



Metals Despatch

Newsletter of the International Metals Study Groups

June 2013, Issue No. 15

LEAD AND ZINC FORECAST

The outlook for World supply and demand for lead and zinc was presented during the ILZSG Spring 2013 meeting held in Lisbon on 24 April 2013. Highlights include:

- **The global usage of refined lead metal** is expected to increase by 4.8% to 11.09 million tonnes in 2013. It is anticipated that Chinese lead demand will increase by 6.7% this year, driven by automotive and e-bike production as well as mobile phone networks. Demand in Europe is expected to rise by 1.9% in 2013. In the United States usage is forecast to grow by 1.2%.
- **Global lead mine production** is forecast to increase by 3.5% to 5.43 million tonnes in 2013. In China production is expected to increase by 4.7%. In Australia the reopening of the Paroo Station mine will add 85,000 tonnes to output.
- **Global production of refined lead metal** in 2013 is expected to increase by 4.8% to 11.13 million tonnes, with Chinese production rising by 6.2%. Output in Italy will grow with the reopening of the Porto Vesme plant. Higher output is also forecast in Kazakhstan, Republic of Korea, Mexico and the United States.
- It is expected that the global supply of refined lead metal will exceed demand by 42,000 tonnes in 2013.

- After falling 3.3% in 2012, global **zinc usage** is forecast to rise by 5.2% in 2013 to 12.98 million tonnes. Chinese demand is expected to grow 6.8% influenced by infrastructure development in central and western provinces. Elsewhere in Asia increases are forecast in India, Indonesia, Taiwan (China), Thailand and Turkey. Demand in Europe is expected to grow only by 1.7%, while usage is anticipated to rise 2.9% in the United States.
- **Global zinc mine output** is forecast to increase by 2.3% to 13.92 million tonnes in 2013. Output in Africa will grow with the opening of the Perkoa mine in Burkina Faso. Commissioning of new mines in India and Mexico will add to output. In Canada output is forecast to fall by 28% with the closure of two Xstrata operations due to depletion.
- **Global refined zinc production** is forecast to rise 5.2% to 13.25 million tonnes in 2013, driven primarily by an expected 9.7% increase in China. Production is expected to increase in Australia, Brazil, Republic of Korea, India, Italy and Japan.
- The latest **forecasts** indicate the global refined zinc market will be in surplus for the seventh successive year with the supply of refined zinc metal exceeding demand by 273,000 tonnes in 2013.

For further details of the outcomes of the ILZSG meetings or questions on the market outlook please email Paul White at paul.white@ilzsg.org

NEXT STUDY GROUPS' MEETING DATES

The dates for the next International Study Groups' meetings are:

ICSG: 30 Sept - 2 Oct 2013, Lisbon, Portugal
INSG: 30 Sept - 2 Oct 2013, Lisbon, Portugal
ILZSG: 2 - 4 October 2013, Lisbon, Portugal

Joint Study Groups' Seminar 2:00 pm on 2 October 2012: "By-Products of Copper, Nickel, Lead and Zinc including their Role as Critical Materials" Lisbon, Portugal

ICSG: Industry Advisory Panel, London, 10 October 2013

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COPPER FORECAST

The International Copper Study Group (ICSG) met on 25 and 26 April 2013 in Lisbon and reviewed the current outlook and trends in World copper supply and demand. The following forecast was issued:

- Global refined copper usage is forecast to grow by only 0.3% in 2013 to 20.6 million tonnes. With anticipated recovery in the world economy, usage is foreseen to grow by around 4% in 2014.
- In 2012, mine production levels increased gradually, recovering from constrained output in previous years. ICSG anticipates that recovery will continue and additional output will arise from significant new operations and expansions at existing facilities due to come on stream in 2013 and 2014. After adjusting for possible disruptions, world mine production for 2013 and 2014 is anticipated to grow by around 5.5% each year.

In 2013, world refined copper production is expected to be affected by maintenance shutdowns at smelters, but with the restoration of production that was constrained in 2012 and the start-up and expanded capacity at SX-EW plants in Africa and electrolytic plants in China refined copper production is expected to grow by around 4% in 2013 and a further 5% in 2014.

According to ICSG projections for 2013, the copper market is expected to have a production surplus relative to demand. World production of refined copper is expected to exceed demand for refined copper by about 415,000 t, as demand will lag behind the growth in production. For 2014, although a recovery in usage is anticipated, a higher surplus is expected with increased output from new and existing mines.

For further details of the outcomes of the ICSG meetings or questions on the market outlook please e-mail ICSG Chief Statistician Ana Rebelo at rebelo@icsg.org



Copper and Bronze Coins from China

NICKEL FORECAST

The International Nickel Study Group (INSG) met on 22 and 23 April 2013 in Lisbon and reviewed the current outlook and trends in World nickel supply and demand. The following forecast was issued:

- Global **primary nickel usage** was 1.47 Mt in 2010, 1.58 Mt in 2011 and 1.65 Mt in 2012. For 2013 an increase to 1.77 Mt is expected.
- World **primary refined nickel production** was 1.45 Mt in 2010, 1.61 Mt in 2011 and 1.76 Mt in 2012. Production is projected to increase to 1.86 Mt in 2013. The 2013 figure does not include any adjustment factor for possible production disruptions.
- INSG members also discussed **market trends**. It was noted that 2012 saw a stock build up as new projects came on stream and nickel pig iron production in China grew. Nickel demand in early 2013 improved relative to the latter part of 2012. Production increased in early 2013 and will likely continue to increase in coming months.

INSG recognizes the significant impact of the current financial, economic and political uncertainty in many parts of the world. The effects of the above on both the supply and demand for nickel are not fully known. The Study Group cautions that future market developments could alter the forward-looking market balance.

For further details of the outcomes of the INSG meetings or questions on the market outlook please email Sven Tollin at sven.tollin@insg.org

JOINT STUDY GROUPS' SEMINAR

A Joint Study Groups' Seminar on "Financial Aspects of the Metals Industry: Price Volatility, Investor Activity and Project Financing" was held on 24 April 2013 in Lisbon, Portugal. The seminar was held through the combined efforts of the International Lead and Zinc Study Group (ILZSG), the International Copper Study Group (ICSG) and the International Nickel Study Group (INSG). The seminar was chaired by Mr. Salim Bhabrawala (United States).

The Seminar opened with Mr. Chris Evans of the London Metal Exchange speaking on LME-related financial aspects of the metals industry. Mr. Evans first provided an overview of the key points of new legislation impacting on the non-ferrous metals industry and explained the implications of these changes. In the second part of the speech he sought to dispel a number of misconceptions that have arisen about recent developments. Mr. Evans presented his views on the issue of the LME

warehousing situation and addressed some concerns about electronic trading. He concluded that the LME's strength comes from the connection between customers in the physical metal market and the financial market. The acquisition of the LME by HKEx last year will reinforce this relationship.

Mr. David Wilson, Director, Metals Research and Strategy at Citi Research, Citigroup, gave a presentation on 'The Impact of Non-fundamental Factors on the Non-ferrous Metals Markets', in which he examined metal price volatility from the banking point of view. He noted that base metals prices have been very volatile since 2005 and commodity related investments have surged from around US\$ 30 billion in value at the end of 2003 to around \$400 billion in early 2013. Mr. Wilson argued that the evidence is that the fundamentals drive prices over the long term. Positive fundamentals, in the form of strong demand trends from urbanisation and industrialisation in China, on the one hand, and weak supply growth on the other, provided a key underlying story to attract positive investor flows.

Mr. Alexei Mojarov, of the Special Unit on Commodities within UNCTAD, gave a presentation on "Financialization - One of "New Twists" to Commodities Problematique". He presented the hypothesis that financialization means that commodities markets are increasingly beholden to the expectations of financial actors and less so to those of commercial actors. While financial investors have been long active in commodity markets, their investment in commodities for purposes of portfolio diversification gained in volume following the bursting of the equity market bubble in 2000.

Mr. George Cheveley, Portfolio Manager at Investec Asset Management, gave a presentation entitled "Commodity and Resources Update", in which he shared information on the trends in investing in commodities and the relative size of commodity markets compared with other investment options. He noted that institutions have transitioned into becoming more sophisticated active commodities investors over the past 15 years. However, base metals remain a relatively small part of the overall investment universe.

Dr. Masuma Farooki of the Raw Materials Group (RMG) gave two presentations. The first on "Resource Wealth and Fiscal Tools; The Rights and Responsibilities of the State", was a report on the Study Groups' joint project to examine taxation and fiscal incentives applied to the mining and metals industry. The study focuses on 38 countries and examines fiscal incentives and taxes in both the mining and refining sectors. A copy of the draft report had been provided to members. In her second presentation, "An Industry at Risk? Project Finance in the Mining Sector", Dr. Farooki provided an overview of recent changes in financing in the mining sector, presenting data on mining projects in the

investment pipeline as of 2012. A breakdown was presented on greenfield and brownfield projects in various stages of development. A breakdown was provided showing that between 2011 and 2012 the share of mining investment going into copper, nickel, lead and zinc projects had declined, while investments in iron ore increased and gold was steady.

Following the presentations, the Chairman invited all speakers to take part in a panel discussion. A series of questions were made on the topic of LME warehousing and the slow rate of withdrawing stocks from the warehouse. Questions were also raised about the relationship between investment in infrastructure and mining, and on the actual process of revenues from mining being invested back into the economy and whether this can benefit the wider population while supporting the mining sector.

In summing up the Chairman underlined the importance of holding events such as the current seminar and encouraged the Study Groups to continue to work on this topic.

For further details of work underway in the Study Groups please email paul_white@ilzsg.org (for lead and zinc), curtis_stewart@ilzsg.org (for nickel) and rebelo@icsg.org (for copper). The presentations given at the Seminar may be viewed by visiting: <http://www.ilzsg.org/static/home.aspx> and clicking on the 'Presentations' tab.



Nickel-containing Coin (U.S.)

INSG MEETING 22-23 APRIL 2013

Delegates from INSG member countries, industry and observing countries/organisations met in Lisbon 22-23 April to review statistical, economic and environmental issues related to nickel.

Delegates reviewed the INSG primary nickel market statistics in detail, and discussed the market forecast, which was prepared by the secretariat based on information provided by governments and industry. Details of the forecasts are provided on page 2.

The INSG Environmental and Economics Committee received presentations on topics related to

environmental regulation and international policy initiatives that may affect nickel. Dr. Kevin Bradley of the Nickel Institute spoke on the 'Regulatory and Public Policy Challenges Facing Nickel', noting that nickel mining, production and use take place in an increasingly complex and interlinked regulatory environment. Mr. Stephen Briggs of BNP Paribas made a presentation entitled "Outlook for the Nickel Market - Structural Surplus but Downside Limited", in which he argued that base metals have become an almost mainstream asset class. He concluded that a large structural surplus of nickel is not in doubt, but the physical balance may be rather closer. Mr. David Weight, General Manager of the Cobalt Development Institute, spoke on 'Cobalt - the Technology Enabler - CDI Review and Future Challenges'. He described the role of the Cobalt Development Institute (CDI) in promoting the sustainable and responsible use of cobalt in all its forms. Mr. Curtis Stewart, Head of Economics and Environment, reported on progress on the study on nickel produced from laterite ore in Southeast Asia contracted to SMM of Shanghai.

The Statistics Committee reviewed the latest statistical data, and also received valuable input to its work through a series of presentations and discussions. A paper by Mr. Heinz H. Pariser of Alloy Metals & Steel Market Research, Germany on "Challenges for the Nickel Industry" was presented by Mr. Sven Tollin and Mr. Benno Kraz. A presentation prepared by Mr. Peter Kaumanns of ISSF, Belgium on the "Latest Developments In World Stainless Steel and Its Markets in 2013" was delivered by the Chief Statistician. Mr. Keith Dunleavy, Managing Director, Stratton Metals Resources Ltd, UK made a presentation: "What the Traders' Role Is in Today's Nickel Market". Mr. Mark Selby, Senior Vice President, Business Development, Royal Nickel Corporation, Canada made a presentation on "Future Supply Challenges in Nickel".

The INSG Industry Advisory Panel comprised of representatives from the world's nickel producing, using and recycling industries, once again provided valuable input on the Study Group's work program priorities. The Panel heard from Mr. Dmitry Kuznetsov, Chief Analyst, JSC Normetimpex, a Norilsk Nickel Group company, Moscow, who made a presentation on "Nickel Market Outlook 2013". Mr. Benno Kraz, Managing Director of ELG Haniel Trading, Germany, spoke on the latest world trends in the supply and demand for stainless steel scrap from the point of view of a large processor. Mr. Mikael Sthaalros, Managing Director and CEO of Damstahl, Denmark, made a presentation on "Distribution of Stainless Steel".

Copies of the presentations are available on the INSG website www.insg.org

ILZSG SPRING MEETING, LISBON 2012

The International Lead and Zinc Study Group held its Spring meeting in Lisbon on 24 April 2013. The Head of Statistics and Forecasting presented a review of the current outlook for World supply and demand (See details on page 1). Meetings of the Standing Committee, Economic and Environment Committee and the ILZSG Industry Advisory Panel were held.

The Industry Advisory Panel meeting on 24 April provided an opportunity for an exchange of information between members and industry on the latest developments in the lead and zinc market. A presentation was made on "The Impact of the Latest Regulatory Developments on the US Lead-Acid Battery Sector" by Mr. David Weinberg, Attorney at Law, Wiley Rein and Fielding, United States/Battery Council International. This was followed by a presentation on "Japan's Policy on Mineral Resources and JOGMEC's Activities" by Mr. Kentaro Morita of Japan Oil Gas and Metals National Corporation (JOGMEC). Copies of the presentations are available on the ILZSG website.

The Study Group's Economic and Environment Committee met on 24 April. Mr. Frank van Assche, Director of European Affairs, International Zinc Association (IZA), spoke on recent changes to environmental regulations affecting zinc. This was followed by a presentation by Prof. Maria Ondina Figueiredo of the Portuguese Direção Geral de Energia e Geologia (DGEG) who spoke on "Recent Research Related to the Iberian Portuguese Pyrite Belt on Certain Ores And Mining Wastes to Assess the Potential for By-Products". Copies of the presentations are available on the ILZSG website www.ilzsg.org.



Lead Coins from Elizabethan England

ICSG CONVENES 41st REGULAR MEETING

Over 60 representatives from ICSG member governments and companies, observer governments and organizations attended the International Copper Study Group's 41st Regular Meeting at ICSG Headquarters in Lisbon on 25-26 April 2013. Meetings were held of the Environmental and Economic Committee (EEC), Statistical Committee, Industry Advisory Panel, Finance Committee and Standing Committee, followed by a Plenary Session.

At the EEC meeting Mr. Carlos Risopatron, ICSG Head of Environment and Economics, presented the main findings of the recently-completed 'Surveys of Chinese Wire Rod Mills and Scrap Use in Secondary Smelters'. Ms. Susanna Keung ICSG Statistical Analyst/Economist provided a summary of the 2013 edition of the ICSG Global Recyclables Survey. She said that based on preliminary data total copper scrap usage is likely to have fallen in 2012 due to significantly lower direct melt volumes. Mr. Michael Jansen from Red Kite Capital Management presented an overview of drivers affecting demand for refined copper and scrap, and concluded that the market is moving towards a surplus. A presentation from Dr. Luis Tercero from the Fraunhofer Institute presented a report on a dynamic copper flow model that uses ICSG and industry statistics as inputs, and concluded that Europe has a higher copper recycling rate than other parts of the world. Dr. Thomas Weitzendorf from Customer Experts Consulting made a presentation on the main findings of the Survey of Copper and Copper Alloys Scrap Supply in the EU being undertaken for ICSG. He estimated that copper content in scrap traded in Europe was around 30% based on available data. Mr. Ross Bartley from the Bureau of International Recycling (and EUROMETREC) presented the outcomes of their research on the global copper scrap recycling industry and highlighted the problems of copper theft.

At the Statistical Committee meeting the topics of Chinese apparent usage calculation and the outlook of world refined copper usage were addressed. A presentation by Mr. Robert Edwards from CRU described the trends of unreported stocks of copper in China and highlighted the effect of inclusion of these stocks on the global balance between production and consumption. Mr. Ian Littlewood from Wood Mackenzie presented an outlook for world copper usage in 2013 and 2014, and highlighted that the predicted growth rates are heavily dependent on Chinese demand recovery. Ms. Ana Rebelo, ICSG Chief Statistician, gave a presentation of the results of the preliminary forecast of global copper mine production and the balance of refined copper production and consumption, as well as the corresponding assumptions. She also gave a presentation on the development of copper mines, smelters and refineries projects. Ms. Susanna Keung, ICSG Statistical Analyst/Economist,

presented a summary of the Country Profile report for the Philippines' copper industry, from mining through to usage.

Presentations may be viewed at ICSG's web site www.icsg.org

ICSG ATTENDS IWCC MEETING

In May, the Secretary-General, Mr. Don Smale and ICSG Chief Statistician, Ms. Ana Rebelo represented the Study Group at the 60th International Wrought Copper Council (IWCC) Annual Meeting in Tokyo, Japan, involving both upstream copper producers and downstream users. The Secretary-General also attended and made a presentation at the major Japanese government J-Summit event, and met with Japanese government and industry representatives.

ICSG PRESENTS AT ISRI RECYCLING CONFERENCE IN THE UNITED STATES

In April 2013 the Institute of Scrap Recycling Industries (ISRI) celebrated 25 years with a convention in Florida, USA attracting recyclers and traders from all over the world. The ICSG Head of Economics and Environment, Mr. Carlos Risopatron, was invited to deliver a presentation entitled "Copper and Copper Alloy Scrap Use and Trade in China and the Rest of the World".

ILZSG PRESENTS AT METAL BULLETIN'S 5TH WORLD LEAD CONFERENCE

A paper entitled "Global Lead Mine Supply – Trends, Prospects and the Influence of Zinc and Silver" was presented by Paul White, ILZSG's Head of Forecasting and Statistics at Metal Bulletin's 5th World Lead Conference which was held in Istanbul, Turkey from the 18th to 20th March 2013. Topics covered in the presentation included current estimates of world lead resources and reserves, exploration investment and recent trends in lead mine supply, industry structure and an assessment of mine projects that might be brought on stream in the near future and longer term. Copies of this paper are available from the secretariat at paul.white@ilzsg.org.

ICSG SURVEYS OF THE CHINESE COPPER INDUSTRY AND THE EU-27 RECYCLING INDUSTRY COMPLETED

The ICSG 2012-2013 survey of Chinese Copper wire rod and secondary smelters was recently completed and the resulting report is available. This ICSG project covered refined copper and scrap use in Chinese copper wire rod plants, and the use of scrap in Chinese secondary copper smelters and refineries. The 2012-2013 survey of European Union copper scrap and copper alloy scrap recyclers and traders was also completed and a report is now available. Both reports can be purchased at the following email: mail@icsg.org.

SECRETARY-GENERAL VISITS NEW ILZSG MEMBER MEXICO

In February the Secretary-General visited Mexico to meet with government and industry representatives and attend the annual International Zinc Association Americas conference. Mexico rejoined ILZSG earlier this year and is a long-standing member of ICSG.

MINING JOURNAL PUBLISHES INSG ARTICLE

INSG staff once again collaborated in writing an article for publication in Mining Journal. The article examines the world nickel market in 2012 and the outlook for 2013. The article will be published in the June 2013 edition of Mining Journal. The secretariat will distribute copies to all INSG member country delegations.

LONGER TERM REQUIREMENTS FOR GLOBAL ZINC MINE SUPPLY

A paper examining trends in global zinc mine supply was presented at Metal Bulletin's 17th Zinc and Its Markets Seminar held in Amsterdam, Holland from 6th to 8th May 2013 by the Group's Head of Forecasting and Statistics, Paul White. The analysis incorporated an assessment of past and probable future trends in zinc mine output as well as a detailed overview of a number of committed and longer-term projects. For copies of this presentation please contact paul.white@ilzsg.org.

STUDY GROUPS PARTICIPATE IN EU EUROPEAN PARTNERSHIP ON RAW MATERIALS AND WORKING GROUP ON CRITICAL RAW MATERIALS

On 19 April the Secretary-General participated in the meetings of the EU European Partnership on Raw Materials, and on 17 May the ILZSG Head of Forecasting and Statistics attended a meeting of the Ad Hoc Working Group on Critical Raw Materials. Both meetings were held in Brussels.

ILZSG ATTENDS 2013 EUROBAT FORUM

In June, the ILZSG Statistical Analyst, Mr. Joao Jorge represented the Study Group at the EUROBAT Forum in Rome, Italy. Subjects covered included advances in battery technologies, environmental regulations and new battery markets and applications.

INSG PRESENTS AT 5TH NICKEL GLOBAL 2013

Mr. Sven Tollin, INSG Chief Statistician, presented a paper, 'Outlook for Global Nickel Market in 2013' at the CBI China - 5th Nickel Global 2013 conference in Singapore in March 2013. Copies of the presentation are available from INSG.

STUDY GROUPS' PARTICIPATION IN CONFERENCE ON BY-PRODUCTS

The Head of Economics and Environment for ILZSG and INSG, Curtis Stewart, made a presentation on the Study Groups' 'Study of By-Products of Copper, Lead, Zinc and Nickel' at the Third International Conference on By-Product Metals in the Non-Ferrous Metals Industry held in Wroclaw, Poland, on May 15-17. Copies of the presentation are available from the secretariat.



Danish Zinc Coin (1957)

Forthcoming Events

MEETINGS, CONFERENCES and SEMINARS

- **The Second Copper Recycling Conference**, organized by Metal Bulletin will be held on 17-19 June in Dusseldorf, Germany with ICSG represented by Mr. Carlos Risopatron, Head of Economics and Environment. More information can be found at the website: www.metalbulletin.com/event/rcop13
- **The 18th International Lead Conference** will be held in Prague, Czech Republic on 19-23 June 2013. More information can be found at the International Lead Association website <http://www.ila-lead.org/conferences>. Curtis Stewart, Head of Economics and Environment, will represent ILZSG.
- The Second **Asia Copper Week** including the CESCO Asia Copper Dinner 2013 will be held in Shanghai on 20-21 November, and will include a CEO Summit and a CNIA/ANTAIKE Copper Fabrication Forum. ICSG will be represented by the Secretary-General. <http://www.asiacopperweek.com/>

Forthcoming Events

- In December Chile will host the prestigious Copper 2013 International Conference, the key world-level technical conference on copper. The Copper Conference returns to its country of origin after the last conference was held in Hamburg in 2010. The venue for the eighth version of this Conference will be the Casa Piedra Conference Centre in Santiago de Chile, on 1 to 4 December 2013. More information can be found at the website: <http://www.cobre2013.cl/en/>



Euro Coins contain nickel, copper and zinc



UPDATE ON JOINT PROJECTS CONDUCTED BY THE STUDY GROUPS

The co-location of the three Study Groups in Lisbon has enhanced the ability to conduct joint projects. Highlighted here are some of the recent joint projects which have been completed or are currently underway.

NON FERROUS METALS BY-PRODUCTS: JOINT STUDY GROUPS' RESEARCH PROJECT

A project by the three Study Groups to generate information on the by-product metals of copper, lead, zinc and nickel was approved by member countries at their September 2012 meetings. A contractor was selected to gather information on production, usage, trade and other data, on by-product metals. By-products metals included in the study include bismuth, indium, germanium, scandium, cobalt, rhenium, tellurium, selenium, rare earths and molybdenum. The project resulted in the completion of a 221 page Study of By-Products of Copper, Lead, Zinc and Nickel as well as a Directory of Producers. These publications have been distributed to member countries. A follow up Joint Seminar will be held in Lisbon on 2 October during the next round of Study Group meetings.

JOINT STUDY ON TAXATION AND FISCAL INCENTIVES

This joint project was approved by each of the Study Groups in October 2012 and a contract was awarded to RMG of Sweden to conduct the study. A preliminary report on the project was presented at the April 2013 Joint Seminar in Lisbon by Dr. Masuma Farooki. A copy of this presentation is available on the ILZSG website. The final report of the project is expected to be available to members before the October 2013 meetings.

JOINT STUDY ON RISK FACTORS

The Study Groups are jointly launching a project to examine the main risk factors likely to inhibit companies' ability to meet production targets or to develop planned mining and metals projects. A preliminary report on the study is scheduled for the October 2013 meetings.

Study Groups Publications Resulting from Joint Projects

- *Study Groups' Survey of Semifabricators in China*
- *By-Products of Copper, Zinc, Lead and Nickel*

(More details on publications can be found in pages 8-11)



PUBLICATIONS

*****AVAILABLE NOW*****

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[Serbia](#),
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[United States](#), [Zambia](#)

NEW

Survey of Copper Wire Rod Plants and Secondary Copper Smelters and Refineries in China 2013 This first large scale ICSG survey of copper wire rod plants covers up to 91% of Chinese wire rod output in 2012, equivalent to 5.28 Mt. It includes information on the current situation for 220 plants with 128 plants reporting output, scrap use and production plans up to 2015. The survey of copper smelters using scrap covered over 89% of China secondary smelter output. All 28 scrap smelters with 3.1 Mt/year capacity and 24 copper refineries with over 2.8 Mt/year of capacity are included. A review of all copper wire rod plants, secondary smelters and refineries under construction in 2012 and expansion plans up to 2015 is included. The report provides information on inputs and outputs, technologies, source of scrap, capacity utilization, regulations and forecasts for copper wire rod and secondary smelters and refineries until 2015. *Published May 2013.*

NEW

Lead and Zinc New Mine and Smelter Projects 2013

This 70 page report covers lead and zinc mines and smelters opened or closed during 2012, firm projects currently committed and other projects under consideration. Developments in 48 countries spread throughout all the continents are covered with a total of over 200 separate entries. In addition, where available, estimates of ore reserves and the percentages of the metals they contain are also given. *Published January 2013*

NEW

ICSG Directory of Copper Mines and Plants

The Directory highlights current capacity and provides a five year outlook of forecast capacity for over 1,000 existing and planned copper mines, smelters and refineries on a country by country basis, including separate tables for SX-EW plants. Salient details for each operation are included and the Directory separates operations between Operating & Developing and Exploration & Feasibility stages. *Published February 2013.*

INSG World Directory of Nickel Production Facilities 2012

Comprehensive directory lists nickel mines, smelters and refineries as well as new nickel industry developments (committed, likely and potential) together with recent closures in more than twenty countries. *Published September 2012.*

NEW

Copper and Copper Alloys Scrap Supply Survey in the European Union (EU-27) 2013 The survey covers most of the copper scrap and copper alloys scrap supply chain in Europe, small and large traders, direct collectors and recyclers of scrap in the EU-27. The consultants contacted 227 companies with a 25% response rate and 58 industry players comprising interviews with copper scrap and alloy scrap traders, recyclers, direct collectors and industry experts. The study summarizes the findings from both secondary and primary statistics. One section provides a look into a top down approach to estimate material availability, copper content in trade and the economic logic of copper scrap dismantling. *Published May 2013.*

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INSG China Nickel Pig Iron Market Study

This study, carried out by Shanghai Metals Market for INSG, provides an overview of the rapidly changing nickel pig iron market in China. NPI has become the major nickel source in China and accounts for a growing share of global production. The report looks at evolving trends in production and ore supply as well as furnishing information on major NPI producers and stainless steel producers. *Published in May 2012.*

By-Products of Copper, Zinc, Lead and Nickel

This joint report of the three Study Groups on the production, usage, trade and outlook for by-products metals contains information on common sources of by-product metals, refinery processes, recycling, markets, contracts, historic process and pricing mechanisms, uses, government regulations, REACH status of compounds, government stockpiles and trade restrictions is provided. A Directory of mining and producing companies with capacities is also included. The 216 page Report and 86 page Directory are offered together. *Published September 2012.*

The World Copper Factbook 2012

A comprehensive overview of copper, with statistics, graphs, flowcharts and other information providing details on production, usage, recycling, definitions and history. *Published July 2012.*

Directory of Copper & Copper Alloy Fabricators (First Use) 2012

This directory provides a systematic global overview of companies and plants involved in the first use of copper. First users are mainly semis fabricators that process refinery shapes into semi-finished copper and copper alloy products. The Directory covers wire rod plants, ingot makers (for castings), master alloy plants, brass mills, and electrodeposited copper foil mills. Includes a complete update of the new plants operational in China in 2011. *Published July 2012.*

Study on Chinese Zinc First Use Market 2012

This study comprises a detailed examination of the recent evolution of the zinc first use market in China and discussion of likely future trends. The work was undertaken on behalf of ILZSG by the highly-regarded Beijing General Research Institute of Mining and Metallurgy (BGRIMM) and includes in depth analysis of all the major first use sectors. The majority of information contained in the report is based on extensive direct contact with industry experts, zinc users in the different sectors and the relevant Chinese associations. 87 pages. *Published June 2012.*

Investigation of the Indian Lead Market

This report was prepared for ILZSG by the Indian Lead Zinc Development Association (ILZDA), an organisation that has been closely involved with the Indian lead and zinc sectors for the past 50 years. It provides an up-to-date analysis of trends and developments in the rapidly expanding Indian lead market. A high proportion of the information provided in the report was obtained via direct contact with lead producers and recyclers, consumers, traders and relevant authorities. 92 pages. *Published February 2012.*

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Copper Scrap Supply Survey in China

This report describes the findings of a survey of key copper recyclers in China and includes copper scrap stocks and flows. The survey covers three groups of scrap importers and two groups of scrap dismantlers. Scrap importers include scrap traders, industries importing for internal use and scrap yard owners importing scrap. The sample of scrap dismantlers includes companies specialized in dismantling domestic scrap and companies dismantling imported scrap. More than one million tonnes of copper and copper alloy scrap traded in 2011 are included in the survey sample. *Published May 2012.*

Copper Scrap Recovery in NAFTA

This report analyses the organisation of the copper recycling industry in the United States, Canada and Mexico. A database with over 500 plants recycling scrap is included and used to describe industrial organization, technologies used to recover old scrap, and yard management practices and inventories. The report on recyclers in the NAFTA region includes findings from interviews on factors driving the inventory decisions and outlines concerns of recyclers including theft, trade and environmental restrictions. *Published May 2012.*

The Market for Lead: The Fundamentals Driving Change 2012

Comprehensive 61 page analysis of the world lead market. The report analyses the structure of mine and refined world lead production and identifies actual and future trends. It assesses lead usage patterns in the main market sectors and the impact of environmental regulations on the metal's usage. It also discusses international trade or concentrates and refined metal as well as the impact of the Basel Convention and other regulatory initiatives on the secondary lead industry. A special section is dedicated to the growing importance of China in the world lead market. *Published March 2012*

Joint Study Groups' Survey of Semifabricators in China This report was undertaken jointly by the three Study Groups and is based on a survey which measured scrap and refined use of copper, zinc, nickel, lead and tin by Chinese fabricators of copper and copper alloys, including brass. It validates and improves the ICSG Recyclables Survey for China and in cooperation with ILZSG and INSG provides data on nickel and zinc recycling and use in China. While focusing on refined and scrap copper use, the report provides useful information on quantities and trends in zinc and nickel usage for alloys in China. *Published April 2012.*

Nickel Heap Leaching Study – 2010

A comprehensive analysis of heap leaching in nickel production prepared for INSG by consultants, this report provides up to date information on all aspects of heap leaching. It examines the various hydrometallurgical processes applied to nickel leaching. It also covers the economic and environmental impact of the use of heap leaching, including on CO2 emissions. 72 pages. *Published April 2010.*

Environment and Health Controls on Lead: 2011

A review of current and proposed regulations controlling lead in works, lead in the atmosphere and lead in water in 34 countries. Available in PDF or spreadsheet form. *Published June 2011.*

Environmental and Health Controls on Zinc: 2011

A review of current and proposed regulations controlling zinc in works, zinc in the atmosphere, zinc in water and recommended daily dietary allowance for humans and animals. Available in PDF or spreadsheet form. *Published June 2011.*

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World Directory 2011: Primary and Secondary Lead Plants

An overview and full detailed listing of over 270 primary and secondary lead smelters and refineries in 66 countries showing addresses, telephone and fax nos., e-mail, web addresses, types of plant operated and current capacities. Also includes, summary tables and graphs. 105 pages. *Published May 2011.*

INSG Environment, Health and Safety (EHS) Regulations Relating to Nickel 2011

An update of the compilation of environmental, health and safety regulations affecting nickel. The listing of regulations is provided by country, state or province as well as separately for international organizations. The report is presented in a spreadsheet format and contains web links to regulations in various jurisdictions. 42 pages. *Published June 2011.*

Copper Scrap Market in Japan, China's Scrap Usage Survey and Domestic Copper Scrap Generation in China, 2010-2015

Adding to ICSG's expanding body of research on scrap, ICSG commissioned three reports about scrap that provide information on two critical copper markets: Japan and China. The Japanese Report, prepared by MERI/J, provides a comprehensive overview of the refined copper and copper scrap markets and also covers Japanese copper scrap trade, material flows, how scrap is categorized and relevant regulations. The Chinese Reports, prepared by BGRIMM, provides insight into scrap usage in China at the smelters/refineries and fabricators and forecasts domestic scrap generation in China. *Published October 2009.*

Chinese Primary Nickel Stocks Study - 2010

A comprehensive study of Chinese primary nickel stocks providing data and information on nickel stocks held by first users such as stainless steel, specialty steel, battery materials producers, galvanizers and foundries, refined nickel producers, nickel pig iron producers, traders, exchanges and others. It identifies key factors impacting on market stock levels, such as price expectation and financing costs. The report also estimates stock changes taking place between 2009 and 2010. 40 pages. *Published December 2010.*

To place an order or for further information about the above and other publications published by the International Metals Study Groups please contact: sales@ilzsg.org for ILZSG reports, mail@icsg.org for ICSG reports, and insg@insg.org for INSG reports.

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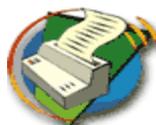
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MORE PUBLICATIONS

*****COMING SOON*****

ILZSG Interactive Mine and Smelter Database

ILZSG is now proceeding with the design and development of an interactive interface to allow users to access the majority of the data held in the mine and smelter databases via the Group's website. This interface will enable members and subscribers to run queries to match individual needs. Information to be made available includes company contact and website details, mine and smelter locations, capacity, technology employed, start-up dates, details of new project and recent mine and smelter closures and openings.

ICSG Directory of Copper & Copper Alloy Fabricators (First Use) 2013

This directory provides a systematic global overview of companies and plants involved in the first use of copper. First users are mainly semis fabricators that process refinery shapes into semi-finished copper and copper alloy products. The Directory covers wire rod plants, ingot makers (for castings), master alloy plants, brass mills, and electrodeposited copper foil mills. The 2013 edition will include a complete update of Chinese, Russian, India and Brazilian copper wire rod plants and projects. To be published in July 2013.

INSG World Directory of Nickel Production Facilities 2013

Comprehensive directory lists nickel mines, smelters and refineries as well as new nickel industry developments (committed, likely and potential) together with recent closures in more than twenty countries. To be published September 2013.

ICSG Directory of Copper Mines and Plants

The Directory of Copper Mines and Plants highlights current capacity and provides a five year outlook of forecast capacity for over 1,000 existing and planned copper mines, plants and refineries on a country by country basis, including separate tables for SX-EW plants. Salient details for each operation are included and the Directory separates operations between Operating & Developing and Exploration & Feasibility stages. To be published in December 2013.

Report on World Zinc Oxide and Zinc Dust Production and Usage

The report will analyze the zinc oxide and zinc powder and dust sector. It is intended to list the location of major zinc oxide producing plants and zinc dust and powder producing facilities together with estimates of capacities. To be published 2013

World Directory of Lead and Zinc Mines 2013

A global directory of mines located with information on ownership, type of mine and start-up date. Information on daily mill capacity and annual production capacities for lead and zinc will be included as well as information on other metals produced by lead and zinc mines, often with typical annual production. To be published 2013.

World Directory of Primary and Secondary Zinc Plants 2013

An overview and detailed listing of primary and secondary zinc plants showing processes used, current capacities and contact information. Plants recovering zinc from steel plant flue dusts are covered. A Google Earth digital mapping product allows the exact location of most of the plants listed to be determined. To be published 2013.