Precision Periodic Announces the Successful Extraction of 80% Total Rare Earths in a Five Minute, Single Pass from Phosphate Mine Waste

**Precision Periodic announces the successful results of rare earth extraction projects for Florida Industrial and Phosphate Research Institute. Using their proprietary reusable Thor REE Nano-filter they captured 80% of the total rare earths in a five minute single pass-through including the radioactive elements. The filter can be reused for thousands of cycles and is highly scalable for all size applications.**

Orlando, FL, July 29, 2019 --(PR.com)-- Precision Periodic announces the successful results of projects for Florida Industrial and Phosphate Research Institute capturing, extracting and separating Rare Earth Elements (REE) out of both phosphoric acid and the resulting waste using the reusable Thor nano-filtration system. The filter captured 40-60% of the rare earth elements and radioactive elements in a five minute single pass-through from wet process phosphoric acid and 80% of the rare earth elements in a five minute single pass-through from sulfuric acid leached waste.

“The successful test projects proved that the Thor nano-filtration technology could be a game-changer for US production of its own rare earth elements supply,” says Brian J. Andrew, CEO of Precision Periodic. He continues, “The phosphoric acid contains 150 ppm of total rare earths. Based on our extraction capabilities, we could extract 75 grams of total rare earths out of every 1,000 liters of phosphoric acid from a phosphate mine. This equates to one Florida phosphate mine being able to produce 230 metric tons of total rare earths per year which would supply an estimated 25% of the annual US Military needs.”

Florida Industrial and Phosphate Research Institute provided two different source liquids for the test projects. The first was the wet process phosphoric acid which contained radioactive elements and the second being a sulfuric acid leach liquid of the sludge waste. The Thor nano-filtration system captured 45-55% of the radioactive elements which exceeded the goal to establish the waste as viable for other uses.

Unlike other REE filters, heavy metals are not an issue for Precision Periodic. Along with their REE filter, Precision Periodic also has another version that can filter out the heavy metals.

There is no limitation on throughput through the filter and it can be designed around any application. The largest filter built to date handles 9,000 gallons an hour. This size filter will hold from .5 to 1.2 kilograms of rare earth elements, precious metals, or heavy metals. The filter can be used for thousands of cycles before reconditioning or replacement is needed.

Precision Periodic partners with companies to provide their filtering capabilities for extraction and refining of both rare earth elements and precious metals. The REE filter is currently available for partnership projects.

About Precision Periodic:
Precision Periodic has developed a proprietary nano-filter's for extracting and releasing multiple rare earth elements, precious metals, heavy metals and/or radioactive elements out of acidic liquids. Their process has been validated by Florida Industrial and Phosphate Research Institute and they are support by the University of Central Florida (UCF) Business Incubator Program.

About the UCF Business Incubation Program:

The University of Central Florida Business Incubation Program is a community resource that provides early-stage companies with the tools, training and infrastructure to become financially stable, high growth/impact enterprises. Since 1999, this award-winning program has helped over 390 local startup companies reach their potential faster by providing vital business development resources. For more information, visit www.incubator.ucf.edu.
Contact Information:
Precision Periodic
Jo Ellen Andrew
407-557-2000 x123
Contact via Email
PrecisionPeriodic.com

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