



Advanced Process Control gave Significant Growth in Throughput and Yield at a Catfish Rendering Plant

CHALLENGE

Protein Products is a fishmeal and oil production facility located in Sunflower MS. Protein Products processes the inedible fish waste from the US farmed catfish industry. Through their process, the inedible fish parts are converted into high quality feed ingredients for the pet, aquaculture, and feed industries.

Protein Products observed some challenges in maintaining high capacity and keeping the moisture level in their final product at the desired level, and for this reason they decided to get in contact with CORE to optimize their current processes. Specifically, they were experiencing:

- Variations in the residual moisture in the meal due to large variations in the discharge temperature from the cooker.
- Reduced throughput and capacity.
- Lower energy efficiency.

SOLUTION

Protein Products took advantage of CORE's Advanced Process Control (APC) and Optimization package. Implementing CORE APC for their cooker and presses, the entire production process was optimized and a more effective and sustainable production was achieved. This has allowed Protein Products to meet the demanding needs of their customers with better yield and quality while achieving improved energy efficiency and throughput.

RESULTS

In close collaboration with CORE, Protein Products keeps improving their results. In the first year after adding CORE APC to their operation, Protein Products achieved:

- **31 %** increase in throughput
- **23 %** increase in residual moisture in the meal
- **18 %** decrease in thermal energy consumption
- **42 %** reduction in discharge temperature variations

Industry

- Fishmeal

Process optimized

- Dry Rendering
- 1 Cooker
- 3 Presses

Country

- United States

Company

- Protein Products Inc.

"We are encouraged by the results we are seeing due to the CORE system. I got nothing but positive feedback from our operators, they all love it. The system has made the operation easier with better results."

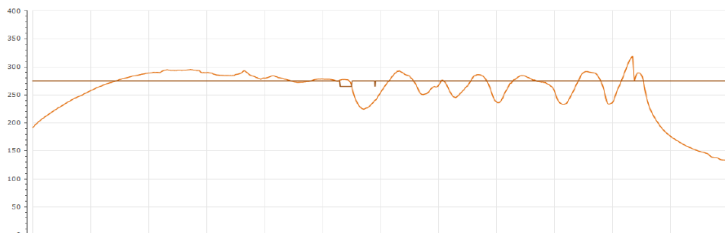
- Jeff Gay

Protein Products

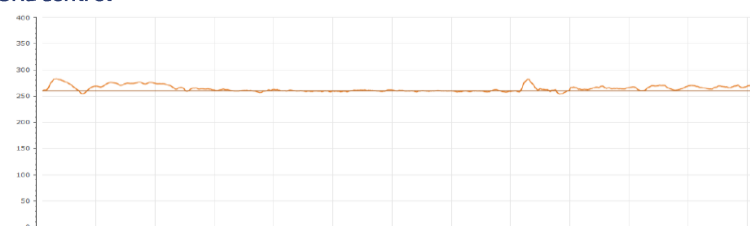
STORY DETAILS

Below is shown two 24-hour trend curves that illustrates an example of the stabilization of the discharge temperature of the cooker using the CORE advanced cooker controller.

Before CORE – manual control

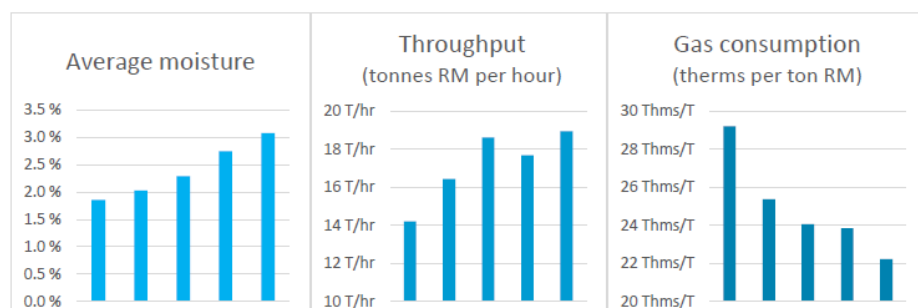


With CORE control



Cooker - Discharge temperature variations reduced by 42%.

In the first year after implementation, the optimization process gave significant improvements in moisture in meal, throughput was increased, the energy efficiency increased and generally a better overall operation of the plant was achieved. Protein Products and the CORE team continue to work together to address changes in process, equipment, personnel and other factors that can impact production.



Quarterly results from mid 2018 to end of 2019.

About CORE A/S

The DNA of CORE is about stable sustainable savings. We are focused on optimizing your energy efficiency, yield, product quality, capacity, reducing the level of your investment and increasing your profit. We deliver the world's most sophisticated advanced self-learning controllers, which within a few years have spread across the globe based on the significant savings CORE has provided, especially to the industry for animal by-products and fish processing. A partnership with Haarslev Industries was established in 2016.

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CORE BUSINESS VALUES

Advanced Process Control

- Improved stability
- Consistent quality of the final product
- Higher throughput, capacity and yield
- Reduced energy costs
- Reduced maintenance

CORE SERVICES AVAILABLE

CORE's optimization package

- Remote support
- Controller monitoring
- Optimization
- Visualization
- On-site visits
- Examination reports

CORE