

ReElement Technologies Achieves Greater than 99.5% Purity of Separated Rare Earth Elements from Ore Feedstock

ReElement produces greater than 99.7% Neodymium (Nd) and 99.9% pure Neodymium / Praseodymium (NdPr) from a rare earth ore concentrated feedstock

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[ReElement](#) Technologies Corporation, (“Company”) a leading provider of high performance refining capacity of rare earth and critical battery elements, announced today that it has demonstrated its technology in the separation and purification of rare earth ores to produced separated and purified rare earth elements at magnet grade. The demonstration process was conducted from an ore concentrate provided by a partner to showcase the Company’s ability to extract, separate and purify the high-value elements in the ore body that can supply the rare earth magnet supply chain.

Mark Jensen, CEO of ReElement Technologies said, “Our team has mobilized quickly on a very large and attractive opportunity in the rare earth ore separation and purification market. With today’s announcement we have demonstrated our teams ability to separate and purify magnet-grade rare earth elements cost effectively from rare earth ore concentrate. We announced our expansion to all feedstocks in April of this year and have quickly been turning around customer samples that are looking for a more cost effective and environmentally friendly method to sperate and purify rare earth elements from ores that do not utilize a solvent extraction process



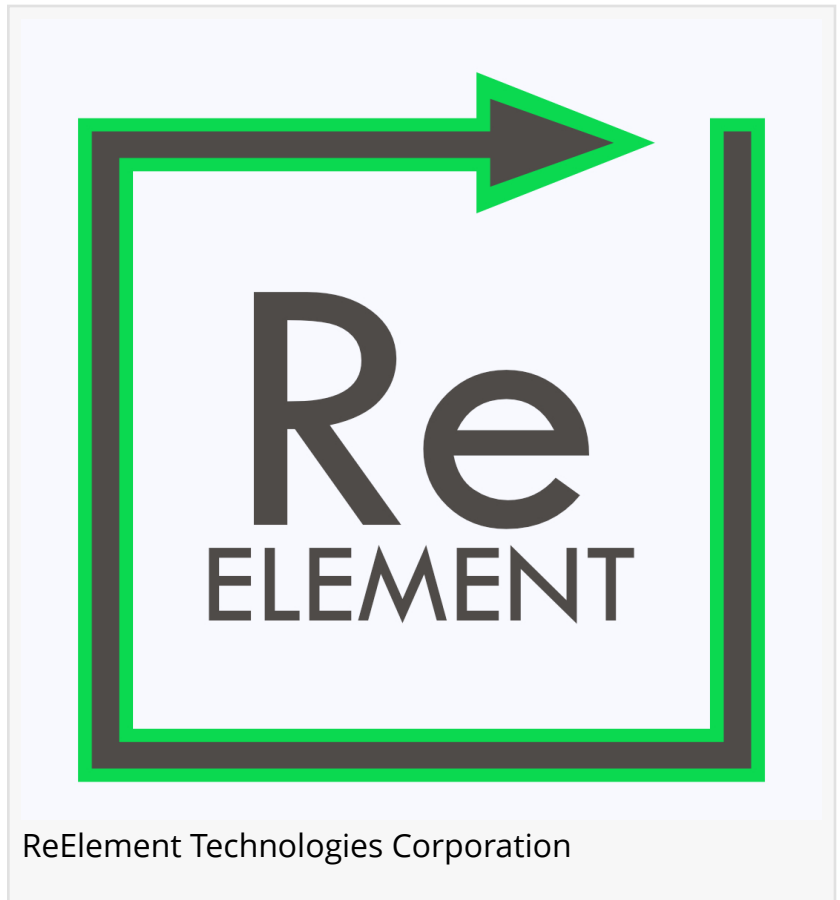
99.5%+ PURE SEPARATED RARE EARTH ELEMENTS FROM MINERAL ORES

07.31.2024

FINITE RESOURCES MADE INFINITE

ReElement confirms that mixed rare earth concentrates from both natural ore and recycled magnets are highly economical at both small and large scale in today’s market

in the separation and purification phase of the refining process. The solvent extraction process, largely utilized today in China, has proven to be very challenging to deploy outside of China due to the process's severe environmental impact, high CapEx and OpEx requirements and limited flexibility. Today, we are excited to share the high efficacy of our technology platform to achieve the desired results with natural ores, but that we can deploy anywhere in the world due to our platform's cost and operating efficiencies and environmental safety. We look forward to scaling our production capacity in Marion, Indiana with our initial production trains being focused on recycled magnets and rare earth ore concentrates from our worldwide partnerships."



ReElement Technologies Corporation

In April of 2024 ReElement announced it has expanded its exclusive use of the patents for ligand assisted displacement ("LAD") chromatography and knowhow for all feedstocks to now include

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Mark Jensen, CEO ReElement Technologies Corporation

rare earth ores. These exclusive patents and technologies, developed at Purdue University, have been utilized by ReElement at its Noblesville, Indiana Commercial Qualification Facility to produce ultra-pure rare earth oxides and critical battery elements to the growing magnet and energy storage industries. ReElement has successfully developed its critical mineral platform technology providing a high performance and scalable solution for separating, purifying and refining rare earth and critical elements in an efficient, low cost and environmentally safe

process outside of China.

ReElement is currently evaluating or in conversations with providers of rare earth ores from four different continents with the goal of either partnering with such parties or acquiring their rare earth concentrates to be refined domestically. Rare earth elements (REEs) include the 15 elements in the lanthanide series plus scandium (Sc) and yttrium (Y). REEs are essential ingredients for high-end commercial and national defense applications in magnets, metal alloys,

catalysts, ceramics, and phosphors, which are important for high-technology and clean energy applications. The REE market was valued at \$5.37 billion in 2022 and is expected to reach \$14.24 billion by the end of the 2030, while being critical inputs in products and applications valued at over \$4 trillion.

Ligand Assisted Displacement (“LAD”) Chromatographic Separation and Purification

The use of LAD chromatography to separate, purify and refine rare earth and critical elements is the most cost effective and environmentally safe methods utilized to date. LAD chromatography, as designed for rare earth element extraction and purification, is a much cleaner and greener purification process compared to conventional solvent-based extraction methods. It has a higher yield, productivity, flexibility and efficiency allowing for smaller and scalable processing volume without the harsh or toxic chemicals.

The technology enables:

- Modular and scalable production capacity (growing processing volumes efficiently as feedstock production expands);
- Localization of processing (Removing the need to transport raw ore across the world);
- Significantly less chemical and energy use; and
- Versatility of technology for multiple feedstocks (ores, recycled material, etc.).

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