ICSG
Statistical Committee
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Recent Trends in Copper Wirerod Markets

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CRU Analysis
Outline and structure

The wirerod story so far…

European Les Miserables

What’s happening in China?

and don’t forget substitution

Tomorrow in brief
The wirerod story so far...

Global copper wirerod production

2008 global wirerod production

Data: CRU

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World production by technology type (2008)

- Chinese Upcast: 27%
- Hot Rolled: 45%
- Outokumpu: 7%
- Properzi: 5%
- Southwire: 2%
- Contirot: 8%
- Rautomead: 1%

Data: CRU

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World copper wirerod & drawn wire exports

Jan-July 2009 (-29% y-o-y)

Data: GTIS

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Tomorrow in brief
Total European wire rod markets

European wire rod consumption

Consumption by product | H1 09 vs. H1 08
--- | ---
Energy cable | -21%
Communication cable | -24%
Winding wire | -36%

Data: CRU

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Recent news on industry restructuring

**Europe**

**Nexans France** and **Nexans Copper France** will merge to cap costs. 387 layoffs will take place and the Chauny production unit in Northern France which will be closed. 50 jobs will also be created.

**Nexans** is planning to close its Vacha building cable plant in Germany. Responding to the economic crisis, the company is accelerating its restructuring plans, cutting its workforce by 900. It announced that it has signed an agreement to sell its Montreal rod mill to **AmRod Corp**, a copper rod producer based in New Jersey, USA.

**Yazaki Saltano** has started temporarily laying off nearly 60% of its wiring harness workforce. The decision will impact 786 staff with wage cuts until September.

Romanian **Iproeb** continued to operate at reduced capacity in April, following reduced output in February and March. In February, the company sent on forced leave 120 employees and another 225 in March.

**Belden Inc.** cut its workforce in Europe by 110 as part of operational restructuring.

**Alcoa Inc.** sold its wire harness and electrical distribution business to **Platinum Equity**. The sale includes 2 plants in Hungary, together with other operations in 13 countries.
### Wirerod industry recovery timeline: North America vs. Europe

#### Europe

<table>
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<th>Q3 2008</th>
<th>Q3 2009</th>
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<tbody>
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<td></td>
<td>Market downturn</td>
<td>Market stabilised</td>
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**Q2 2009**

Short time working (Aurubis) and extended summer holidays, then plant closures (Nexans) and job losses

#### North America

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<th>Q1 2008</th>
<th>Q2 2009</th>
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<td>Market stabilised</td>
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**Q1 2009**

Major cost reduction measures at Belden, General Cable, Rea Magnet Wire, Superior Essex, Southwire etc
Western Europe case study: France
Comparative disadvantages for Nexans

- Declining domestic cable industry
- Losing share in both export and domestic markets
- Low operating margin

Overcapacity

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European wire rod capacity utilisation

Western Europe

Eastern & Central Europe

Much lower capacity utilisation rate because of overcapacity in Russia that was once favourable under the old export tariff system.

Data: CRU

© 2009 CRU International Limited confidential
Russian wirerod production

Rod exports slump 50% year-on-year in 2009

<table>
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<th>Y-O-Y change</th>
<th>Wire &amp; cable production* (tonnes)</th>
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<tr>
<td>+3%</td>
<td>279,000</td>
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<tr>
<td>+6%</td>
<td>295,000</td>
</tr>
<tr>
<td>+16%</td>
<td>342,000</td>
</tr>
<tr>
<td>-3%</td>
<td>331,000</td>
</tr>
<tr>
<td>-42%</td>
<td>98,000</td>
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*Includes over 80% of companies in Russia, Ukraine, Belarus, Uzbekistan, Armenia and Kazakhstan
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Looking forward
Chinese wirerod production
Q3 growth rate to be stabilised

'C000 tonnes

Data: CRU
Chinese comparative advantage

New rod mill capacity is driven by...

- Growing domestic wire & cable production
- Large / Increasing national exports of insulated wire and cable
- Growing domestic wire & cable consumption
- Replacing overseas imports of copper wire rod or drawn copper wire
Chinese economic drivers

Network infrastructure & construction

Consumer durable ownership

Rapid export growth

Rising import replacement
Fujian Nanping Sun Cable Co. Ltd. will build a 100ktpy copper wirerod in Shanghang.

Jiangsu Jiangrun Copper plans to make 240,000 tonnes of copper rod this year. Plant capacity is 320,000 tonnes and began in mid-2008. 2008 output was 97,000 tonnes. H1 2009 output was 85,000t.

Nanjing Huaxin Nonferrous Metals raised its copper rod capacity to 400,000 tonnes by obtaining from its parent company a new 150,000 tonnes production line.

Walsin Lihwa’s Chinese mills are operating at 100% capacity, vs. 70% in 2008. It sees healthy orders from large cablemakers. Its 2 (1 newly commissioned) China-oriented Nanjing mills have more orders than the export-focussed mills in Taiwan and Dongguan.

Quanwei (Tongling) Copper commenced operations in its unit in Tongling at the end of December 2008. Capacity of low-oxygen copper wirerod to 250,000 tonnes per year.

Tianjin Dawufeng Copper Semis Co. Ltd. is completing the second stage of the 150,000 tonnes copper wirerod project. Upon completion capacity will reach 300,000 tonnes.
Jinchuan Nonferrous Metals expands its rod capacity from 25,000 to 100,000 tonnes at end-June. The company has installed a cathode-using Southwire line from the USA.

Huiyou Wire and Cable will commission a 100,000tpy rod mill in early August. It will mostly be sold to local cablemakers. The rod mill will use refined cathode for feed.

Chalco is building a 300,000 tonne semis project in Yunnan province. It will be capable of producing 200,000 tonnes of copper rod and 100,000 tonnes of sheet and strip.

Amer International Group commissioned a 300,000 tonne copper rod mill and a 100,000 tonne wire drawing unit in Tongling City, Anhui province in late-August 2009.

Fujian Guangming Non-Ferrous Metal Products is to launch a 60,000 tonne copper rod project in Yingtan city, Jiangxi province.

Jianxin Copper commissioned a new 30,000tpy rod mill in Yingtan city on 8th September 2009.

Also many sheet and strip projects are also starting to come into production (6 new projects)

...new wirerod capacity = 1.6Mt
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Tomorrow in brief
Downside risks for the Chinese wire rod market
Cu/ Al price ratio exceeding 3:1

Annual Cu/Al price ratio, 1950-2011F

Our forecasts show that the Cu/Al price ratio will exceed 3:1 in 2009, 2010 and 2011

A new record level: A period of three successive years with a price ratio above 3:1
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Tomorrow in brief
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Conclusions

- The economic recession has affected the wirerod industry globally.

- The European industry was badly hit as end-use demand is still weak; market participants have made cost reduction measures and expect output to be 10-15% lower than previous year.

- Russia showed a record of fast growth in wirerod output during the past 9 years but fell in 2008 and more significantly in 2009 due to the economic downturn and an unfavourable tariff system.

- China has become an important wirerod consumer given its significant industrial and economic development.

- China: new copper wirerod capacity of over 1.6Mt will be commissioned in the next 12 months.

- Substitution remains a problem to solve for the whole industry, which could be more serious in regions with faster recovery.
Our knowledge and experience of the whole copper industry value chain makes us the ideal choice for single client projects

- In depth-knowledge of the metals and mining industry, including areas such as mine costs, new projects, wire and cable and copper semis markets.
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- Unrivalled databases and industry contacts, extensive site visits.
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- Wire & cable companies
- Private equity firms
- Major air conditioner manufacturers
- Global industry associations
- Investment banks
- Junior mining companies

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