What Australian Strategic Materials Gets Right About Rare Earth Manufacturing

written by Jack Lifton | October 31, 2026

Last Tuesday, October 27, I visited Australian Strategic Materials Limited's (ASM) Korean Metals Plant in Ochang, South Korea. I have been involved in the development, production, and marketing of Less Common Metals (LCM) for more than sixty years, and during that time I have visited a great many metallurgical plants, laboratories, and industrial research facilities around the world. I have also listened to innumerable presentations by promoters of proposed critical minerals projects. I can therefore say, from considerable experience, that the ASM Korean Metals Plant is one of the most impressive examples I have seen of what can be accomplished when metallurgical engineering, industrial management, and a clearly defined commercial objective are brought together.

The first thing that struck me was the operation's scale and professionalism. The Korean Metals Plant occupies a complex of approximately 20,000 square meters, or nearly five acres, in the Ochang Foreign Investment Zone, about 115 kilometers south of Seoul. I was informed that the operation now employs 78 people. This is not a speculative project, a collection of laboratory apparatus assembled for visiting investors, or an artist's conception of a future industrial facility. It is an operating metallurgical complex with installed production equipment, technical personnel, quality-control systems, and the infrastructure necessary to manufacture rare earth metals and alloys for demanding industrial customers.

The plant was opened in May 2022 and has since developed the

capability to manufacture neodymium and praseodymium metals and neodymium-iron-boron strip-cast alloys. These are essential metallic feedstocks for manufacturing high-performance sintered rare earth permanent magnets. Producing a separated rare earth oxide is not the same as producing a metal, and producing a metal is not the same as producing a magnet alloy with the chemical composition and physical characteristics required by a commercial magnet manufacturer. Each step requires specialized equipment, metallurgical expertise, process control, and customer qualification. ASM has established an operating capability in the stages of this supply chain that remain particularly underdeveloped outside China.

The plant’s currently reported installed nameplate capacity is approximately 1,300 metric tons annually of neodymium-iron-boron alloy. ASM is carrying out a second expansion phase intended to increase this capacity to 3,600 metric tons annually. During the first half of 2026, the company completed the installation of eight additional molten salt reactors, bringing the total to twelve. A second strip caster, with a planned annual capacity of 2,000 metric tons, is also part of the expansion program. The existing installed capacity and the larger planned capacity must not be confused. The latter depends upon completion, commissioning, and successful operation of the additional equipment.

I was particularly impressed by the quality of the plant’s laboratory facilities. The quality-control and research and development operations appeared thoroughly modern, professionally organized, and appropriate to the requirements of an advanced metallurgical manufacturing business. This is a subject investors frequently pay insufficient attention to. In the rare earth industry, producing a metal or alloy is only the beginning of the manufacturing process. Reproducing the required chemical composition, controlling impurities, establishing

consistent product characteristics, and demonstrating those characteristics to a customer is what distinguishes a commercially useful operation from an experimental one.

A modern quality-control laboratory is not an accessory to a rare earth metal plant. It is an essential part of the production process. Customers purchasing materials for high-performance permanent magnets cannot accept uncontrolled variations in composition or product characteristics. The value of a rare earth metal or alloy is therefore determined not simply by the presence of the desired elements but by the manufacturer’s ability to deliver a reproducible product that meets a customer’s specifications. The facilities I saw at Ochang gave me confidence that ASM’s management understands this distinction.

Equally impressive was the company’s commitment to research and development. Rare earth metallization is a specialized field in which incremental improvements in process efficiency, yield, impurity control, and equipment utilization can make the difference between an economically competitive producer and one that survives only through subsidies. The ability to investigate and implement such improvements within an operating manufacturing organization is, in my opinion, a significant competitive advantage.

ASM has also been developing the capability to produce the heavy rare earth metals dysprosium and terbium, which are particularly important in the manufacture of permanent magnets intended to operate at elevated temperatures. The company reported its first commercial sales of these metals in 2025 and has continued development of its heavy rare earth metallization equipment. This is an important undertaking because heavy rare earth metal production outside China remains extremely limited. Establishing a reliable, commercially scalable production process for these

materials would substantially increase the strategic importance of the Korean Metals Plant.

I should emphasize that my favorable assessment of the facility is not intended to suggest that all of its installed capacity is already being utilized or that every product under development has reached sustained commercial production. ASM’s published operating reports make clear that production volumes are still being increased and that additional equipment is being commissioned. This is the normal progression of a developing industrial operation. What matters is that the company has established the physical, technical, and organizational foundation from which it can expand production in response to actual customer demand.

Perhaps the most encouraging aspect of my visit was the quality of the management professionals whom I met. I found them to be outstanding. They impressed me as technically knowledgeable, commercially realistic, and thoroughly familiar with the practical problems of operating and expanding a sophisticated metallurgical manufacturing facility. Their approach was that of industrial professionals focused on producing qualified materials efficiently and consistently, rather than promoters primarily concerned with how large their future production might become.

In my experience, competent industrial management is as important as the underlying technology. A metallurgical process does not become a successful business simply because it works in a laboratory. It must be engineered into a reliable production system, operated by trained personnel, supplied with appropriate raw materials, maintained economically, and integrated with customers’ purchasing requirements. The management team I met at Ochang appeared to understand these requirements exceptionally well.

This offers a larger lesson for governments and investors trying to establish rare earth industries outside China. Much of the public discussion still focuses on mineral resources, mining projects, and the separation of rare earth oxides. These activities are necessary, but they are not sufficient. The ultimate industrial objective is the manufacture of useful products, and the essential intermediate stages of metal production and alloy manufacturing cannot simply be assumed into existence.

The Korean Metals Plant demonstrates that these intermediate capabilities can be established outside China. It also demonstrates why their development requires much more than access to a mineral deposit. The equipment, laboratories, operating procedures, technical personnel, management, and relationships with industrial customers must all be developed together.

ASM's Korean operation is particularly relevant to the proposed reconstruction of the American rare earth permanent magnet supply chain. The United States does not need merely to announce additional rare earth metal and alloy production capacity. It needs to establish the ability to manufacture commercially qualified products, at predictable costs, in quantities justified by actual demand. The experience accumulated at Ochang could help establish comparable operations in the United States.

The question of raw material supply remains, of course. The Korean Metals Plant currently depends upon externally sourced rare earth feedstocks. The development of reliable sources of separated rare earth oxides outside China will therefore remain an important factor in the plant's long-term competitiveness and supply security. But this should not obscure the achievement the plant represents. ASM has already established a significant portion of the downstream manufacturing capability that so many

other companies are still proposing to build.

I left the Korean Metals Plant with a very favorable impression of both the facility and the people operating it. The complex is substantial, the laboratories are impressive, the installed manufacturing equipment is real, and the management professionals are among the most capable I have encountered in this industry.

For investors, the lesson is straightforward. Industrial capability should be judged by what has been built, what has been demonstrated, what can be produced reproducibly, and what customers are prepared to purchase. Announced capacity is not production, and production is not necessarily a qualified commercial product.

Australian Strategic Materials has made a substantial investment in establishing genuine rare earth metallurgical manufacturing capability in South Korea. I believe its Korean Metals Plant deserves recognition as an important achievement in developing a rare earth supply chain outside China.

After sixty-four years in this business, I am not easily impressed by industrial promises. I am, however, impressed by competent people operating real manufacturing facilities. That is what I saw at Ochang.