Scandium Canada updates on its proprietary Aluminum-Scandium Alloys

written by Raj Shah | September 25, 2025

September 25, 2025 (Source) – Scandium Canada Ltd. (TSXV:SCD) (OTC:SCDCF) is pleased to announce that new data on the properties of its modified AA535 and AA7075 alloys confirm an economically viable technological advancement in the field of aluminum-scandium (Al-Sc) alloys explicitly developed for additive manufacturing applications. The current results are focused on the properties of samples printed through the laser powder-bed fusion (L-PBF) process. The company's latest results substantiate that Scandium Canada's alloys offer a practical solution to one of the most persistent challenges in metal 3D printing: eliminating cracking in high-strength aluminum alloys, which paves the way for a new era of lightweight, high-performance, and cost-effective components across multiple industries. See press release : Scandium Canada updates on aluminum-scandium 3D powders research and development. It should be noted that Scandium Canada has established a division within the company, *Scandium+*, dedicated explicitly to ramp up commercialization efforts for these two Al-Sc powders and the development of other Al-Sc alloys, to engage in dialogue with end-users. Press release : Scandium Canada Ltd. makes changes to its management team and corporate structure.

Scandium+'s main objectives are to :

- Deploy scandium in markets with the highest needs.
- Commercialization of patent-pending Al-Sc alloys with potential in multiple sectors (AA7075/Sc/Zr

AA535/Sc/Zr/Ce).
- Focus on value-added Scandium alloys.

The main attributes of Scandium Canada's Al-Sc powders include:

- **Reduced Scandium Content:** The technology enables significant reductions in the amount of scandium required, directly addressing cost and resource sustainability. The alloys maintain the grain-refining effect necessary to eliminate hot cracking during L-PBF processing, making high-quality production possible at lower material expense.
- **Broad Processing Window:** The newly developed aluminum-scandium-zirconium alloys exhibit printability across a wide range of laser power and scanning speed parameters. Testing has confirmed relative densities above 99% under optimal conditions, a key measure for component integrity and reliability.
- **Suitable Mechanical Properties:** Mechanical testing shows ultimate tensile strengths (UTS) ranging from approximately 330 to 380 MPa in the as-built state. With heat treatment, these alloys achieve UTS increases of 17–25%.
- **Minimized Defect Density:** The proprietary blending procedure, utilizing ZrH2, reduces the formation of microcracks with only minimal microporosity. This marks a substantial improvement over previous generations of L-PBF aluminum alloys, where macro-cracking was a common issue and hindered large-scale adoption. This also offers potential for other applications than L-PBF.

"Scandium Canada's proprietary alloys directly address the critical need for printable, high-strength, and lightweight

metals in sectors such as aerospace, automotive, and advanced manufacturing. This advancement is expected to accelerate the transition to lightweight structures in critical applications, supporting global efforts toward sustainability, energy efficiency, and improved engineering design," commented Dr. Luc Duchesne, Head of *Scandium+* division and Chief Science Officer.

Filing of a new international patent application

This innovation, developed in partnership with McMaster University, is now protected by a new international patent application filed under the Patent Cooperation Treaty (PCT) on September 17, 2025. This strategic move not only enhances Scandium Canada's growing intellectual property portfolio but also positions the company for commercial applications.

Short-term commercial opportunities study

An ongoing study with Productique Quebec announced on August 22, 2025, is currently using the properties of Scandium Canada's alloys to assess 10 short-term commercial opportunities from an extensive list of over 140 potential uses of Scandium Canada's scandium alloys. Completion of this study is expected in mid-October 2025 and targets several applications, in addition to laser powder-bed fusion (L-PBF).

ABOUT SCANDIUM CANADA LTD.

Scandium Canada (TSX-V: SCD) is a public company whose ultimate goal is to bring the world's leading primary source of scandium into production, enabling the development and commercialization of aluminum-scandium (Al-Sc) alloys. The Corporation is leveraging its Al-Sc alloy development division and the development of its Crater Lake mining project to meet the growing need for lighter, greener, longer-lasting, high-performance materials. The Corporation aims to become a market

leader in scandium, while committing itself to building a more responsible economy through innovation and agility.

ABOUT SCANDIUM+

Scandium+ is dedicated to the research, development, and commercialization of innovative scandium uses. We strive to unlock the full potential of scandium through strategic partnerships, cutting-edge technology, and a commitment to responsible stewardship, leading progress across multiple sectors.

Forward-Looking Statements

All statements, other than statements of historical fact, contained in this press release including, without limitation, statements reporting the results of tests of Scandium Canada's Al-Sc alloys, their main attributes and resulting advantages, the protection provided by the filing of an international patent application, the short term potential commercial opportunities and, generally, the above "About Scandium Canada Ltd." paragraph which essentially described the Corporation's outlook, constitute "forward-looking information" or "forward-looking statements" within the meaning of applicable securities laws, and are based on expectations, estimates and projections as of the time of this press release. Forward-looking statements are necessarily based upon a number of estimates and assumptions that, while considered reasonable by the Corporation as of the time of such statements, are inherently subject to significant business, economic and competitive uncertainties, and contingencies. These estimates and assumption may prove to be incorrect. Many of these uncertainties and contingencies can directly or indirectly affect, and could cause, actual results to differ materially from those expressed or implied in any forward-looking statements and future events, could differ

materially from those anticipated in such statements. A description of assumptions used to develop such forward-looking information and a description of risk factors that may cause actual results to differ materially from forward-looking information can be found in the Corporation's disclosure documents on the SEDAR+ website at www.sedarplus.ca. By their very nature, forward-looking statements involve inherent risks and uncertainties, both general and specific, and risks exist that estimates, forecasts, projections and other forward-looking statements will not be achieved or that assumptions do not reflect future experience. Forward-looking statements are provided for the purpose of providing information about management's endeavors to develop the Crater Lake project, and, more generally, its expectations and plans relating to the future. Readers are cautioned not to place undue reliance on these forward-looking statements as a number of important risk factors and future events could cause the actual outcomes to differ materially from the beliefs, plans, objectives, expectations, anticipations, estimates, assumptions and intentions expressed in such forward-looking statements. All of the forward-looking statements made in this press release are qualified by these cautionary statements and those made in our other filings with the securities regulators of Canada. The Corporation disclaims any intention or obligation to update or revise any forward-looking statement or to explain any material difference between subsequent actual events and such forward-looking statements, except to the extent required by applicable law. Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.

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