



LITHIUM

Independent Metallurgical Operations Pty Ltd (IMO) and Metallurgy Pty Ltd (Metallurgy) have significant experience in the development of process flowsheets for lithium projects based on Spodumene, Lepidolite and Petalite. Our team have proven capability in the design, management and execution of lithium testwork programs, project development, and due diligence throughout Australia and worldwide.



Our scope of services ranges from sample selection, ore characterisation and mineralogy, through to management of metallurgical testwork, scoping and feasibility studies and client representation through plant commissioning, ramp up and process plant optimisation.

PROJECT	CLIENT	OUR WORK
Andover Project, Western Australia	Azure Minerals	Process flowsheet development testwork, including ore characterization, Dense Media Separation and Flotation.
Goulamina Project, Mali	Leo Lithium	Process flowsheet development testwork, including batch flotation optimization, variability testwork and pilot plant operation.
LiOH Refinery, Kwinana, Western Australia	Tianqi JV	On-site metallurgical support.
Pilgangoora Lithium-Tantalum Project, Western Australia	Pilbara Minerals Limited	<ul style="list-style-type: none"> Continuous multi stage flotation pilot plant and batch testwork management to produce a high-Li₂O grade spodumene concentrate suitable for downstream testing. Lithium bearing pegmatite whole core cutting and preparation. On-site metallurgical support.
Mt Marion Lithium Project, Western Australia	Mineral Resources Limited	<ul style="list-style-type: none"> Project feasibility study consulting including dense media cyclone recovery of coarse spodumene, flotation and magnetic separation stages applied to fines. On-site metallurgical support.
Altura Lithium Mine, Western Australia	Altura Mining Ltd	On-site development of metallurgical accounting and reporting. Auditing of process plant sampling, sample preparation and assay procedures to ensure statistically correct inputs were provided into the process plant mass balance.
Mt Cattlin Lithium Project, Western Australia	Galaxy Resources Ltd	Beneficiation testwork management including heavy liquid separation.*

▶ Please contact us for more details on how we can provide you with assistance and support to your project.

www.indmetops.com.au

IMO Consulting & Operations

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Seymour Lake Lithium Project, Canada	Ardiden Limited	Beneficiation testwork management. Testwork consisted of Initial mineralogical characterisation followed by heavy liquid separation (HLS) at various grind sizes and successful application of dense media separation based on HLS results. Production of a high Li ₂ O grade saleable concentrate from flotation flowsheet development testwork conducted on the natural fines.*
Mina do Barroso Lithium Project, Portugal	Savannah Resources plc	Savannah FS management. Project development scenario and strategic planning. Coordination of various technical, social and commercial owners teams. Internal client desktop, optimisation and options study management. Organisational structure management and development to suite business model. Decision matrix tool utilisation. Metallurgy representation on behalf of Savannah. FS beneficiation (both DMS and flotation) testwork flowsheet management and development. Spodumene beneficiation flowsheet options study evaluation. By-product (mica, feldspar and quartz) testwork flowsheet development and management. Liaison with potential by-product end users and concentrate application testwork management.
Lepidolite Hill, Western Australia Confidential Project	Lithium Australia	Lepidolite Hill: Execution of a continuous multistage pilot plant producing high purity Lithium Hydroxide from a lithium bearing mica.* Confidential Project: FS beneficiation flotation testwork management and flowsheet development. Confirmation of beneficiation flowsheet via continuous pilot flotation to generate a high grade Li ₂ O concentrate suitable for downstream testwork management.
Bougouni Lithium Project, Mali	Kodal Minerals plc	Initial DMS testwork flowsheet management and development across multiple deposits. Includes heavy liquid testwork management on multiple crush sizes to optimize DMS Li ₂ O grades and recoveries.
San Jose Lithium Project, Spain	Plymouth Minerals Limited	Metallurgy representation on behalf of Plymouth. Management of beneficiation and refinery testwork to produce battery grade concentrate. Process Engineering and Scoping Study collation assistance.*
L-Max® Technology	Lepidico Ltd	Flotation development testwork and multiple continuous hydrometallurgical pilot plant operations to develop the L-Max® process and produce battery grade lithium carbonate.*
Cinovec Project, Czech Republic	Cobre Montana	Execution of a batch testwork program producing a high-grade Lithium Carbonate from lithium bearing mica.*

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Cinovec Project, Czech Republic	European Metals	Execution of a Lithium bearing mica flotation testwork program optimizing Li recovery.*
Bikita Mine, Zimbabwe	Bikita Minerals	Design and management of a three-stage flotation testwork program including mica and Spodumene pre-flotation and final Petalite rougher cleaner flotation stages.
South Dakota Lithium Project, USA	Iris Metals	Client representation and testwork management to provide metallurgical guidance and representation, feedback, track the testwork schedule as well as ensuring that all data is adequately captured and documented.
Mt Alexander Project, Western Australia	St George Mining Ltd	Metallurgical testwork: Lithium Sample Characterisation.

* Metallurgical Testwork conducted by Metallurgy Pty Ltd.

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