

Scandium International signs LOI with Australia's largest defense exporter

Despite scandium's scarcity and high cost, interest in the metal is high with multiple high value commercial uses having been developed. Of particular interest is the alloy of scandium into aluminum metal products. Used in a combination with other common aluminum alloys scandium can produce stronger, more corrosion resistant, heat tolerant, weldable aluminum products. This alloy is strong enough to be welded rather than riveted, resulting in lighter, more fuel efficient craft that are cheaper to produce and run. Aircraft manufacturers are particularly interested in scandium alloyed aluminum materials. Aircraft designers believe use of Al-Sc alloys can reduce aircraft weights by 15%-20%.

[Scandium International Mining Corp.](#) (TSX: SCY) owns an 100% interest in the [Nyngan Scandium Project](#), the world's first scandium only mine development project, located in New South Wales, Australia.

Nyngan Scandium Project

Mineral exploration at the site has defined a measured and indicated resource significantly larger than the currently planned 20 year mine life. The average process plant feed grade over project life is 409 ppm of scandium. Feasibility Study Highlights include, a capital cost project estimate of US\$87 m with operating costs of US\$557 per kg of scandium oxide, producing an estimated 37,690 kg of oxide per year over the mine life.

NYNGAN SCANDIUM PROJECT

LOW COST, SINGLE PRODUCT FOCUS, RIGHT-SIZED



SCY HAS CLEAR FIRST-MOVER ADVANTAGE



NYNGAN IS SHOVEL-READY, WITH AN EXPERIENCED MGM'T TEAM

BIG GROWTH POTENTIAL- BOTH MARKET & PROJECT



MULTIPLE ALUMINUM SECTORS SEEKING A BETTER ALLOY CHOICE

MINE-FRIENDLY AUSTRALIA LOCATION A BIG PLUS



HISTORIC CHINA/RUSSIA SOURCING HAS DISCOURAGED SCANDIUM USE

ROBUST PROJECT RETURNS (DFS)



US\$87M CAPEX, US\$220M NPV_{8%}
+3X EXPANSION POTENTIAL



On Nov 20, 2018, Scandium International has [signed](#) a Letter Of Intent (LOI) with Austal Ltd., the world's largest aluminum shipbuilder and Australia's largest defense exporter, to test scandium-containing aluminum alloys in marine applications. The LOI calls for the Scandium International to contribute various aluminum alloy samples containing scandium, for testing by Austal and potentially other third party testing groups, to determine suitability in marine and defense applications. In over thirty years of operation, Austal has constructed over 300 vessels for 100 operators in 54 countries around the world. Scandium International intends to publicly report a summary of the results at the conclusion of the program.

George Putnam, CEO of Scandium International Mining Corp. [commented](#): "We are very pleased to add Austal to our list of partners exploring scandium's advantages in marine/naval applications. Austal is a design leader in high-speed marine vessels utilizing aluminum hulls and superstructures for lightweight design and fast, efficient performance. We believe scandium additions will deliver unique and useful property values in marine environments, and we believe Austal represents an ideal partner to determine their applicability."

SCANDIUM

DEVELOPING A NEW ALUMINUM ALLOY MARKET — NOW

SUPPLY
CONSTRAINED?



A HISTORICAL PROBLEM WITH
A SOLUTION ON THE HORIZON

COST
CONSTRAINED?



NEW DIRECT-MINED
RESOURCES ARE LOWER COST

VALUE
UNDERSTOOD



KNOWN STRENGTH AND ALLOY
PROPERTY IMPROVEMENTS

LARGE WAITING
MARKETS



A BETTER ALUMINUM FEEDING
THE LIGHTWEIGHTING TREND



Other **Letters Of Intent** Scandium International has [include](#):

PAB Coventry Ltd. (PAB) to test scandium containing alloys in aluminum sheet forming applications. PAB has been a well-known parts and forms supplier to the upper market segment of the British automotive industry for decades.

Impression Technologies Ltd. (ITL) to also test aluminum sheet forming applications. ITL are a privately held technology company, developing and licensing its advanced aluminum forming technology, Hot Form Quench ("HFQ®"), to automotive, aerospace, rail and electronics industries, globally.

Eck Industries Inc. The LOI calls for the Scandium International to contribute aluminum -scandium master alloy 2%, for mixing and trial-testing of proprietary alloys by Eck.

Grainger & Worrall Ltd. The LOI also calls for the Scandium International to contribute aluminum -scandium master alloy 2%, for mixing and trial-testing. The test work will be undertaken at Grainger and Worralls production facilities in Shropshire England, first as a limited test-run, and if successful, later at small production scale.

Scandium International has many partners in place testing to prove that this super metal with its lightweight, strength and corrosion resistance properties, could have a huge potential future with demand from the aerospace, aviation and electric vehicle industries.

Scandium International Mining Corp. is headquartered in the US state of Nevada, has its flagship project in Australia and is listed on the Toronto Stock Exchange.