

# Scandium International Reports on Results from Eck Industries Trials of Scandium in Alloys



November 27, 2018 (Source)  
– Scandium International Mining Corp. (TSX: SCY) (“Scandium International” or the “Company”) is pleased to report on select aluminum casting trial results undertaken by Eck Industries

Inc. (“Eck”), employing scandium provided by SCY. SCY previously announced on May 3, 2018 that it signed a Letter of Intent (“LOI”) with Eck, who agreed to conduct the testing on cast alloys at its Manitowoc, Wisconsin, USA facilities.

Eck is an industry leader in sophisticated casting systems and high-performance aluminum casting materials, making this group an ideal candidate to explore applications for scandium as an alloying agent in castings. Customer segments include commercial aircraft parts, automotive and trucking cast parts, military drivetrain casings, marine propulsion system castings, and military aerospace components.

Recently David Weiss (VP Engineering/R&D for Eck) gave a presentation at the Materials Science and Technology (“MST”) conference in Columbus, Ohio (October 18 -24<sup>th</sup>, 2018) on the results of preliminary tests with scandium, as part of a larger study of continuing work in castable aluminum-cerium alloys, specifically tuned for high temperature applications.

**HIGHLIGHTS OF RESULTS RELATING TO SCANDIUM:**

- Both high temperature performance and inter-granular corrosion resistance were materially improved with cerium additions to cast alloys, which were further improved with additions of scandium.
- Heat-working tolerance improvements were particularly noteworthy for combined Ce-Sc systems, exhibiting 100% recovery (strength retention) after exposure to temperatures of 350°C for 100 hours.
- Strength improvements from scandium additions were also noted under ambient temps.
- *Conclusion from MST Conference Presentation* – “The Al/Ce/Mg/Sc system is a promising alloy path for very high-performance applications”.

This work at Eck Industries represents successful exploration of a novel and unique castable alloy system, using scandium in concert with cerium, as a replacement for typical silicon additions in most common casting alloys. The material improvements in both high temperature performance and resistance to corrosion apparent in this new alloy system opens up expanded applications in places where these critical performance parameters are required in thermally difficult environments. More published data and results are expected from Eck Industries on this work in coming months, and the effort is anticipated to represent patentable intellectual property for Eck Industries as well.

**George Putnam, CEO of Scandium International Mining Corp. commented:**

“The aluminium casting sector represents an attractive target for the introduction of scandium. Casting applications are particularly well suited to experimentation by innovative groups, and we are pleased to see Eck Industries has found useful and commercially valuable improvements from scandium additions, in areas particularly aligned with their current product market opportunities.”

## **ABOUT SCANDIUM INTERNATIONAL MINING CORP.**

The Company is focused on developing its Nyngan Scandium Project, located in NSW, Australia, into the world's first scandium-only producing mine. The project owned by our 100% held Australian subsidiary, EMC Metals Australia Pty Limited, has received all key approvals, including a mining lease, necessary to proceed with project construction.

The Company filed a NI 43-101 technical report in May 2016, titled **"Feasibility Study – Nyngan Scandium Project"**. That feasibility study delivered an expanded scandium resource, a first reserve figure, and an estimated 33.1% IRR on the project, supported by extensive metallurgical test work and an independent, 10-year global marketing outlook for scandium demand.

Willem Duyvesteyn, MSc, AIME, CIM, a Director and CTO of the Company, is a qualified person for the purposes of NI 43-101 and has reviewed and approved the technical content of this press release on behalf of the Company.

*This press release contains forward-looking statements about the Company and its business. Forward looking statements are statements that are not historical facts and include, but are not limited to statements regarding any future development of the project. The forward-looking statements in this press release are subject to various risks, uncertainties and other factors that could cause the Company's actual results or achievements to differ materially from those expressed in or implied by forward looking statements. These risks, uncertainties and other factors include, without limitation: risks related to uncertainty in the demand for scandium, the possibility that results of test work will not fulfill expectations, or not realize the perceived market utilization and potential of scandium sources that may be developed for sale by the Company. Forward-looking statements are based on the beliefs, opinions and expectations of the*

*Company's management at the time they are made, and other than as required by applicable securities laws, the Company does not assume any obligation to update its forward-looking statements if those beliefs, opinions or expectations, or other circumstances, should change.*