

# COPPER

## WORLDWIDE

**Metal** Synergies in  
Electrowinning  
+ Electrorefining

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Process suppliers

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AI sorting  
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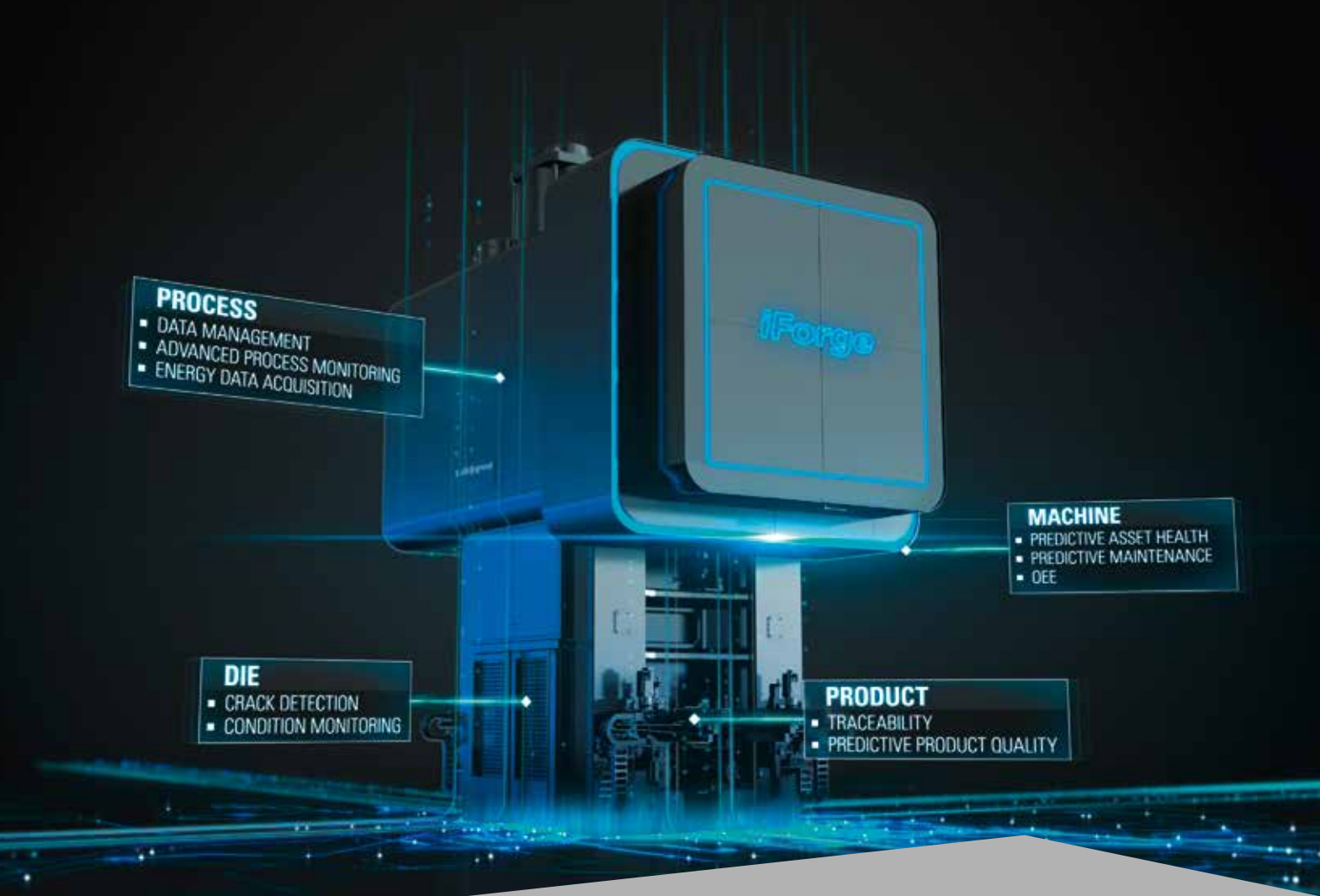
What is on  
over the next  
nine months



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**SMS**  **group**

# iForge – THE CUTTING EDGE SOLUTION FOR DIGITALIZATION IN CLOSED-DIE FORGING

Our constant aim at SMS group is to strive for process solutions that open up entirely new perspectives for our customers. Our latest development iForge is the cutting-edge solution that takes process performance, product quality, ecologization and cost optimization to a completely new level, driven by our new technologies and cloud solutions. With iForge you get a valuable support to optimize and better control your forging processes along the lines of Industry 4.0.



## COPPER WORLDWIDE

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SIPS 2023 - The annual SIPS event has championed 'Sustainability through Science & Technology' since 2003 (see Page 21). Image: Flogen

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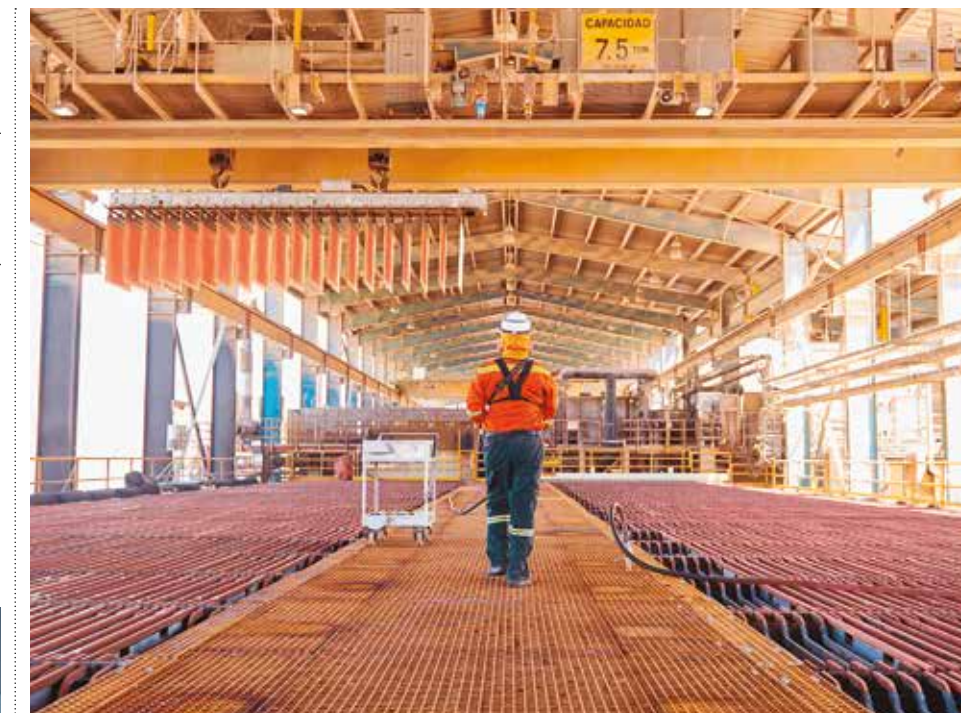
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Lomas Bayas is an open-pit copper mine in Sierra Gorda producing up to 75,000 tonnes of high-purity copper cathodes per year (see Page 3).

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**JUN 30** - The key connection between the KGHM's GG-1 shaft in Kwielice and the Rudna Mine in Poland made on 14 June was celebrated. The GG-1 intake-air shaft is 1,348 metres deep with a diameter with casing of 7.5 m. It will be used to transport people and materials (see Page 5). Photo: KGHM

**AUG 1** - The Punta Lomitas Wind Farm is operated by ENGIE Energía Perú and will soon reach a capacity of 296.4 MW. The production from the wind farm will support electricity demand from Quellaveco, the copper project developed by Anglo American and Mitsubishi Corporation. Photo: ©2023 Anglo American. All Rights Reserved.

**JAN 19** - Copper cathode produced at Rustenburg Base Metals Refinery in South Africa. Founded in 1952, the Rustenburg Base Metals Refinery produces high quality electrowon nickel from its automated tankhouse, as well as copper cathode, cobalt sulphate and sodium sulphate. Photo: ©2023 Anglo American. All Rights Reserved.



# New energy economy rapidly emerging

**Jul 12** - The pace of deployment of some clean energy technologies - such as solar PV and electric vehicles - shows what can be achieved with sufficient ambition and policy action, but faster change is urgently needed across most components of the energy system to achieve net zero emissions by 2050, according to the IEA’s latest evaluation of global progress.

The annual update of the IEA’s Tracking Clean Energy Progress online resource reveals remarkable gains in the past year. Electric car sales reached a record high of more than 10 million in 2022, a nearly tenfold increase in just five years. Renewable electricity capacity additions rose to 340 gigawatts (GW), their largest ever deployment. As a result, renewables now account for 30% of global electricity generation. Investment in clean energy reached a record USD 1.6 trillion in 2022, an increase of almost 15% from 2021, demonstrating continued

confidence in energy transitions even in an uncertain economic climate.

Tracking Clean Energy Progress tracks progress by assessing over 50 different components, from sectors to technologies to infrastructure. The transition to clean energy is occurring at different speeds across regions and sectors, however. For example, nearly 95% of global electric car sales in 2022 took place in China, the United States and Europe. Stronger international cooperation is needed to spread progress on electric cars and other key technologies to all regions, particularly emerging and developing economies.

Announced manufacturing capacity for electric vehicle batteries has reached levels sufficient to fulfil expected demand requirements in 2030 in the IEA’s scenario for achieving net zero emissions by 2050. Solar PV has also been upgraded to ‘on track’, as its progress now aligns with milestones consistent with net zero ambitions.

While progress can be observed across all of the 50-plus components of the energy system evaluated in Tracking Clean Energy Progress, the majority are not yet on a path consistent with net zero emissions by 2050. Stronger policy support and greater investment are needed across a wide range of different technologies, in all regions of the world, to enable a broader and faster shift towards clean energy to keep net zero emissions by 2050 within reach.

The IEA also released the newly redesigned Clean Energy Technology Guide, an interactive digital database that allows users to visualise the readiness and geographical distribution of more than 500 different innovative technologies or components across the global energy system, along with the accompanying Clean Energy Demonstration Projects Database.

www.iea.org

## Half year ICSG data

**AUG 21** - The International Copper Study Group (ICSG) released preliminary data for June world copper supply and demand in its August 2023 Copper Bulletin. World copper mine production increased by 2% in H1 2023, with concentrate production increasing by about 2.2% and solvent extraction-electrowinning (SX-EW) by 1.5% respectively. The benefit from some start-ups and expansions was offset by operational issues, as well as by community actions in Peru. Overall world production in June was up 4.5% y-o-y.

Production in Chile declined by 4% in H1 due to operational issues, lower grades and reduced water supply due to a drought in the central region. Indonesian output was down by 6% as Grasberg operations were temporarily disrupted by significant rainfall and landslides. Panamanian production fell 8% as output at Cobre de Panama was interrupted for 15 days due to export restrictions imposed by the Maritime Port Authority. United States output declined by 3.5%. Chinese production was lower by 2% from operational issues at two major copper mines, Jiama and Julong. In Peru, local communities’ actions continued to impact Las Bambas and Antapaccay. However, despite these constraints Peruvian mine production increased by 20%, primarily due to additional output from Quellaveco (commissioned July 2022) and the continued ramp-up at Mina Justa. DRC output grew 10% due to the expansion of the Kamoa mine and others.

World refined copper production increased by about 7% in H1 2023 with primary production (electrolytic and electrowinning from ores) up by about 6% and secondary production (from scrap) up by 12%

respectively. Growth in world refined production was mainly attributed to strong performances in China and the DRC. Preliminary official Chinese refined production data indicate a rise of about 15%, whilst refined output is estimated to have grown by 7% in the DRC due to the continued ramp-up of new or expanded electrowinning plants.

Chilean total refined copper production was down by 5%, with SX-EW output down 3.3% and electrolytic production down 8%. Japanese refined production increased by 1% from a low base in Q1 2022 when production was impacted by operational issues and maintenance work. A series of maintenances or operational issues led to declines in production in the United States (-6.5%), India (-5.8%), Indonesia (-6%), Finland (-28%) and Sweden (-11%). Data indicate that global secondary refined production (from scrap) increased by 12% mainly due to a rise in China.

World apparent refined copper usage grew by about 4% in H1 2023. Chinese apparent demand (excluding changes in bonded/unreported stocks) grew by around 9%. Net refined copper imports declined by 13% but refined production increased by 15%. Lower demand in the EU, Japan and the United States negatively impacted World ex-China refined usage which is estimated to have declined by about 2.5%. The preliminary world refined copper balance in the first half of 2023 indicates an apparent surplus of about 213,000 t. The world refined copper balance adjusted for estimated changes in Chinese bonded stocks indicated a 251,000 t surplus.

www.icsg.org

## Environmental cost of excess data storage

**JUNE 28** - The environmental impact of data footprints is an important but largely overlooked piece of corporate sustainability. A recently released study from the data security company Blancco surveyed 1,800 high-level IT or compliance managers from companies around the globe, finding that 88% of businesses claimed environmental sustainability had a high-to-moderate influence on their approach to processing end-of-life data, but 39% did not have a plan in place to reduce their data footprints. That leaves them ‘at risk of compliance failures

in light of upcoming sustainability regulations. Regulators are cracking down on green efforts that sound impressive but do very little and fall into the greenwashing category,’ the press release said. A previous report from Blancco found that when organisations switched to cloud-based storage, 65% reported an increase in the volume of redundant, obsolete or trivial data they collect, which means more costs for storage and higher energy use.

www.resource-recycling.com  
www.blancco.com

## Sustainability and emissions service

**AUG 1** - CRU has launched its new sustainability and emissions service to offer users commodities intelligence through a sustainability lens. The new service is designed to give clients comprehensive sustainability insight across the value chain to inform their strategies. The service gives users a comprehensive, coherent view of how the transition to a low carbon, sustainable economy will affect different commodities and impact market dynamics. It covers:

- Policy developments, initiatives and regulations
- Carbon markets, pricing, emissions trends and abatement curves
- Decarbonisation, the development of green technologies and emission reduction scenarios and their cost implications
- Energy costs, pricing, demand and renewable capacity forecasts.

The service builds on CRU’s existing deep commodity market knowledge and sustainability tools, such as the Emissions Analysis Tool. The service is live today and two tiers of service access are available. Classic offers insight on emissions trends, policy roundups and short-term carbon price forecasts, while Premium adds mid- and long-term carbon price forecasts, data and insights on decarbonisation, green technology and energy markets, as well as direct access to CRU’s analysts.

**SEP 14** - CRU appointed Frank Nikolic as its new Vice President, North America, within its Base & Battery Metals team.

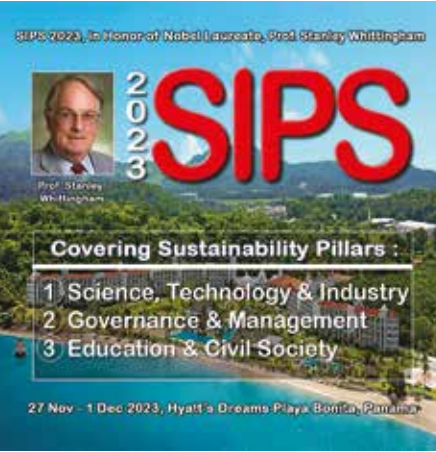
www.crugroup.com

## Smelting activity analysis

**SEP 5** - The SAVANT Global Dispersion Index fell to 46.7 in August from 46.8 in July, despite a rebound in activity in China. At month end only four of the 37 primary smelters that SAVANT monitors were seen as inactive, including Daye’s 300 ktpy smelter in Hubei province and Zijin Mining’s 150 ktpy plant in Jilin province. KGHM’s 190 ktpy smelter in Poland was inactive from 25 August, due to upgrade work.

www.earth.space

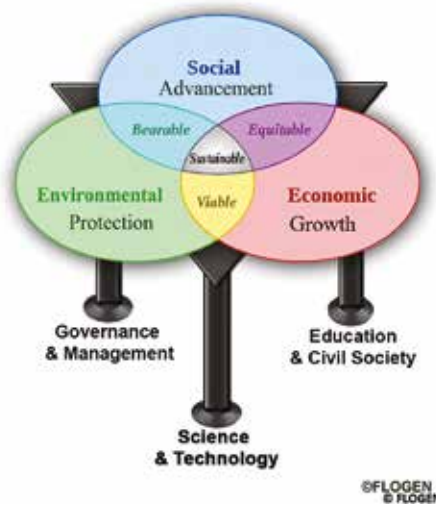
## NOV 27 - DEC 1 SIPS 2023



Organised since 2003 by the not-for-profit corporation FLOGEN Stars Outreach, SIPS 2023 Edition incorporates summit plenary lectures from well-known speakers that address the link between scientific, technology and engineering domains in the pursuit of sustainable development, as well as specific science, technology and engineering symposia that feature technical presentations with the same goals in mind. Based on the FLOGEN Sustainability Framework and following the rich tradition of previous years, the summit will cover 3 sustainability pillars: (1) Science, Technology & Industry, (2) Governance & Management and (3) Education & Civil Society.

SIPS 2023 is entirely dedicated to and bears the name of Prof. Stanley Whittingham, Nobel Laureate in Chemistry. Prof. Whittingham is a pioneer in discovering the role of lithium in lithium ion batteries that are very useful to conserve the energy and help one of the sustainability issues of recent times. The summit’s International Symposia include: green chemistry and polymers; physical chemistry; solid state chemistry; solution chemistry; electrochemistry; molten salt and ionic liquids; advanced materials; advanced manufacturing; advanced technologies; batteries; bio-extraction; ecosystems; energy production; environment; metallic systems; metals and alloys; minerals; mining; multiscale materials; non-ferrous smelting and hydro/electrochemical processing; rare earth and platinum group metals; recycling.

www.flogen.org



## AUG 21 - 24 The 62nd Annual COM

The Fairmont Royal York Hotel in Toronto saw the 62nd Annual Conference of Metallurgists (COM 2023), organised by Metsoc of CIM, take place with the theme of Climate Change and Sustainability. The plenary sessions included ‘Donald Sadoway - Electrometallurgical Pathways Towards Profitable Sustainability’. The symposia included:

- Integration for Better Outcomes
- Derek Kerfoot Memorial Pressure Hydrometallurgy
- The Laplante-Laskowski Symposium on Mineral Processing Fundamentals
- Wasmund Memorial of Sustainability in Pyrometallurgy

Event sponsors included Hatch, Sherritt, KPM, Rio Tinto, Eriez and Vale.

www.metsoc.org

## NOV 1 - 2 ZIMEC 2023

The 11th edition of the Zambia International Mining & Energy Conference (ZIMEC 2023) will take place in Kitwe. ZIMEC 2022 gathered over 500 attendees from 17 countries, with more than 40 exhibition stands. The main theme of ZIMEC 2023 will be ‘Investing in Zambia, Mine to Market, Clean Energy and the Sustainable Development of Future Minerals’.

www.zimeczambia.com

## APR 15 - 19 Wire and Tube

With over 2,000 exhibitors from 65 countries, wire and Tube 2024 will assert their position as leading international trade fairs for the key industries of wire, cable, tubes, pipes and their supplier industries. wire 2024 occupies exhibition halls 9 to 17: wire, cable, wire products and technologies are scheduled in halls 9 to 12 and hall 15.

www.wire-tradefair.com

## MAY 27 - 31 ALTA 2024



Perth’s ALTA 2024 has a new Two-Conference Technical Program Format, focussing on current industry priorities:

Nickel-Cobalt-Copper, including a Forum and Panel on the Production of Nickel and Cobalt Products for the Battery Industry runs from 27 - 29 May.

Lithium-Battery Technology - Rare Earths, including a Forum and Panel on Battery Recycling runs from 30 - 31 May. There will be around 42 exhibitors.

**MAY 31** - There will be around 42 exhibitors. ALTA announced on AUG 4 that all five ALTA 2023 Proceedings are now available for purchase. The costs of all seven ALTA Short Course Manuals have also been reduced by 50%. The manuals were updated in 2022. ALTA was established by metallurgical consultant Alan Taylor in 1985.

www.altamet.com.au

## EVENTS IN BRIEF

**SEP 18 - 20 E-Scrap & E-Reuse Conference**

The E-Scrap & E-Reuse Conference in New Orleans presents dozens of high-level sessions exploring the biggest trends in electronics sustainability. The lineup is built to deliver market insight, tips on operational improvement and macro trend analysis.

www.e-scrapconference.com

**OCT LME Week Events**

6 - Copper and a Sustainable Society (ICA)

9 - LME Metals Seminar with Keynote Address by Máximo Pacheco Matte, Chairman, Codelco

10 - 2023 China Nonferrous Metals Forum including ESG Practice Forum

10 - LME Dinner

www.lme.com

**OCT 31- NOV 2 IMARC**

The International Mining and Resources Conference 2023 is coming soon in Sydney. Attending IMARC on an Expo Pass gives you access to the 3-day exhibition featuring over 470 mining and METS companies and the ESG Collaboration Theatre featuring the Talk it Forward Dialogue Tables.

www.imarglobal.com

**NOV 28- 30 Resourcing Tomorrow**

Critical minerals are a central theme of this year’s Resourcing Tomorrow in London. It will look at key challenges in the EU Critical Minerals Act, the Inflation Reduction Act, and the increasing role of OEMs in Critical Mineral Supply Chains. Around 40 of the worlds largest Mining Companies are speaking. A Ministerial Roundtable on 27 November at the Palace of Westminster will be hosted by the UK Government and will be organised by the UK Critical Minerals Association together with Beacon Events.

www.resourcingtomorrow.com

**JAN 10 - 11 Future Minerals Forum**

The Future Minerals Forum (FMF) in Riyadh aims to enhance global mineral and economic development through intergovernmental collaborations, knowledge exchange and business partnerships with a special focus on the super-region of Africa, Western and Central Asia.

www.futuremineralsforum.com

**JAN 17-19 IERC 2024**

The International Electronics Recycling Congress IERC 2024 returns to Salzburg. For 22 years, IERC has been driving sustainable practices and innovation in electronics recycling.

www.icm.ch





# World Copper Conference Asia 2023

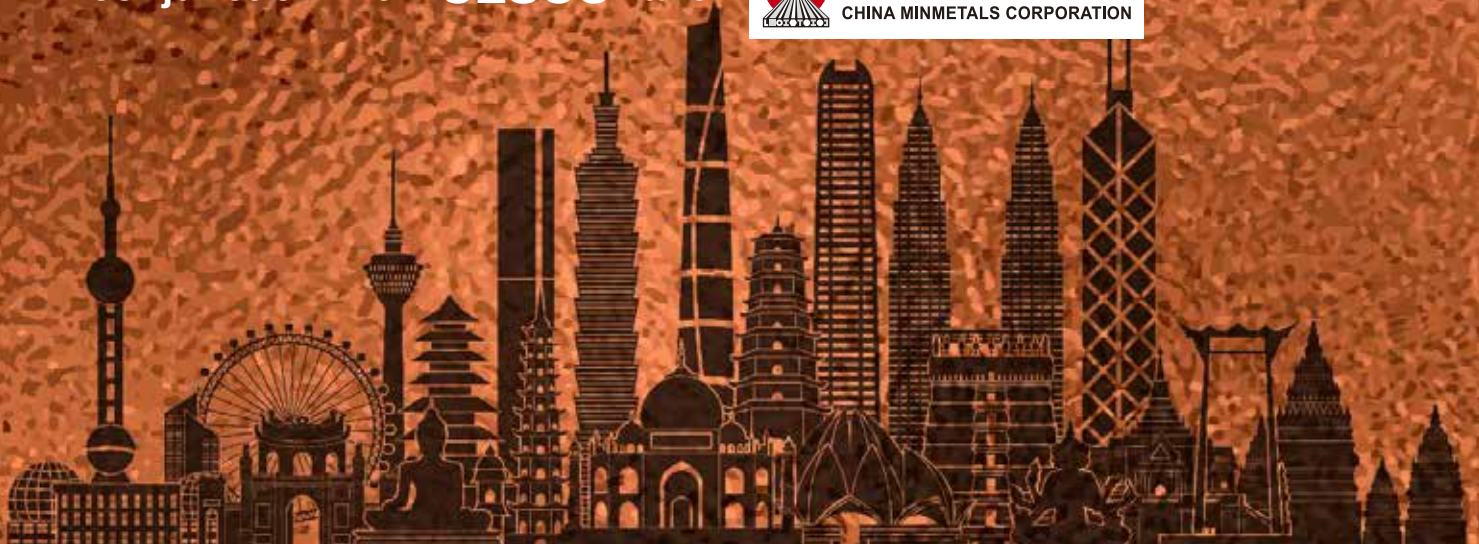
15-16 November 2023 • Shanghai, China

part of  
**ASIA  
COPPER  
WEEK  
2023**

In conjunction with **CESCO** and



中国五矿集团有限公司  
CHINA MINMETALS CORPORATION



## Why should you attend?



Meet with suppliers and customers, and discuss opportunities for the year ahead during this vital contract negotiation season.



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Understand the strategies of leading miners and smelters

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