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 intmet - Integrated Metallurgy  @INTMETproject

COORDINATOR

COBRE LAS CRUCES, S.A.

General offices Cobre Las Cruces S.A.
Carretera SE-3410 – Km. 4,100
41860 Gerena – Sevilla – SPAIN

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CONTACT US @ office@intmet.eu

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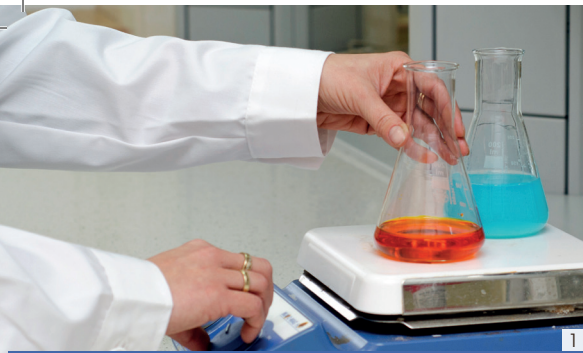


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Integrated metallurgy for polymetallic,
complex and low grade ores and concentrates



Humidity cell test. Soluble weathering products are mobilized by a fixed-volume aqueous leach that is performed and collected weekly. Leachate samples are analysed. © AGQ Mining and Bioenergy



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- 1 Hydrometallurgical processing of solutions containing metal ions. © copyright IMN
- 2 A standard method for laboratory weathering of solid materials is using a Humidity Cell. In this picture the placement of the material into the humidity cell apparatus can be observed. © AGQ Mining and Bioenergy
- 3 Fire assay is a classical method used for the separation of platinum group elements and gold by pre-concentration. After the fusion in a furnace, the mixture is poured into a mould for cooling. © AGQ Mining and Bioenergy
- 4 Centrifuge equipment for solid liquid separation. © copyright IMN

INTEGRATED METALLURGY FOR POLYMETALLIC, COMPLEX AND LOW GRADE ORES AND CONCENTRATES

REDUCING THE EU'S DEPENDENCY ON NON-FERROUS METAL IMPORTS

The European Union heavily relies on non-ferrous metal imports to satisfy domestic demand. 62 percent of used copper, 65 percent of zinc, and even a staggering 92 percent of gold is imported. For several base metals including Critical Raw Materials such as Rare Earths, Platinum Group Metals, indium and cobalt, the EU countries completely rely on imports.

In fact, Europe has considerable deposits of low grade polymetallic minerals. However, these deposits are often dismissed due to the technical impossibility of recovering the metals in an efficient and economically sustainable way. Currently, no economical process exists for on-site metal extraction from low grade polymetallic deposits; furthermore, there is no industrial process able to deal with polymetallic (Cu+Zn+Pb) concentrates.

INTMET'S SOLUTIONS

The INTMET project meets the challenge to recover valuable metals such as copper, zinc, lead and silver and critical metals like cobalt, indium and antimony from low grade and complex ores. Our approach offers a radical solution and represents a unique technological breakthrough. INTMET uses three innovative hydrometallurgical processes aimed at maximising the metal recovery yield while minimising energy consumption and the environmental footprint.

INTMET applies an on-site Mine-to- Metal approach and an integrated treatment of the produced concentrates. It combines hydrometallurgical processes (atmospheric, pressure and bioleaching) with novel metal extraction techniques, e.g. Cu/Zn-SX- EW. In addition, secondary materials like mining and metallurgical wastes will be added to the process for metal recovery and valorisation. The technical, environmental and economic feasibility of the approach will be integrated into an innovative business solution.