

# SILICA, MINERAL & IRON SANDS

Independent Metallurgical Operations Pty Ltd (IMO) has extensive experience in mineral sands and silica deposits.

Our team has significant relevant experience in mineral sands testwork programs and process optimisation including electrostatic, magnetic and gravity separation.

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



EVERYTHING  
METALLURGY



**METALLURGY**  
Quality Metallurgical Testwork



PROJECT	CLIENT	OUR WORK
<b>Murray Basin Project, Victoria</b>	Iluka Resources / Downer EDI	Provision of technical expertise for process plant commissioning and supporting optimisation in order to pass the engineer Process Guarantee at the Douglas Concentrator and Hamilton Mineral Separation plant.
<b>Moma Sands, Mozambique</b>	Kenmare Resources / Downer EDI	Management of process plant commissioning and ramp up to design production on behalf of the engineer. Provision of operational support, operator training and optimisation.
<b>Chavara Project, India</b>	Ministry of Mines, India	Provision of technical expertise and process support for the commissioning of an electrostatic plant upgrade.
<b>Stream Sediment Mineral Sands Project, Western Australia</b>	Dreadnought Resources	Characterization testwork on heavy mineral sands, including gravity testwork and magnetic separation, to determine whether samples were amenable to standard mineral sands processing operations.
<b>Harts Range Garnet Project, Northern Territory</b>	Australian Abrasive Minerals	Testwork management to produce fine garnet, ilmenite and zircon by-products from a heavy mineral concentrate also generated by IMO. Product evaluation based on market specifications.
<b>Muchea West Project, Western Australia</b>	Carbine Resources	Concept study including processing of bulk sample (gravity).
<b>Sandbox Project, Queensland</b>	Carbine Resources	Preliminary metallurgical sighter tests determining the potential for upgrading the sands to marketable grade silica products.
<b>Kanyika Niobium Project, Malawi</b>	Globe Metals and Mining	Process flowsheet development and optimisation of oxide flotation inclusive of reverse silica flotation stages.
<b>Amazon Bay, PNG</b>	MIL Resources Ltd	Management of the Pre-Feasibility Study inclusive of testwork management encompassing: Gravity Concentration, Magnetic Concentration and product characterisation.
<b>Yilmia Andalusite Project, Western Australia</b>	Strategic Resource Management	Beneficiation of Andalusite through Attritioning followed by upgrading by size, Gravity Separation, Magnetic Separation for Iron Removal.
<b>Loxton, South Australia</b>	Australian Zircon / Downer EDI	Site based troubleshooting and debottlenecking in relation to design rectification, recommendations and process management to achieve production targets.
<b>Nabeba Iron Ore Project, Republic of Congo</b>	Sundance Resources	Management of Metallurgical Testwork including Reverse Silica Flotation Testwork and Assessment.

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

[www.indmetops.com.au](http://www.indmetops.com.au)

## IMO Consulting & Operations

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## SILICA, MINERAL & IRON SANDS continued

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<b>Muchea Silica Sands Project, Western Australia</b>	Timaru Sands	Silica Sands Iron Removal Study, including metallurgical testwork, to determine the upgradability of the project's Silica Sand.
<b>Moorra Project, Western Australia</b>	Vytas Metals	Silica purification by metallurgical testwork using wet high intensity magnetic separation (WHIMS) followed by wet gravity separation.
<b>Muchea West Project, Western Australia</b>	Australian United Silica Corp. Pty Ltd	High Purity Silica Sand Iron Department Study.
<b>Cadoux Project, Western Australia</b>	Cadoux Ltd (former: FYI Resources)	High Purity Quartz Investigative Study followed by Geometallurgical Program.

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