



Metals Despatch

Newsletter of the International Metals Study Groups

December 2013, Issue No. 16

LEAD AND ZINC FORECASTS

The outlook for World supply and demand for lead and zinc was presented during the ILZSG 58th Session held in Lisbon on 2-4 October 2013. Highlights include:

- **The global usage of refined lead metal** is forecast to rise by 5% in 2013 to 11.00 million tonnes and by a further 4.6% to 11.51 million tonnes in 2014. In China, expected increases of 7.4% in both years will be driven primarily by further rises in automotive and e-bike production as well as the ongoing expansion of the mobile phone system, including the development of the world's largest 4G network.
- Forecast rises in global **lead mine supply** of 5.7% to 5.55 million tonnes in 2013 and of 4.2% to 5.78 million tonnes in 2014 are due mainly to anticipated higher output in Australia, where production has benefited from the reopening of Ivernias's Paroo Station (formerly Magellan) mine in March, as well as increases in China.
- World **production of refined lead metal** is expected to increase by 4.7% to 11.02 million tonnes and 4.2% to 11.48 million tonnes in 2013 and 2014 respectively.
- The **forecast** for the global supply of refined lead metal is a small 22,000 tonnes surplus in 2013. In 2014, the market is expected to be in deficit for the first time since 2009 with the extent of the shortage estimated at 23,000 tonnes.
- After declining in 2012, global **demand for refined zinc metal** is expected to grow this year and in 2014 with rises of 4.8% to 12.89 million tonnes and 5% to 13.54 million tonnes respectively. Chinese zinc demand is anticipated to rise by 7.7% this year and net imports of refined zinc metal into China will remain at just over half a million tonnes.
- World zinc **mine production** will rise by 1.7% to 13.73 million tonnes this year and a further 2% to 14.01 million tonnes in 2014. In India, output will be mainly driven by a rise in production at the Rampura Agucha mine. In Africa, production will be boosted by the new Perkoa mine in Burkina Faso. Further increases in Chinese output are also anticipated in both 2013 and 2014.
- **Global refined zinc metal output** is forecast to grow by 3.4% to 13.01 million tonnes in 2013 and by 4.9% to 13.65 million tonnes in 2014. This will be mainly influenced by higher output in China, as well as increases in India, Italy, Peru and Korea.
- The latest **forecasts** supplied by the Group's member countries indicate that global supply of refined zinc metal will exceed demand by 120,000 tonnes in 2013 and by 115,000 tonnes in 2014. These are lower than the surpluses in the past four years.

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' MEETINGS

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

ICSG: 31 March- 1 April 2014, Lisbon, Portugal

ILZSG: 2 April 2014, Lisbon, Portugal

INSG: 3-4 April 2014, Lisbon, Portugal

Joint Seminar 2:00 pm on 2 April 2014: "The Mining and Metals Industry in Europe", in Lisbon.

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COPPER FORECAST

During the 42nd Regular Meeting of the International Copper Study Group Statistical Committee in Lisbon on 1 October 2013, ICSG member countries reviewed the current outlook for trends in World supply and demand for copper during 2013 and 2014 and issued the following forecast:

- ICSG expects **world apparent refined usage** in 2013 to remain unchanged from that in 2012 at 20.5Mt (million tonnes). World usage without China is expected to increase by 1% in 2013. Although industrial demand for copper in China is expected to increase by about 6% in 2013, apparent usage in China is expected to decrease due to lower refined copper imports. In 2014, global copper demand is expected to increase by around 4.5% amidst better prospects for the world economy. Usage in world-ex-China is expected to increase by 2.5% in 2014.
- In 2013, **world refined copper production** is expected to increase by 3.9% to 20.9Mt compared to 20.1Mt in 2012 as constrained production from maintenance and temporary shutdowns in some regions is overshadowed by expanded output in other regions. In 2014, refined production is expected to grow by around 5.5% to 22.1 Mt, mainly due to restoration of production at existing plants and expanded capacity at electrolytic plants in China, and to a lesser extent SX-EW plants in Africa. Primary refined copper production is expected to grow by about 7% and secondary production by 2%.
- **Global copper mine production** in 2013 is expected to increase by 6.5% from that in 2012. Strong growth is expected to continue in 2014 and 2015 as mine projects that were deferred or delayed during the financial crisis are expected to start coming on stream. Expansions and project ramp-ups during 2013 and 2014 are expected to increase world output to around 18.6 Mt in 2014 from 16.7 Mt in 2013. Most of the new production is expected to be copper in concentrate, with only limited electrowinning expansion anticipated.
- ICSG anticipates that the **refined copper market balance** will show a surplus close to 387 Kt in 2013 and 632 Kt in 2014.
- For further details of the outcomes of the ICSG market outlook please e-mail ICSG Chief Statistician Ana Rebelo at rebelo@icsg.org



Pentlandite - an important ore of nickel

NICKEL FORECAST

The International Nickel Study Group (INSG) met from 30 September to 2 October 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** (consumption) was 1.58 Mt in 2011, increased to 1.66 Mt in 2012, and could approach 1.77 Mt in 2013. For 2014 INSG estimates an increase to around 1.85 Mt.
- World **primary refined nickel production** was 1.61 Mt in 2011, increased to 1.76 Mt in 2012 and could reach 1.91 Mt in 2013. INSG projects an increase to 1.97 Mt in 2014.
- Stock builds are expected for 2013 and 2014 as a number of new nickel projects will start up, existing projects will increase production, including nickel pig iron production in China, and usage outside of China and India is not strong.
- INSG recognizes the significant impact of the current financial and economic 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 any questions on the market outlook please email Sven Tollin at sven.tollin@insg.org

JOINT SEMINAR ON BY-PRODUCT METALS

A Joint Study Groups' Seminar on the topic of "By-Products of Copper, Nickel, Lead and Zinc, including their Roles as Critical Materials" was held on 2 October 2013 in Lisbon with the involvement of the three Study Groups. Ms. Adeline Morliere of France served as chairman for the event. The first presentation was by Professor Rod Eggert of the Colorado School of Mines and Deputy Director of the U.S. Critical Materials Institute, who gave a presentation on 'U.S. Government and Industry Approach to By-Product Metals, including Critical Materials'. This was followed by Mr. Mattia Pellegrini, Head of Unit, Raw Materials/Metals/Minerals at DG Enterprise and Industry in the European Commission, who delivered a presentation 'Update of the EU Critical Materials List and Links to Non-ferrous Metal By-Products'. Mr. Wang Zhongkui, Deputy General Manager of Antaiko, then spoke on the topic of 'Production and Usage of By-Products of Copper, Nickel, Lead and Zinc in China', in which he described production of sulphuric acid, selenium and tellurium as by-products of copper, as well as indium and germanium as by-products of lead and zinc. This was followed by a joint presentation on 'A Comparative Analysis of the Raw Material Strategies of the G-20' made by Dr. Stormy-Annika Mildner, Board Member of the German Institute for International and Security Affairs and Ms. Peggy Schultz, BGR.

Mr. David Maxwell of the Australian Department of Resources, Energy and Tourism delivered a presentation on 'By-products and Co-products of Copper, Nickel, Lead and Zinc – Transparency of Critical Metals Markets and Australia's Potential to Supply Global Demand'. He provided information on Australia's potential to supply global demand for several critical metals. Dr. Katarzyna Leszczyńska-Sejda of the Polish Institute of Non-Ferrous Metals then spoke on 'Production of Rhenium in Poland as a By-product of Copper Production, and its Use Including in Critical Applications'. This was followed by Dr Patrice Christmann, Manager at BRGM, the French Geological Survey, and Member of the UNEP International Resource Panel (IRP), who gave a presentation on 'Overview of the International Resource Panel's Activities relating to Non-ferrous Metals and their By-products'. The work of the IRP covers such topics as metal stocks in society, recycling rates, recycling options and infrastructure, and the environmental impact of metals. The concluding speaker was Mr. Jack Bedder, Senior Analyst, Roskill Information Services, who made a presentation on 'Cobalt as a By-product of Nickel and Copper Production'. This presentation was a status report on progress in a joint study by ICSG and INSG on this topic.

The Seminar concluded with a panel discussion with participation by the speakers. There were several

comments and suggestions from the panel members. Dr. Christmann noted that while there are international organizations specializing in food (FAO) and energy (IEA and IAEA), there is no corresponding body for the metals and minerals sector. He underlined the need for cooperation among governments and organizations and suggested the Study Groups could play a wider role in this area. Dr. Mildner asked if the Study Groups could more widely share their data at no cost, suggesting that the excellent work undertaken was not seen everywhere.

The delegate from the European Union furthered the discussion on what role the Study Groups might play in the area of critical materials. He noted that, while the Study Groups are playing a valuable role and promote dialogue in their field, overall there is a lack of data and a gap of information on materials. The EC delegate reiterated support for the work that the Study Groups have done on critical materials. This had begun with the by-products study in 2012 and was being continued with the current cobalt study. He suggested that the Study Groups consider making the work on by-products more widely available on a no-cost basis.

For further details about the Seminar, please email paul.white@ilzsg.org (for lead and zinc), curtis.stewart@ilzsg.org (nickel) or rebelo@icsg.org (copper). The presentations given at the Seminar may be viewed by visiting each Study Group's website.

INSG MEETING OCTOBER 2013

Delegates from INSG member countries, industry and observing countries/organisations met in Lisbon from 30 September to 2 October 2013 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 Economic Committee received presentations on a range of topics that impact nickel. Dr. Mark Mistry, Technical Director - EU Public Affairs, Nickel Institute, spoke on recent Nickel Institute work, including on the nickel life cycle. Mr. Mattia Pellegrini, Head of Unit, DG Enterprise and Industry, European Commission, spoke on the "European Innovation Partnership on Raw Materials". Mr Peter Willis, Senior Economist, Oakdene Hollins, spoke on the "Study of Risk Factors in Developing Mineral and Metals Projects". Finally, Mr. Curtis Stewart, INSG Head of Economics and Environment, provided delegates with a status report on the Environmental and Economics Work Program.

The Statistics Committee reviewed and discussed the latest statistical data. The Committee also received valuable input to its work through presentations and discussions. Mr. Markus Moll, Managing Director, Steel and Metals Market Research (SMR), Austria, made a presentation on "Megatrends and their impact on the stainless steel and nickel industries". Mr. Peter Kaumanns, ISSF, Belgium, made a presentation on latest developments in the world of stainless steel and its markets. Mr. Ryan Dong, Shanghai Metals Market (SMM), made a presentation on "Nickel Pig Iron Evolution and its Influence on Nickel Price".

The INSG Industry Advisory Panel, comprised of representatives from the world's nickel producing, using and recycling industries, provided valuable input on the Study Group's work program priorities. Mr. Nikhil Shah, Senior Analyst, CRU, London, made a presentation on the subject "Nickel Supply and Demand in 2013 and 2014". Mr. Benno Kratz, Managing Director, 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. Copies of the presentations are available on the INSG website www.insg.org



Willemite - a somewhat rare zinc mineral. Nearly all willemite specimens fluoresce a bright green under ultra-violet light.

ILZSG 58TH SESSION, LISBON 2013

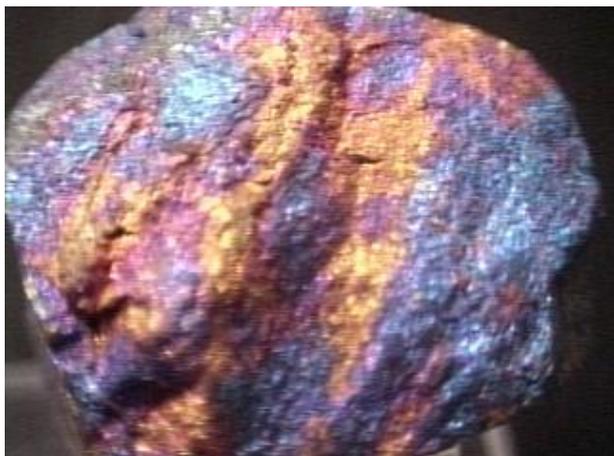
The International Lead and Zinc Study Group held its 58th Session in Lisbon from 3 to 4 October 2013. Delegates were presented with a review of the current levels of world supply and demand and the outlook for 2014 at the meeting of the ILZSG Statistical and Forecasting Committee (See details on page 1). Meetings of the Standing Committee, Economic and Environment Committee, Mines and Smelter Project Committee and the ILZSG Industry Advisory Panel were held.

The Industry Advisory Panel met on 3 October and

provided an opportunity for members to comment on the latest developments in the lead and zinc market. Three presentations were made during the meeting. Mr. Johann-Friedrich Dempwolff, Vice President, Power Solutions of Johnson Controls spoke on "Future Challenges for the Automotive Battery Market". Mr. Jeremy Woolridge, Vice President of the European General Galvanizer's Association, then presented a highly informative paper on trends, developments and the potential for growth in the use of zinc in the general galvanizing sector in Europe. Finally, Mr Ryan Dong, Director of SMM Information and Technology Company spoke on "Trends in Chinese Lead and Zinc Demand and an Overview of SMM's Pricing Methodology for Base Metals". Copies of these presentations are available on the ILZSG website.

The Mine and Smelter Projects Committee was convened on 3 October. Delegates received a presentation from Mr. Graham Deller, Head of Lead and Zinc Research at CRU, UK on "The Impact of Escalating Production Costs in the Lead and Zinc Sector". This was followed by an interesting paper by Mr. Selim Erguder, Managing Director, GOK-ER, Turkey on "Lead and Zinc Mining in Turkey" which examined the reasons for the recent rapid increase in Turkish output as well as prospects for the future.

The Study Group's Economic and Environment Committee met on 4 October. Mr. Curtis Stewart, Head of Economics and Environment, presented the work program, reporting on activities undertaken in 2013 and those proposed for 2014. This was followed by a presentation from Mr. Peter Willis of the consulting firm Oakdene Hollins reported on progress in the Study of Risk Factors in Developing Mineral and Metals Projects. Dr Scott Foster, Director, Sustainable Energy Division, UN Economic Commission for Europe, spoke on the topic of the 'Resource Classification Work of the UN Economic Commission for Europe Expert Group on Resource Classification'. Dr. Stefan Schlag, Senior Manager, IHS Chemical, spoke on the 'Market Outlook for Zinc Oxide and Lithium Compounds in the Automotive Industry – Tyres and Batteries'. Mr. Sebastian Zaleski, Policy Officer in Charge of Trade, Raw Materials/Metals/Minerals in DG Enterprise and Industry, European Commission, gave a presentation on "EU Raw Materials Initiative and European Innovation Partnership", in which he provided an overview of the EU approach to raw materials policy. Dr. Alistair Davidson, Technical Director, International Lead Association, spoke on Resource Availability of Metals used in automotive battery technologies. Mr. David Hanrahan, Chief Technical Advisor, Blacksmith Institute, London, provided a presentation on 'Identifying And Remediating Contaminated Sites – Legacy And Challenges' which focused on clean-up of sites in developing countries where toxic pollution significantly impacts human health. Copies of the presentations are available on the ILZSG website.



Chalcopyrite (or copper pyrite) – a copper ore

ICSG MEETINGS 30 SEPTEMBER - 1 OCTOBER 2013

Representatives from ICSG member governments, industry associations, companies and observer governments attended the International Copper Study Group's 42nd Regular Meeting at ICSG Headquarters in Lisbon.

In the International Copper Study Group Environmental and Economic Committee Ms Gayle Berry, Director, Barclays Capital, London, United Kingdom gave a presentation on how capital expenditure cuts in copper mining projects might push the copper market towards a mid-decade deficit. She predicted that metals and mining industry spending on capital expenditures might fall by 56% in 2015 putting at risk future copper mine production of which the majority is expected to come from greenfield copper mining projects. She expressed the view that the current period of surplus will be short-lived and that demand will soon catch up with supply given the many challenges to increasing mine output. As one example, a range of new mine production is going to come from politically unstable locations.

Mr Carlos Risopatron, ICSG Head of Environment and Economics, summarised the trends in industrial use of refined copper and copper scrap in China and in the rest of the world. There was high growth in copper semis production in China, but falling growth in Chinese copper alloys output in recent years and volatile industrial use across the OECD region. Global trade data indicated that scrap exports fell strongly in the first half of 2013 and China recently reported a fall in copper scrap imports. He then gave an overview of the 2013 edition of the Directory of Copper First Use. In this new edition of the Directory, new wire rod projects had been added in the US, Mexico, Brazil and Chile for the period 2013-2015 and more capacity is reported in India in 2012.

Mr Mattia Pellegrini, Head of Unit, Raw Materials/Metals/Minerals, DG Enterprise and Industry, European Commission, gave a presentation on the important EU initiative, the "European Innovation Partnership on Raw Materials". He explained that the objective of the European Innovation Partnership (EIP) on raw materials is to contribute to the 2020 objectives of the EU Industrial Policy to increase the share of industry of GDP to 20%. The initiative includes the launch of up to 10 pilot projects to promote technologies for the production of raw materials, to find substitutes for applications of critical and scarce raw materials, and to create better conditions for raw materials markets in Europe.

Mr Risopatron presented the outcomes of the 2013 ICSG Survey of Regulatory Developments Affecting Copper, covering various new regulations in copper mining, processing, international trade, and end use. He highlighted the impact on copper of policy reforms in China looking to expand domestic consumer demand, the role of important infrastructure projects and environmental controls on copper plants. Recent copper export-related regulations in a number of countries including the DRC and Indonesia were discussed.

Mr Peter Willis from the consulting firm Oakdene Hollins, reported on the Joint Study Groups' project "Study of Risk Factors in Developing Mineral and Metals Projects". The Secretary-General provided a report on progress in relation to the activities in the approved 2013/2014 Work Program for the ICSG Environmental and Economic Committee. Besides regular activities, the committee started working on several new activities including a survey of brass mills in China, a joint ICSG/INSG Study on Cobalt, and a copper market study for the Middle East/North Africa region to be contracted in coming months. The final report of the study on 'The Impact of Fiscal Instruments and Other Regulations on the Nonferrous Metals Industry' is expected to be completed before the next session. A request to examine the 'conflict minerals' issue was discussed.

At the Statistical Meeting, the topics of factors affecting the Chinese copper market and the outlook of world refined copper usage were addressed. Ms Ana Rebelo, ICSG Chief Statistician, presented the results of the preliminary forecast of global copper mine production and the balance of refined copper production and consumption and explained the main assumptions behind it. She summarised the development of global copper mine production in the first half of 2013, and covered the probable mine projects starting during 2013 to 2015 that will contribute to the strong growth in mine production expected for 2014 and 2015.

Mr Li Yusheng from the China Nonferrous Metals Industry Association (CNIA) gave a detailed presentation on the recent developments and the

2014 outlook for the Chinese copper market. He outlined the rapid growth in Chinese refined production. Refined copper output reached 3.8 million tons (Mt) in the first seven months of 2013, an increase of 12.4% y-o-y due to strong demand, expanded refinery capacity and adequate availability of concentrate. He pointed out that bonded warehouse imports declined by almost 40% in the first seven months of the year while exports declined by around 20%, compared to the same period a year ago.

The ICSG Industry Advisory Panel met on 10 October in London. Industry advisers from Australia, Chile, China, Germany, Italy, Japan, Poland and the United States were present along with the industry association and Study Group representatives. Topics discussed included the latest copper forecast, the ICSG work program, the latest studies on scrap, ICSG Directories, the 2013 Survey of Regulatory Developments Affecting Copper, Chinese copper usage and the main factors impacting on the development of copper mine and smelter projects.

ICSG 2013 DIRECTORY OF COPPER AND COPPER ALLOY SEMIFABRICATORS

ICSG launched the 2013 Edition of the Directory of Copper and Copper Alloy Fabricators – First Use in August 2013. The 2013 edition provides information on 2,211 plants in 88 countries processing refined copper and scrap to produce copper and copper alloy semi-fabricated products and also ingot based castings. The Directory is available for sale at mail@icsg.org

ICSG PRESENTS AT THE 2013 CHINA INTERNATIONAL COPPER CONFERENCE

Ms Susanna Keung, Statistical Analyst/Economist of ICSG, presented the “Outlook of Copper Mines and Plants Capacities” at the well-attended China International Copper Conference in Kunming, Yunnan in October 2013, which was organised by Antaika and co-hosted by China Non-ferrous Metals Industry Association (CNIA) and China Copper Corporation Co Ltd.

ICSG PRESENTS AT THE 9th ASIA COPPER CONFERENCE

Mr Don Smale, Secretary General, presented the “ICSG 2013/2014 Copper Supply and Demand Forecasts and Capacity Developments to 2016” at the Metal Bulletin 9th Asia Copper Conference, in Shanghai, in November 2013, which was part of the major CESCO 2nd Asia Copper Week.

ICSG PRESENTS AT COPPER / COBRE 2013 INTERNATIONAL CONFERENCE IN CHILE

Mr Carlos Risopatron, ICSG Head of Environment and Economics, delivered a presentation in the COPPER 2013 International Conference on 1-4 December 2013 in Santiago, Chile. More details in: <http://www.cobre2013.cl/en/>

ILZSG NEW INTERACTIVE MINES AND SMELTERS INTERFACE ON THE ILZSG WEBSITE

In early 2014 ILZSG will launch an Interactive Mines and Smelters Interface. The new interface will be located on the ILZSG website and will enable users to easily access information from the ILZSG mine and smelter databases. The system uses state-of-the-art technology to provide a user-friendly experience to users. Results of queries maybe exported to pdf format and to print. A fact sheet containing useful detailed information will be available for each mine/smelter including a map of its geographical location. Data will be available on all openings and closures of mines and smelters from 2000 to the present as well as all mine and smelter projects currently committed or under consideration. The secretariat would welcome any feedback on this service regarding possible future improvements. This should be addressed to paul_white@ilzsg.org or joao_jorge@ilzsg.org.

ILZSG SUPPORTS CNIA/ANTAIKE 16th CHINA INTERNATIONAL LEAD AND ZINC CONFERENCE

The 16th China International Lead and Zinc Conference hosted by the China National Nonferrous Metals Industry Association (CNIA) and organised by Beijing Antaika Information Development Company was held in Beijing from 30 October to 1 November. As usual, the event attracted a large audience of over 700 delegates from all sectors of the Chinese lead and zinc industry. ILZSG Head of Forecasting and Statistics, Paul White, made a presentation on the Global Lead and Zinc Market Outlook during the first session of the conference. Copies of this presentation can be obtained from the secretariat at paul_white@ilzsg.org.

STUDY GROUPS COOPERATE WITH INTERGOVERNMENTAL FORUM

The secretariat continued its engagement with the Intergovernmental Forum on Mining, Metals and Sustainable Development by preparing a presentation for the November 2013 meeting of the Forum which was held in Geneva. The presentation was delivered on behalf of the Study Groups by the representative from Natural Resources Canada, Mr. Patrick Chevalier. The ILZSG/INSG Head of Economics and Environment, Curtis Stewart, is the contact point for the Intergovernmental Forum.

ILZSG ATTENDS ADVANCED AUTOMOTIVE BATTERIES CONFERENCE (AABC) EUROPE

Advanced Automotive Batteries held their 2013 conference in Strasbourg, France from 24 to 28 June. A number of leading automotive and battery companies made presentations discussing recent progress regarding the development of batteries for hybrid and electric vehicles. A summary of the latest situation together with likely implications for the refined lead metal market, largely based on the presentations made at the conference, is available from the Secretariat in the form of an Insight titled "The Potential Impact of Hybrid and Electric Vehicles on Lead Demand". If you wish to receive a copy please contact paul.white@ilzsg.org.

INSG PARTICIPATION IN CHINA INTERNATIONAL NICKEL AND COBALT INDUSTRY FORUM

The China International Nickel & Cobalt Industry Forum was held in Wuhan, China, from November 12-14 2013 hosted by the China Non-ferrous Metals Industry Association (CNIA) and organized by Beijing Antaike Information Development Co. The INSG Chief Statistician, Mr. Sven Tollin, attended and made a presentation "The Outlook for the 2013 Global Nickel Market". For copies of the presentation please contact sven.tollin@insg.org



Galena - a major ore of lead and silver

Forthcoming Events

MEETINGS, CONFERENCES and SEMINARS

2014 International Zinc Conference and 2014 International Zinc Oxide Industry Conference will be held at the St. Regis Hotel, Dana Point, CA, USA February 16-19, 2014. Key topics will include the zinc market outlook, near-term analysis of the situation in China, LME warehousing and the impact of tyre industry developments on the demand for zinc oxide. These are two separate conferences, with a special package rate available to those attending both conferences. Further details are available at http://www.zinc.org/about/2014_zn_zno_conference

The 14th European Lead Battery Conference (14ELBC) and Exhibition will be held at the Edinburgh International Conference Centre, Scotland on 9-12 September 2014. The International Lead Association is the organizer of the conference. Further details at <http://www.ila-lead.org/conferences> or from mcdermott@ila-lead.org

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.

BY-PRODUCTS OF COPPER, LEAD, ZINC AND NICKEL

A study to provide information on the by-product metals of copper, lead, zinc and nickel was contracted 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 was held in Lisbon during the October 2013 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 soon.

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 contract was awarded to the consulting group Oakdene Hollins to conduct the study. A presentation with a preliminary report on the study was delivered during the October 2013 meetings and the final report will be distributed to members in the near future.

JOINT INSG/ICSG REPORT ON COBALT AS A BY-PRODUCT OF COPPER AND NICKEL

The study on *Cobalt as a By-product of Nickel and Copper Production* aims to provide an overview of cobalt resources, mine and refined production, trade and markets, and examine the interrelationship between cobalt, nickel and copper in these same areas. So far the areas of cobalt resources, mine production, refined production and trade have been completed as part of the larger study. Nearly half of cobalt mine production comes from primary copper producers, while one third comes from primary nickel producers. Cobalt is traded as a raw material, an intermediate and a refined product, with the greatest volume of trade being from the Democratic Republic of the Congo, the major source of cobalt ores and concentrates, to China, the world's largest refined producer. Copies of the report will be distributed to members in the near future, and will be available for purchase

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 9-13)

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e-mail: insg@insg.org
Website: www.insg.org

ILZSG Member States:

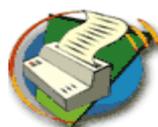
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[European Union](#),
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ICSG Member States

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[Chile](#), [China](#),
[European Union](#),
[Finland](#), [France](#)
[Germany](#), [Greece](#), [India](#), [Iran](#) [Italy](#),
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[Portugal](#), [Russian Federation](#),
[Serbia](#),
[Spain](#), [Sweden](#),
[United States](#), [Zambia](#)



PUBLICATIONS

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

NEW

The World Copper Factbook 2013

A comprehensive overview of copper, with statistics, graphs, flowcharts and other information providing details on production, usage, recycling, definitions and history. *Published September 2013.*

NEW

Report on the Chinese Lead and Zinc Mining Sector

This comprehensive overview of Chinese lead and zinc mine output was prepared for ILZSG by Beijing Antaika Information Development. Information on lead and zinc reserves and resources and the government institutions responsible for developing them is provided, along with a discussion of rules and regulations governing foreign investment in the sector. Data is based on extensive direct contact with experts in different provinces. *Published November 2013.*

NEW

ICSG 2013 Statistical Yearbook

The ICSG Copper Bulletin Yearbook includes annual statistics on copper and copper products, their production, usage and trade by country, as well as stocks and exchange prices, providing a global view of supply and demand for the past 10 years. The Yearbook serves as a useful tool for consultations and analysis on the longer term evolution of world copper production, usage, stocks and prices. Subscribers to the Copper Bulletin receive the Yearbook as part of their annual subscription. *Published September 2013.*

NEW

Nickel Ore Market of Southeast Asia 2013

Laterite ore provided to the nickel pig iron industry is one of the fastest growing sources of nickel units globally. This report lists existing and planned mines and smelters in Indonesia, the Philippines, Myanmar, Papua New Guinea and the Solomon Islands, giving information on capacity, ore grades, export destinations, smelter process and more. 56 pages. *Published August 2013.*

NEW

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

This directory provides a global overview of semis fabricators producing 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. Significant changes to the 2012 are included in this edition for China and for India, where information on the status of the plants, together with a clear breakdown of projects under construction and feasibility. *Published August 2013.*

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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 secondary smelter output. All 28 scrap smelters and 24 copper refineries 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 and forecasts for copper wire rod and secondary smelters and refineries until 2015. *Published May 2013.*

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 October 2012.*

Copper and Copper Alloys Scrap Supply Survey in the European Union (EU-27) 2013 The survey covers 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 takes a top down approach to estimate material availability, copper content in trade and the economic logic of copper scrap dismantling. *Published May 2013.*

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.*

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.*

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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.*

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.*

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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 December 2013.*

World Directory of Lead and Zinc Mines 2014

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 December 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.*

ILZSG Interactive Mine and Smelter Database

ILZSG is now making available an interactive interface to allow users to access data held in the mine and smelter databases via the Group's website. This interface enables members and subscribers to run queries to match individual needs. Information 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. *Available on-line from January 2014.*

Lead and Zinc New Mine and Smelter Projects 2014

This 70 page report covers lead and zinc mines and smelters opened or closed during 2013, firm projects currently committed and other projects under consideration. Developments in 48 countries on all continents are covered with more than 200 separate entries. In addition, where available, estimates of ore reserves and the percentages of the metals they contain are also given. *To be published January 2014.*

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 2014.*

World Directory of Primary and Secondary Zinc Plants 2014

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 2014.*