

FEECO International Helps Aging Catalyst Plants Reduce Costs Through Optimized Rotary Kiln Design

FEECO International is helping catalyst manufacturers to optimize kiln sizing through increased loading for a more efficient operation.

GREEN BAY, WI, UNITED STATES, March 11, 2025 /EINPresswire.com/ -- As aging catalyst plants face the challenge of replacing decades-old [calcination kilns](#), FEECO International is helping producers significantly reduce capital and operating expenses by optimizing replacement kiln designs.



FEECO Indirect Rotary Kiln

While many producers default to ordering a direct replacement for their existing kiln, what they often don't realize is that these original kilns were designed with unnecessarily large dimensions based on outdated industry practices. An OEM with extensive experience in the industry, FEECO has worked with multiple catalyst producers to optimize their kiln sizing, proving that many systems can be sized more efficiently—leading to lower capital investment and improved operational efficiency.

Optimizing Kiln Size for Efficiency

Calcination is a critical step in catalyst production, ensuring the chemical “curing” necessary for optimal performance. Historically, catalyst kilns have been designed with a low material loading of around 3%, whereas other industries operate closer to 10% loading. This conservative approach has been effective but is highly inefficient, inflating energy costs and requiring longer run times.

By increasing material loading in new kiln designs, FEECO helps catalyst producers achieve:

- Increased Capacity – Optimized kilns can process more material in the same timeframe, allowing for increased production rates or reduced operating hours, translating to lower labor and energy costs.

□ Lower Capital Costs – A smaller, more efficiently sized kiln means a reduced initial equipment investment and a smaller footprint on the production floor.

“This can be a major cost savings for producers needing to replace old equipment,” explains Alex Ebben, FEECO Process Sales Engineer and thermal processing expert. “They not only walk away with a lower upfront cost, but they continue to accrue savings through lower operating costs in the long term as well.”

Mitigating Risk Through Pilot Testing

Many catalyst producers are understandably hesitant to modify their kiln design, fearing disruptions in quality or production. FEECO eliminates this risk by providing proof of process through testing in the [FEECO Innovation Center](#), a state-of-the-art facility equipped with batch and pilot-scale rotary kilns.

By simulating increased loading and other process adjustments in a controlled environment, FEECO ensures that new kiln designs will meet production demands while maintaining product quality. The Innovation Center’s precise testing capabilities also allow FEECO to offer process guarantees, providing manufacturers with confidence in their system.

Producers also have access to testing other types of production techniques essential to catalyst manufacturing in the Innovation Center, including:

- Agglomeration (wet granulation)
- Drying
- Coating
- Catalyst regeneration and material recovery

As the catalyst industry modernizes aging production equipment, FEECO is leading the way in kiln optimization, delivering cost savings and efficiency improvements that keep producers competitive. In addition to custom kiln manufacturing, FEECO provides parts and service support, including process audits, spare parts provision, and refurbishment, ensuring peak performance for both FEECO and non-FEECO kilns.

To learn more about how FEECO can optimize your rotary kiln design and reduce costs, visit [FEECO.com](https://www.feeeco.com) or contact Alex Ebben.

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