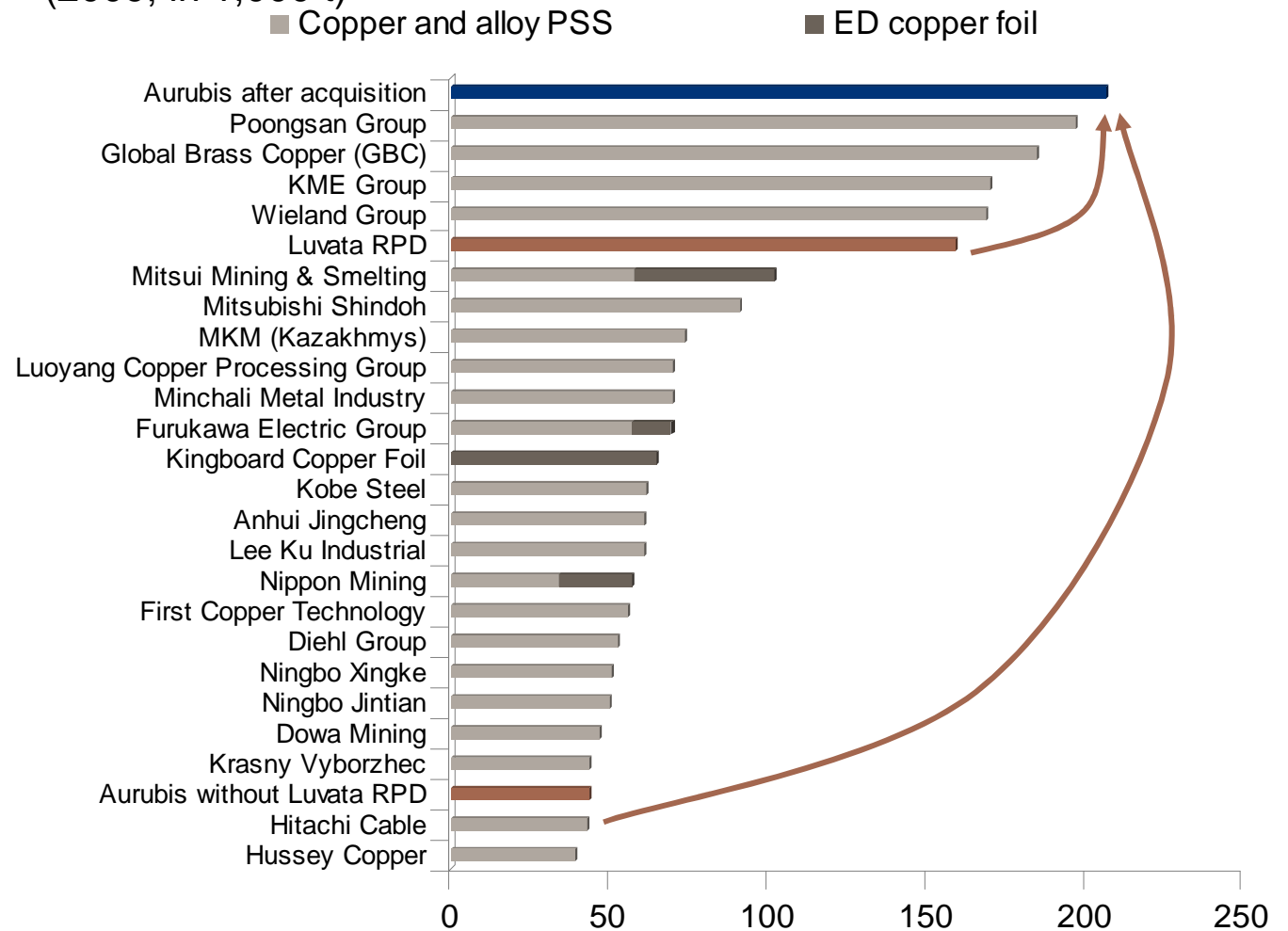


\* Business year 2010/11 est  
Source: basis 2010, Aurubis estimates

# Aurubis' market position has improved significantly following the acquisition of Luvata RPD



Global foil and flat rolled products manufacturer (2009; in 1,000 t)



Data: CRU Semi Flat Rolled Product Report 2010

## Strong gross profit is the foundation of the improvement in earnings



(IFRS operating)

		9 months 2011/12	9 months 2010/11
Revenues	Mill. €	10,235	9,762
Gross Profit	Mill. €	875	685
EBITDA	Mill. €	391	323
EBIT	Mill. €	304	240
EBT	Mill. €	247	219
Consolidated net income	Mill. €	173	158
Return on Capital Employed (ROCE)*	%	21,6	17,5



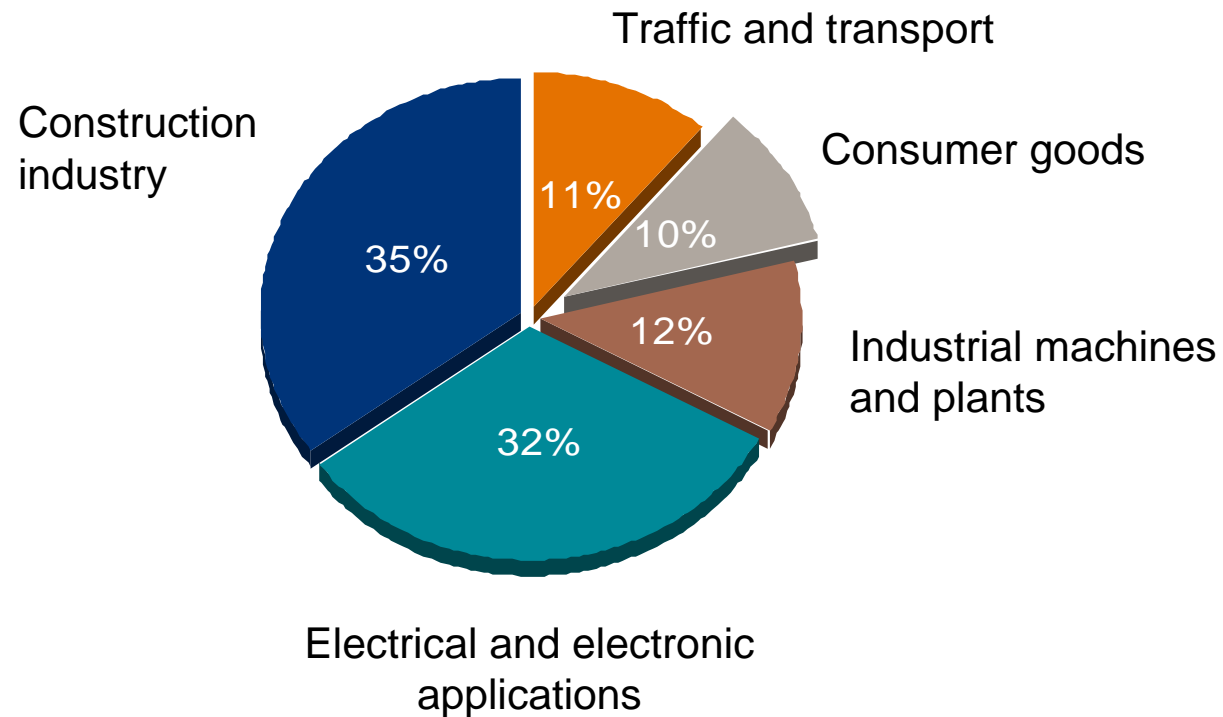
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# New technologies result in more copper applications

## Global copper demand by industries

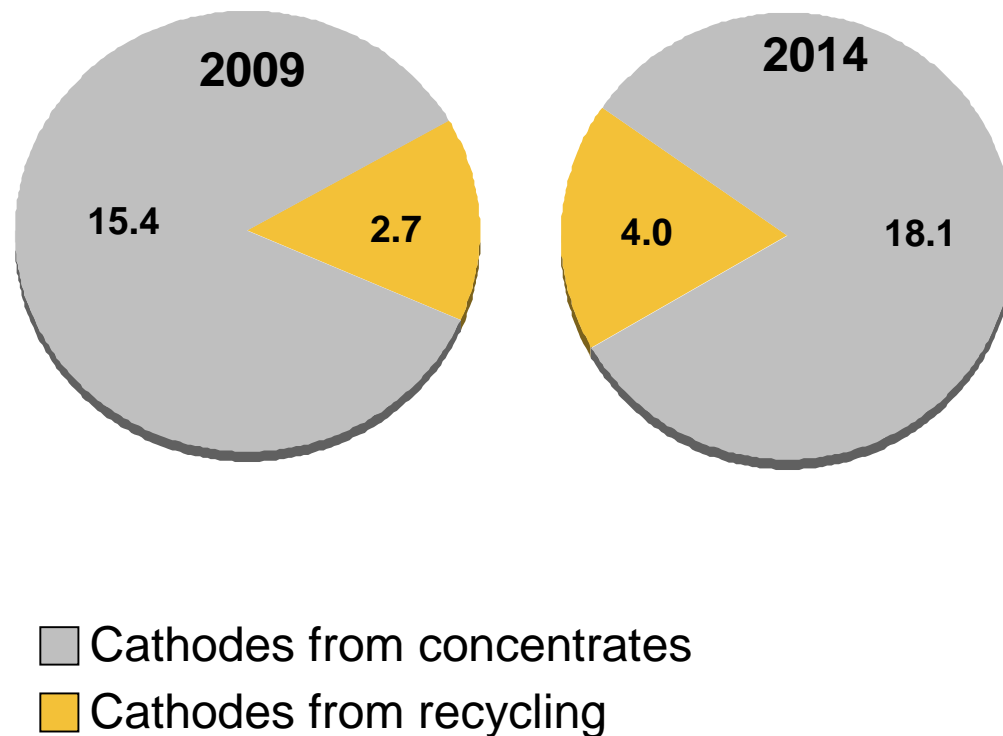


Copper is part of daily life



# Recycling will largely contribute to worldwide copper supply also in the future

Share of recycling materials in global copper market in 2009 and 2014 (mill. t)

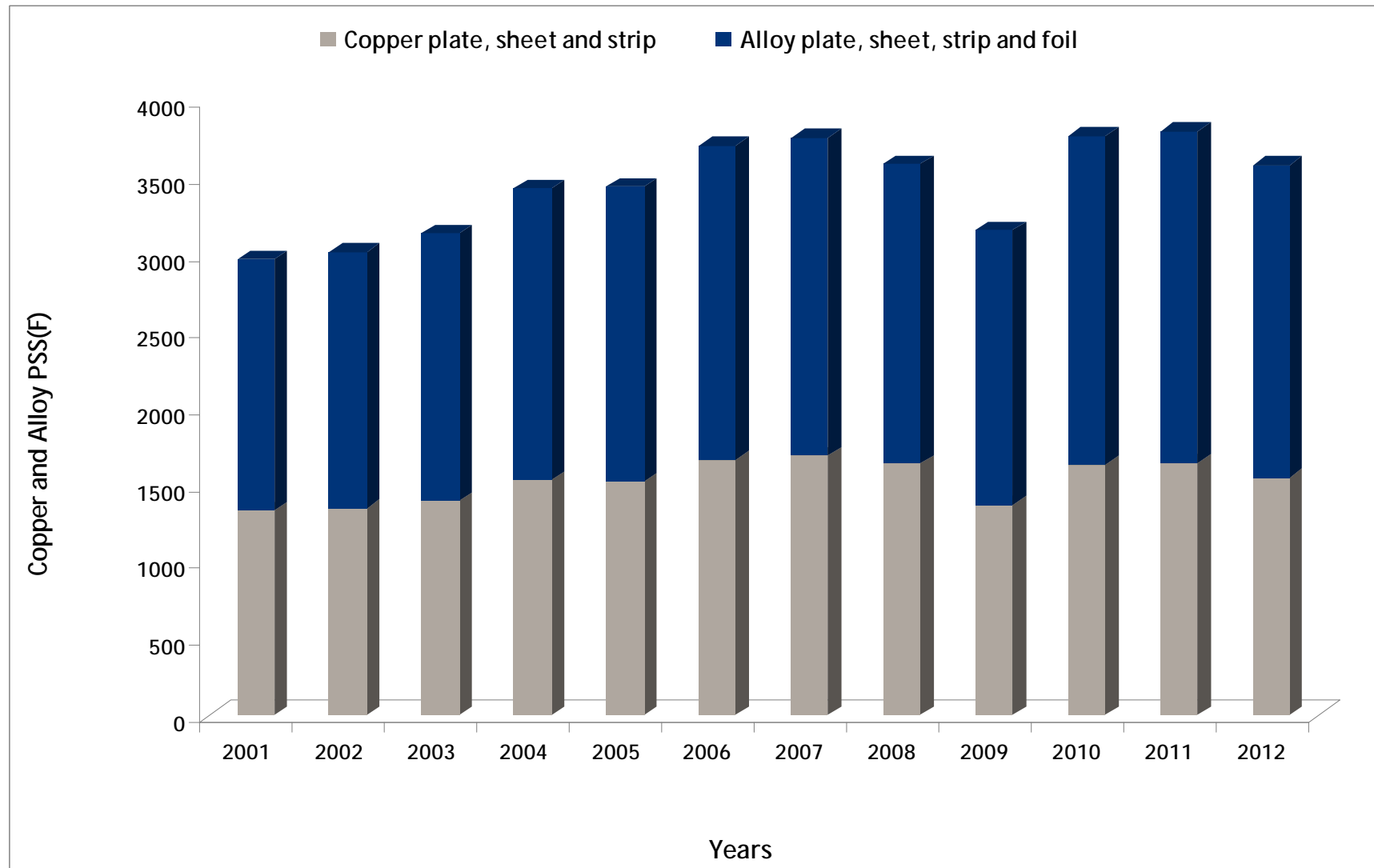


Source: CRU, July 2010, Aurubis

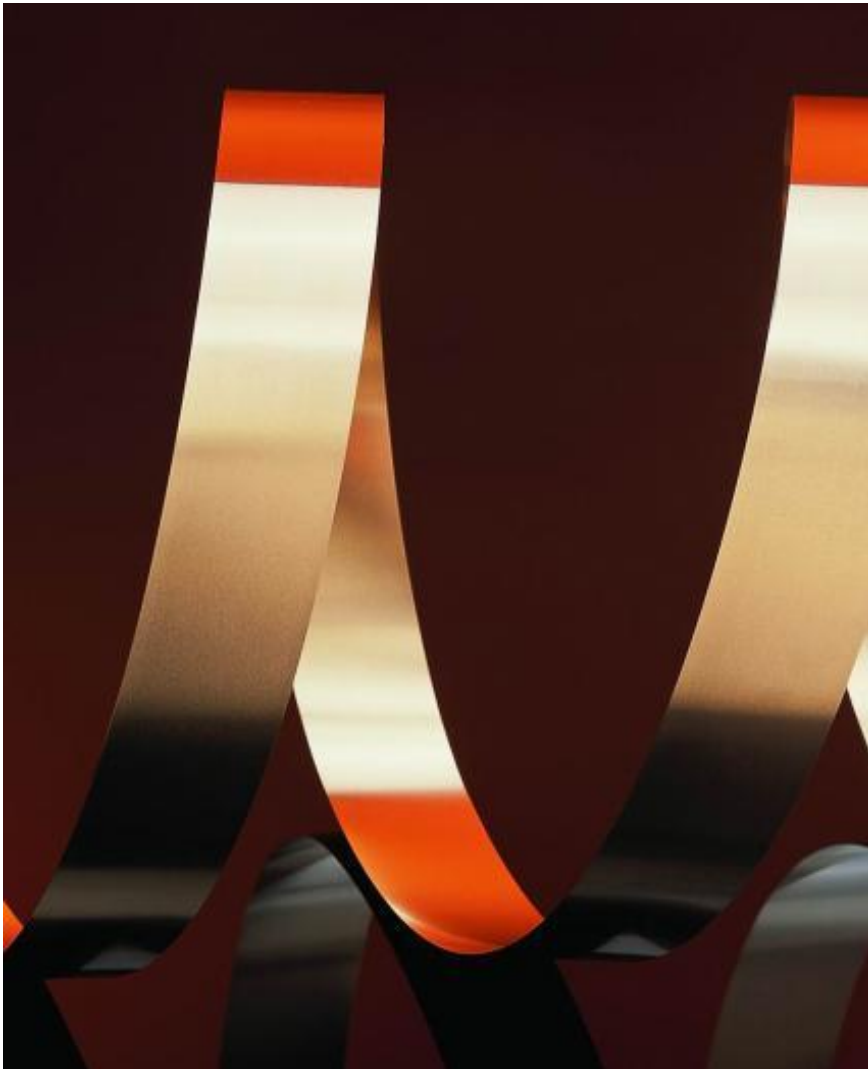
But new applications will influence recycling growth:

- » Growth is determined by the expansion of high-tech recycling for complex raw materials
- » Recycling of complex raw materials requires high investments in technology and environmental protection
- » A more and more scattered distribution of metal contents may affect the economics of recycling

# CRU Market Trends Copper and Alloy PSS(F) 2001 - 2012



\*2011 extrapolated by WVM/GDB figures, 2012 expected forecast by European mills



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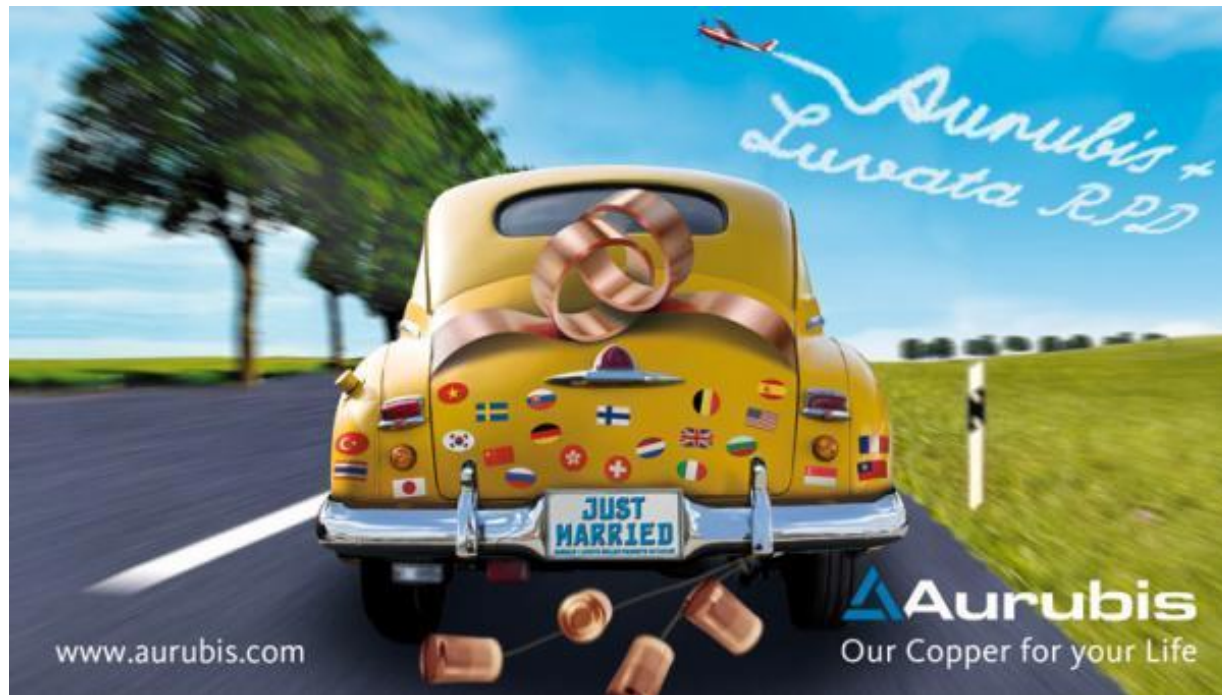


Internationality

Integrated group

Market knowledge

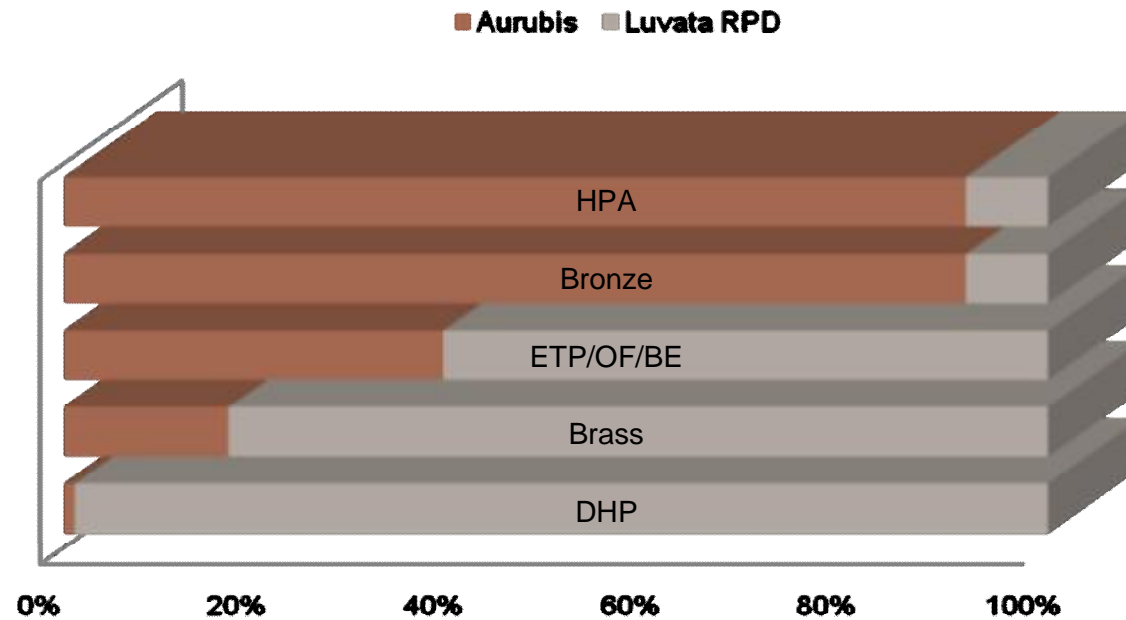
Production processes



Market leadership

Alloys

# The product ranges of Aurubis and Luvata RPD optimally complement each other



# Three basic product areas: Plates, Sheets and Strips

## Type of Products



**Plate**



**Sheet**



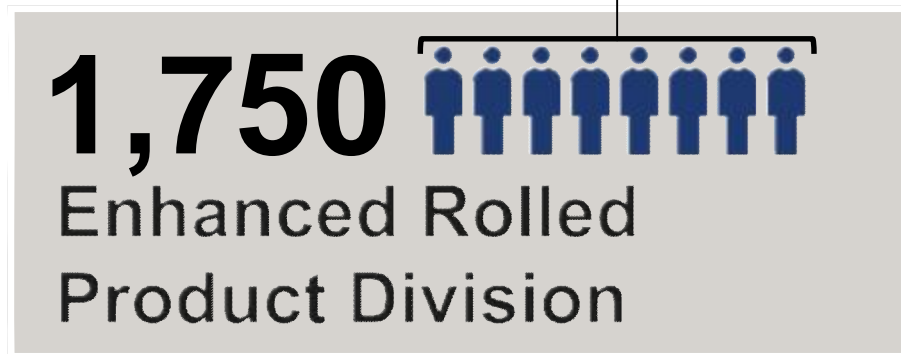
**Strip in coil,  
multi-coil,  
on spool**

## Applications

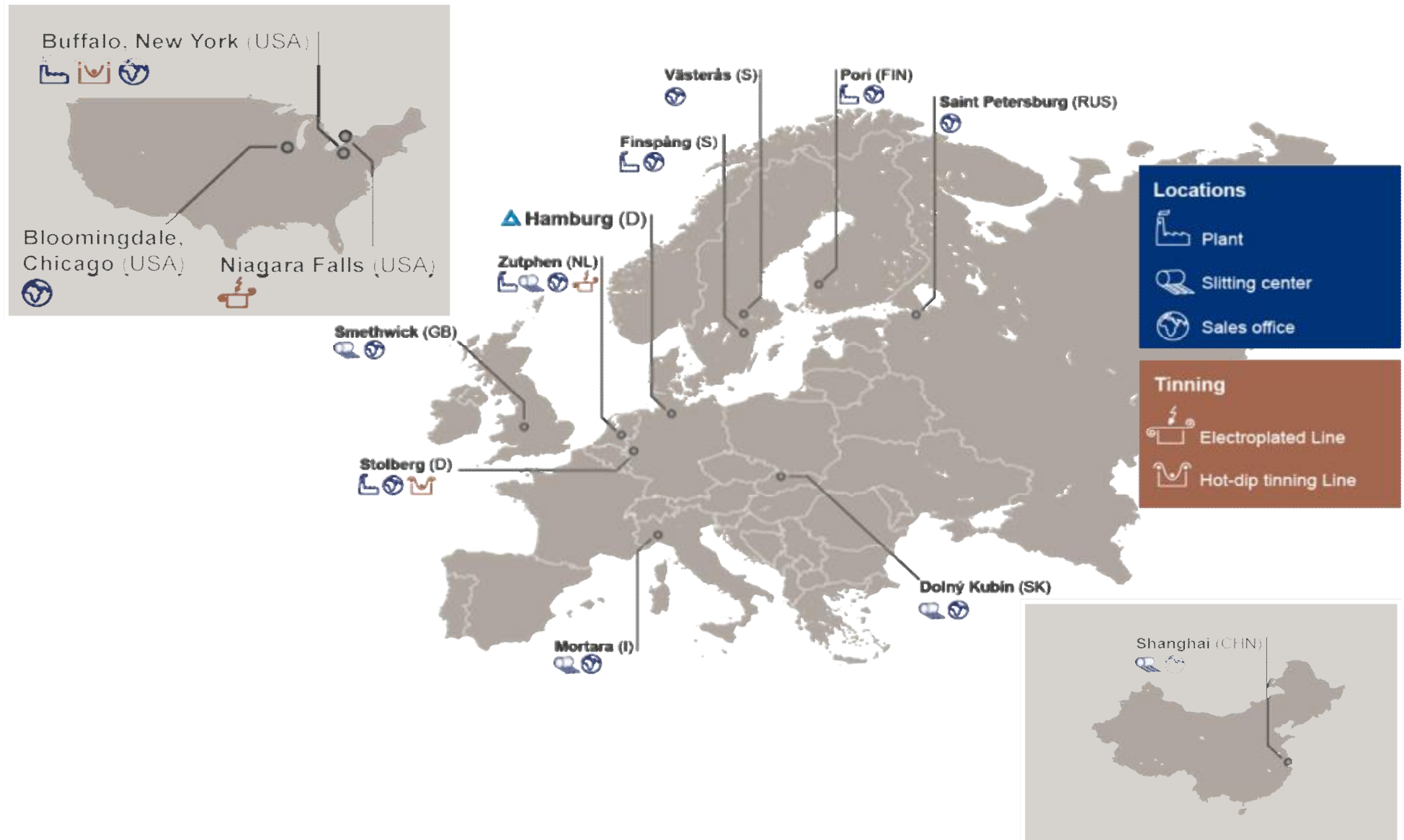
- » Electronic devices
- » Electrical industry
- » Engine cooling
- » Cables
- » General Engineering
- » Ordnance
- » Building and construction architectural
- » Building and construction others
- » Distribution

# Facts & Figures

## Flat Rolled Products & Specialty Wire



# Aurubis Flat Rolled Products & Specialty Wire – Worldwide

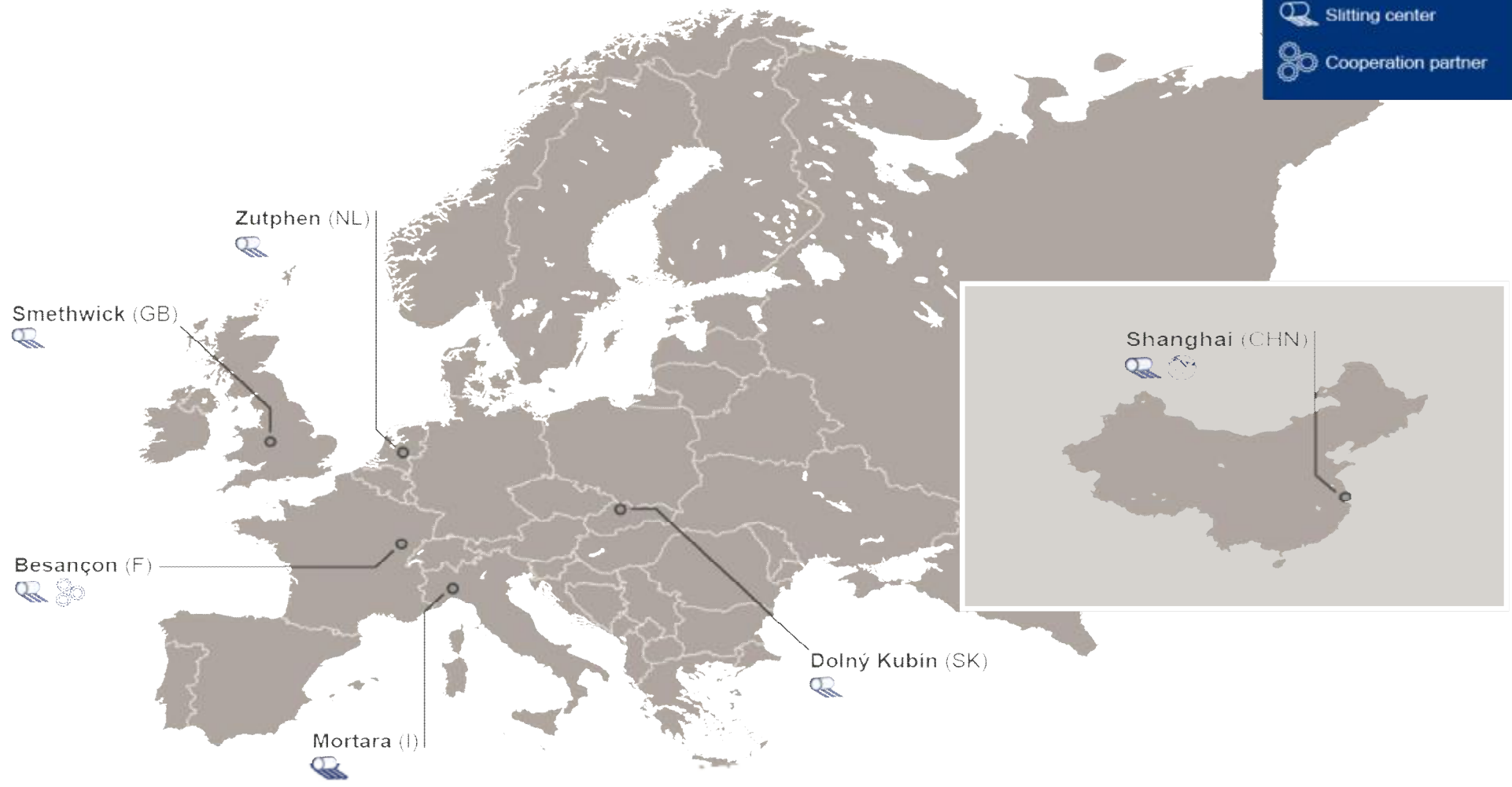


# Slitting Center Worldwide



**Locations**

-  Slitting center
-  Cooperation partner





### Description of Buffalo (USA) plant:

- » Fully integrated mill with casting and hot rolling
- » Strip and sheet production
- » Hot-dip tinning and Electroplating (Niagara)
- » Main products are ACR tube strips and strips for connectors, caskets, ordnance, telecommunication and electrical applications
- » Current capacity is 150,000 t/a



### Description of Zutphen (NL) plant:

- » Integrated mill for the production of thin brass strip
- » Using Vertical Strip Casting (VSC) mainly for Heat Exchange products in engines and generators (76%), also for connectors and industrial applications
- » Electrolytic Tin Plating line up to 350 mm width since July 2011
- » Additionally slitting centre separate as Zutphen Service Centre
- » Current capacity is 60,000 t/a





### Description of Finspång (S) plant:

- » Using Vertical Strip Casting (VSC)
- » Integrated mill for the production of thin gauge copper strips (~0.025-0.5 mm) mainly for Heat Exchange products in engines and generators
- » Automated modern packaging line
- » Current capacity is 35,000 t/a
- » Technical Centre with Rapid Prototyping, Data Base and Wind Channel



### Description of Pori (FI) plant:

- » Fully integrated mill from casting to finishing.
- » Flexible customer driven approach with world class surface quality.
- » Wide product scope with main products:
  - » Plates and Sheets
  - » Cable strip
  - » High conductivity alloys, OF and OFE
  - » Nordic pre patinated products for facades and roofing.
- » Current Capacity is 45,000 t/a



- » Integrated mill for the production of copper, brass, phosphor bronze and high performance alloys
- » Hot-dip tinning line up to 400 mm width
- » Cake processing (CP) from Schwermetall and inhouse horizontal continuous casting (HCC)
- » Main products are strip and wire for connector industry, electronic devices, electrical industry, cables and general engineering
- » Current capacity is 60,000 t/a strip and 15,000 to wire

## Description of Schwermetall Stolberg (D) plant (50% owned):



- » Hot rolling mill using with three semi continuous casting lines and one shaft furnace for DHP-copper
- » Pre-rolled strip in copper, brass and high performance alloys
- » Capacity: casting 240,000 t/a - hot rolling 300,000 t/a

Our strategy determines **what** we want to become as a company:

- » Our strategy is to leverage our **integrated copper processing capabilities** in **smelting, refining, extraction, recycling and fabrication**, generating the highest value out of various and especially complex raw materials.
- » We supply **high quality copper products**.
- » We focus on products for growing applications in which the **specific, foremost conductivity related properties of copper and copper alloys add value** to our industrial customers in **developed and emerging countries**.

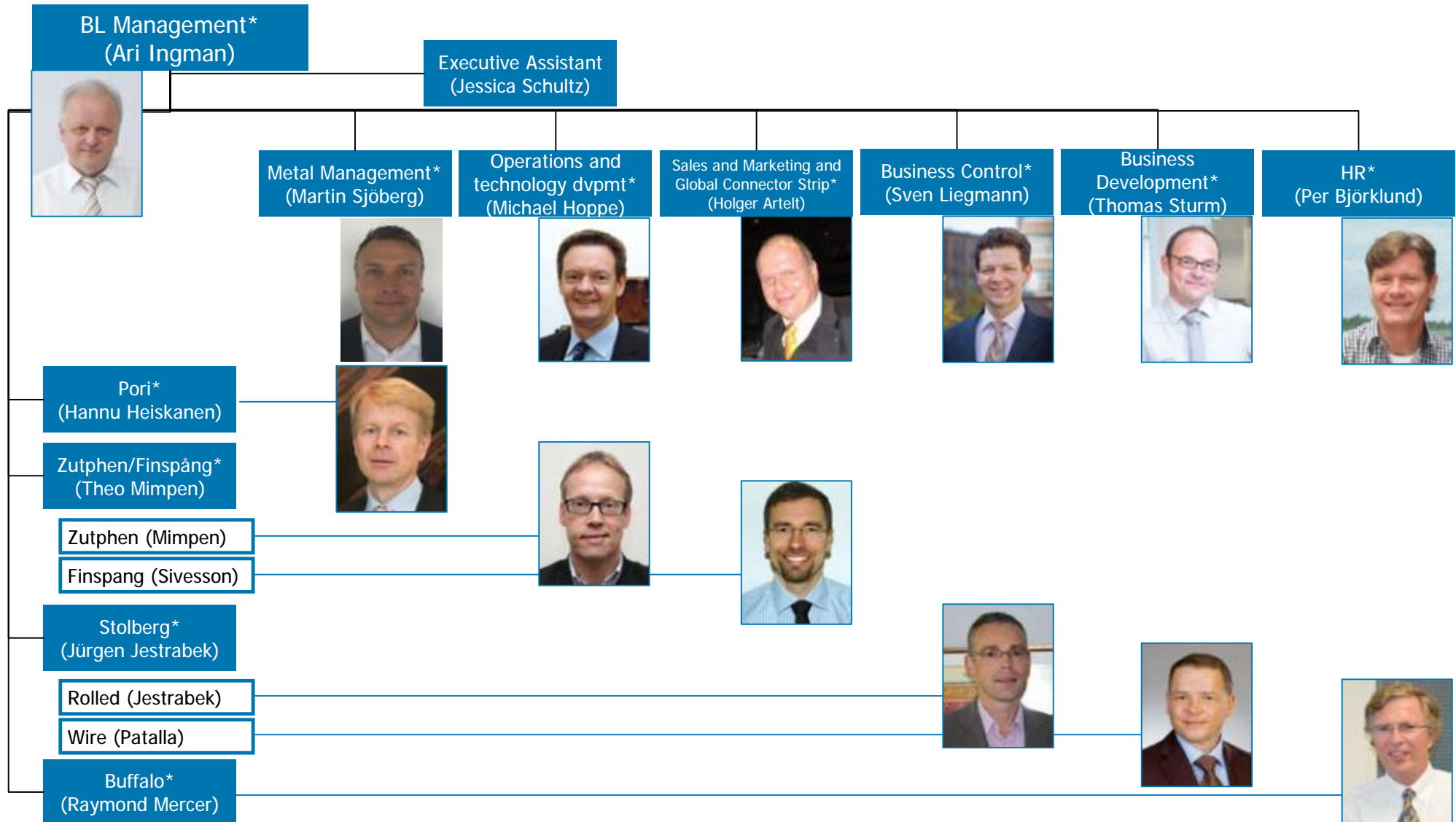


**We will be the leading integrated copper processing company in the world!**

# The Business Line Management



\* Member of the management team





- » High flexibility in quantity and variety of products.
- » Wide and flexible alloy portfolio.
- » Serve all requests of any kind at competitive price level.
- » With Cake, VSC and HSC there are now three different methods of state-of-the-art casting technologies available at Aurubis.
- » Flexibility on specialities or efficient mono-manufacturing for large lot sizes can be used if required.
- » The strategy of „dedicated plants“ guarantees stable processes in all stages of production for all end-user markets.

# Aurubis FRP & SW

## - Supply program strip -



From copper-, brass-, bronze- and special alloys

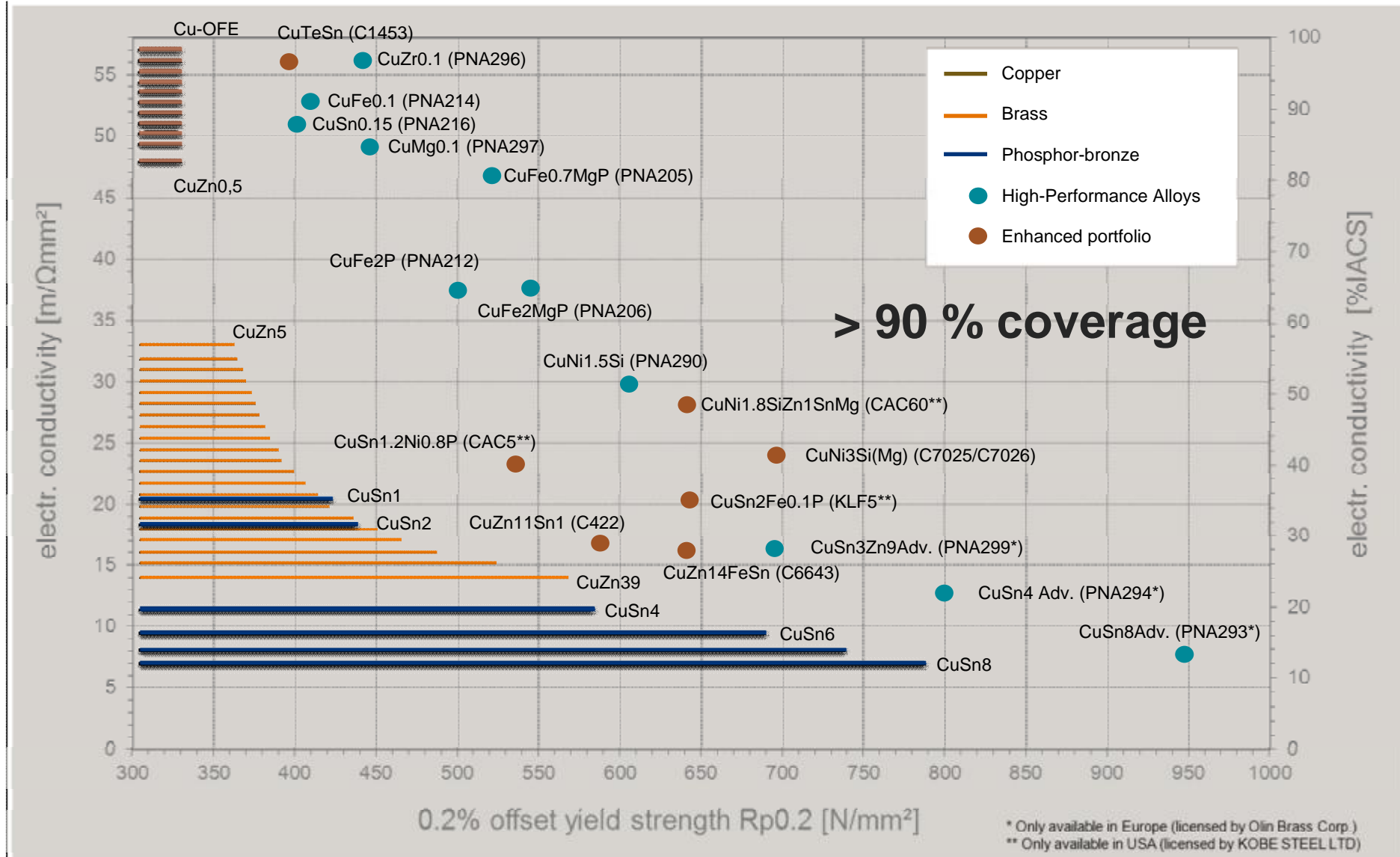


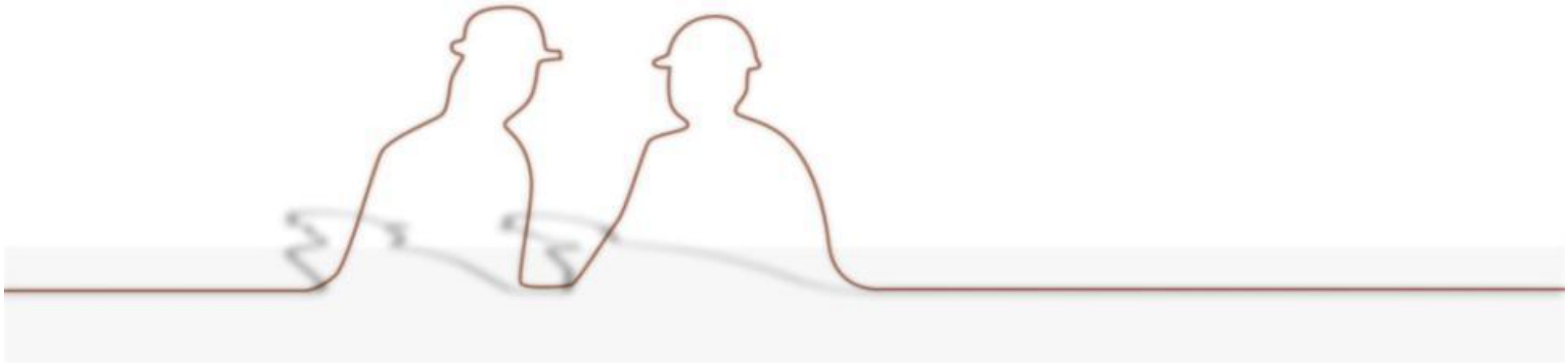
Product	Thickness (in mm)	Width (in mm)
Copper strip	0.1 - 6.00	10 - 1200
Brass strips	0.075 - 3.00	3 - 640
Strip other alloys	0.1 - 3.00	10 - 600
Hot-dip tinned strip (0.8 - 15 $\mu$ )	0.1 - 1.20	10 - 400
Electroplated strip (0.2 - 8 $\mu$ )	0.1 - 0.8	10 - 350
Industrial foil	0.050 - 0.100	10 - 600
Cable foil	0.025 - 0.100	5 - 600
Radiator strip	0.025 - 0.500	5 - 320
Plate / Sheet	0.4 - 150	250 -1100

Additional specifications upon request

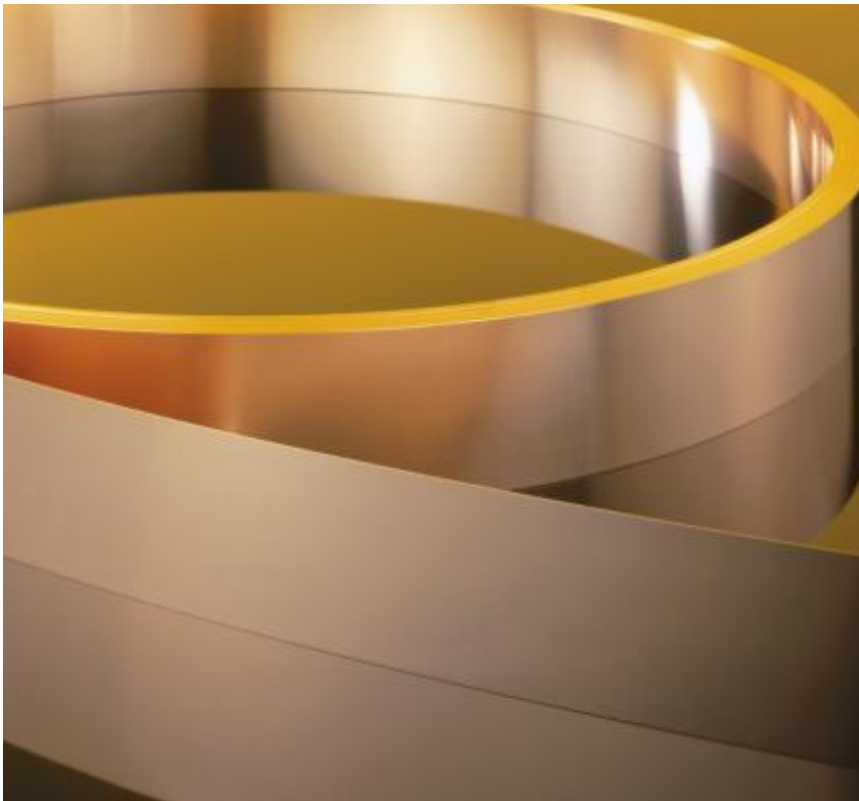


# Range of Alloys





- » Implementation of metal hedging through own market experts (proprietary metal book) to minimize customer own risks
- » Current information regarding the developments of copper stock market (Cu price, premiums, Cu standing)
- » Copper online (copper cathodes trading tool) for transparent hedging
- » Lectures to London Metal Exchange (LME) metal hedging processes
- » Monthly coppermail report to get background information about the copper markets



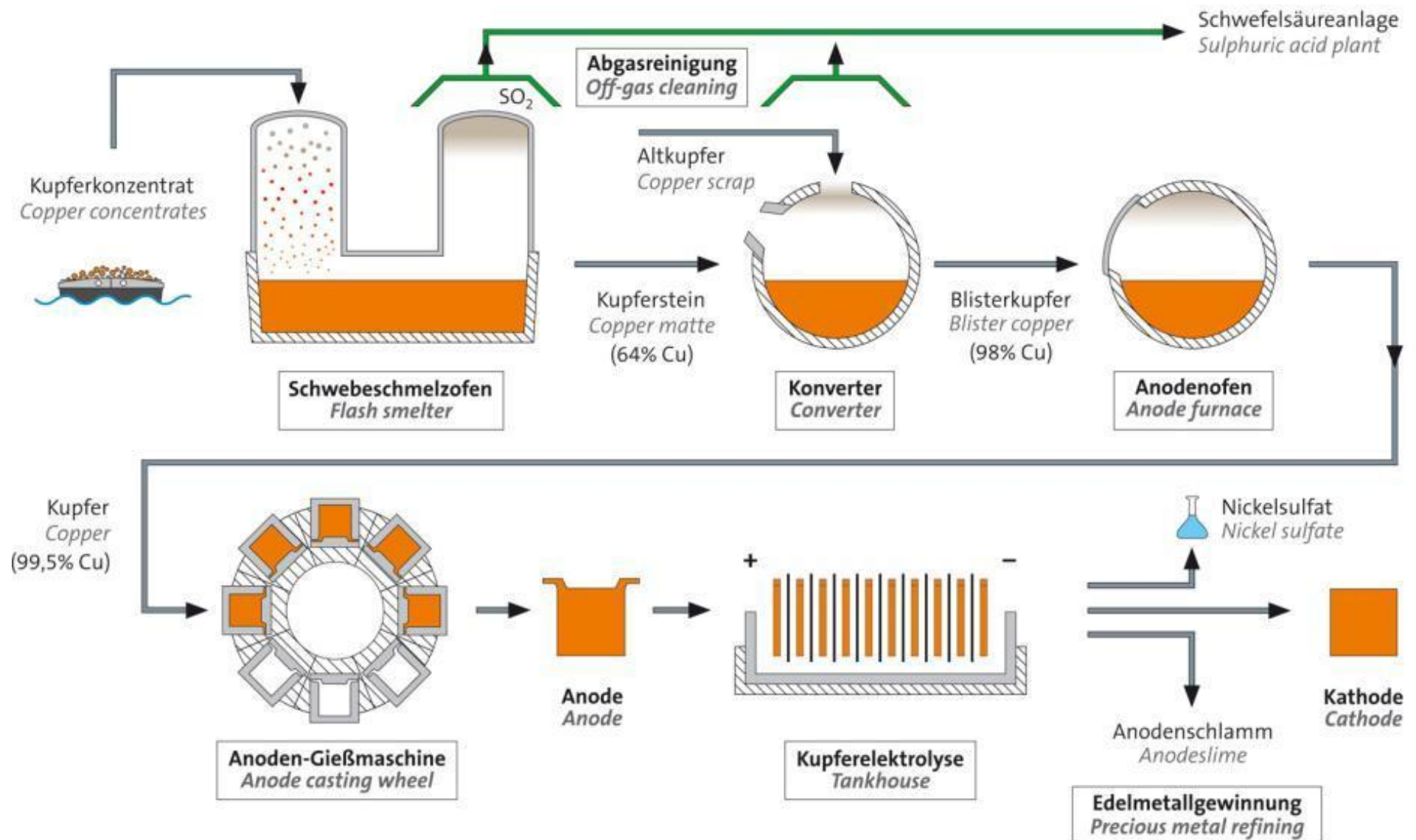
## Aurubis FRP & SW

One world  
All alloys  
One quality

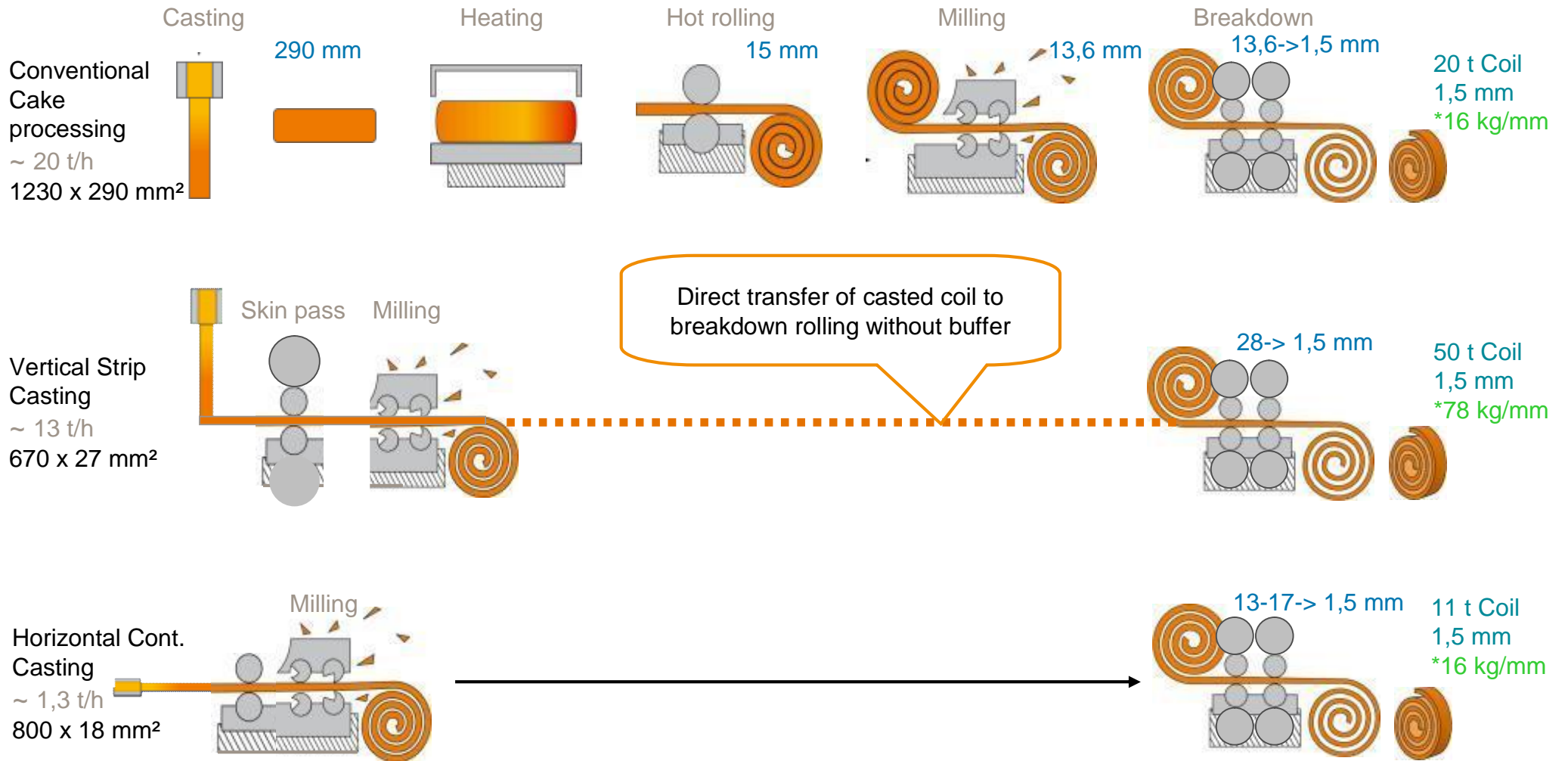
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# Vom Konzentrat zur Kathode

## *From concentrate to cathodes*



# Production processes



\*specific coil weight [kg/mm width], indicating the strip length