

ASX Release

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ASM JV PRODUCES HIGH QUALITY NEODYMIUM METAL ALLOY

Highlights:

- **Successful laboratory production of ~ 1kg of neodymium metal alloy.**
- **Assaying confirms an intermediate neodymium (87%) alloy ingot.**
- **Electrorefining to produce a 99.9% Nd metal is anticipated by the end of July.**
- **Commercial Pilot Plant production of larger quantities of neodymium and praseodymium metal alloys expected to be complete at the end of July 2020.**
- **Metallisation process targets 45% less energy for rare earth metal production than the current industrial process.**

Australian Strategic Materials' (ASM) Korean research and development partner, ZironTech has completed its preliminary work on the metallisation of neodymium oxide feed producing approximately 1kg of neodymium metal alloy in the laboratory from its patented reduction process in South Korea. The JV is targeting 45% less energy use in its rare earth metallisation process than the current industrial process.



Figure 1- ~ 1kg Neodymium (87%) Metal Alloy

Contact Information

Contact David Woodall, Managing Director, ASM Ltd, +61 8 9227 5677
Investors Natalie Chapman, Corporate Communications Manager, +61 418 642 556
Media Marcha Van Den Heuvel, Hill+Knowlton Strategies, +61 2 9286 1226 or +61 468 960 457

This is the first stage of the production of critical metals used in a range of sustainable technologies and new manufacturing industries such as renewable energy and electric vehicle production.

ASM, with its Korean JV partner, will continue to progress the innovative low emission, high purity metal refining technology to produce metals of zirconium, titanium, rare earths and other critical materials for the renewable energy, speciality alloys and permanent magnet markets.

As noted previously, the commissioning of the electrorefining section of the pilot plant, which will produce high purity metal, is planned in July 2020. Further pilot plant runs are planned to produce neodymium, praseodymium, and other rare earths in metallic form.

Australian Strategic Materials Managing Director, David Woodall said:

“This is a major milestone in ASM’s integrated strategy that includes clean metal production for all products from the development of the Dubbo Project in Central West NSW. This integration of metal production into ASM’s business is consistent with the Australian Government’s objective of adding value within Australia, while ensuring supply security and stability of these critical materials to global and domestic Australian manufacturing sectors.”

ASM and its JV partner continue to progress the second phase of its metallisation strategy focussing on the production of zirconium metal in July 2020, focused on delivering significantly improved economics of its Dubbo project as well as giving it an involvement in the wider commercialisation of a breakthrough technology.

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About Australian Strategic Materials – www.asm-au.com

Established as the holding company for the [Dubbo Project](#), ASM is focused on producing specialty metals and oxides for advanced technologies. ASM is a wholly-owned subsidiary of [Alkane Resources Ltd](#). As advised to the ASX on 17 June 2020, Alkane is holding an extraordinary general meeting of shareholders to consider demerging ASM and establishing it as a stand-alone, ASX listed company. For further information on the proposed Demerger and EGM please refer to <http://www.alkane.com.au/demerger/>.

Located in central-western NSW, ASM’s cornerstone Dubbo Project has a long-term resource of [zirconium](#), [rare earths](#), [niobium](#) and [hafnium](#)– a globally significant source of these [critical materials](#) for a diverse range of emerging and sustainable technologies.

In a joint venture with South Korea’s Zirconium Technology Corporation (ZironTech), ASM is advancing oxide separation and [metallisation technologies](#) to create a range of value-added materials from market-available precursors and, ultimately, Dubbo Project outputs. Construction of ASM’s pilot plant in South Korea has been completed with commissioning of the plant for each metal planned to be produced from the Dubbo Project with production of larger quantities of clean metals will commence in Q3 2020.