

Expansion of Process Advancement Center in Indianapolis Provides Sustainable PO Process on Semi-Works Scale

February 5, 2020



Members of Ingredion's Executive Leadership Team celebrate the opening of the new Process Advancement Center in Indianapolis, Indiana. Pictured top row, left to right: David Fame, Manish Shah, Bob Stefansic, Jim Zallie, Tony DeLio, Jorgen Kokke, John Adeosun, Abhay Borkar. Bottom row, left to right: Anna Newmaster, Drew Kochell, Chris Kniola, Nathan Wiley, Paul Werner, Sarah Pleasant, Josh Smith and Ken Lawrance.

INDIANAPOLIS, Indiana – On January 8, the Indianapolis manufacturing plant held a ribbon-cutting event to celebrate the opening of an expansion to the Process Advancement Center (PAC), which added 1,800 square feet to the existing facility and tripled its footprint. Jim Zallie, President and Chief Executive Officer, and several members of the Executive Leadership Team attended the event.

“It is truly amazing what a good idea can develop into when you have the guidance and resources from our engineers, operators and maintenance personnel working together toward a common vision,” said David Fame, Senior Manager, Site Projects and Engineering, who managed the project. “This new process has the potential to greatly impact Ingredion’s manufacturing capabilities of PO [propylene oxide]-treated starches in scale, efficiency and sustainability.”

After the Global Research and Development team completed the development of a new process for making PO-modified products with promising results on the lab-/pilot-scale at our Bridgewater facility, Ingredion’s Business Leadership Team approved the capital for the semi-works unit installation to fully demonstrate the alternative technology, while minimizing the business risk of going directly to full commercialization. “With key processing capabilities installed, the versatile system can be used to develop and advance the manufacturing innovation for the dry/semi-dry thermal processing of different base materials,” said John Adeosun, Senior Engineering Associate, Global Research and Development.

The new PAC area is setup in a vertical configuration with half of the area for storage and the other half for processing. The process developed shortens the reaction time from 18 to 24 hours to less than five hours, with a more efficient usage of PO reagent, and without using sodium sulfate salt for processing. These enhancements make the semi-dry state PO process significantly more sustainable by shortening the reaction time, and reducing water consumption and wastewater treatment costs. This provides Ingredion the opportunity to install the process in regions with challenging regulatory limits on effluent salinity and thereby driving regional self-sufficiency.



Members of the ELT and Global Research and Development tour the Process Advancement Center in the Indianapolis plant.

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“This semi-works capability will enable Ingredion to validate these benefits on a much larger scale than the lab and prove its commercial viability,” said Abhay Borkar, Senior Director, Process Technology and Innovation Process Management. “Deploying this technology in future capacity expansions will deliver manufacturing cost savings that enable margin protection and provide competitive advantage to Ingredion.”