

Poultry Rendering Plant Optimizes their Production Processes Achieving Significant Improvement in Cooker Performance

CHALLENGE

3D Corporate Solutions provides quality pet food ingredients and exceptional supply chain solutions to trusted pet food manufacturers. They are committed to excellence in the proteins, fats, and oils they produce.

As 3D strives to lead the marketplace in customization and innovation, they decided to look for better ways to make their current processes at Pet Solutions more sustainable and stable day after day. They were experiencing:

- Disparities in residual moisture and meal quality due to large variations in the discharge temperature from the cookers.
- Reduced throughput and capacity.
- Moderate energy inefficiencies.
- Large variations in press amperage equating to variations in product quality and lower yields.

SOLUTION

Pet Solutions, an affiliate of 3D Corporate Solutions, was first introduced to CORE Advanced Process Control (APC) system in 2017. In a phased approach, they proceeded to install CORE on their first production line. Implementation of CORE APC occurred on 1 cooker and 2 presses. Based on positive performance improvements on their first line, in 2019 3D decided to replicate their success and installed CORE on a second cooker.

RESULTS

Overall results of CORE APC on Pet Solutions' production lines:

- Line 1
 - ✓ **0.25%** increase in average meal yield.
 - ✓ **35%** reduction in discharge temperature variations.
- Line 2
 - ✓ **0.5%** increase in average moisture in the meal.
 - ✓ **18%** reduction in discharge temperature variations.

Industry

- Poultry, Ingredients

Process optimized

- Dry Rendering
- 2 Cookers
- 2 Presses

Country

- United States

Company

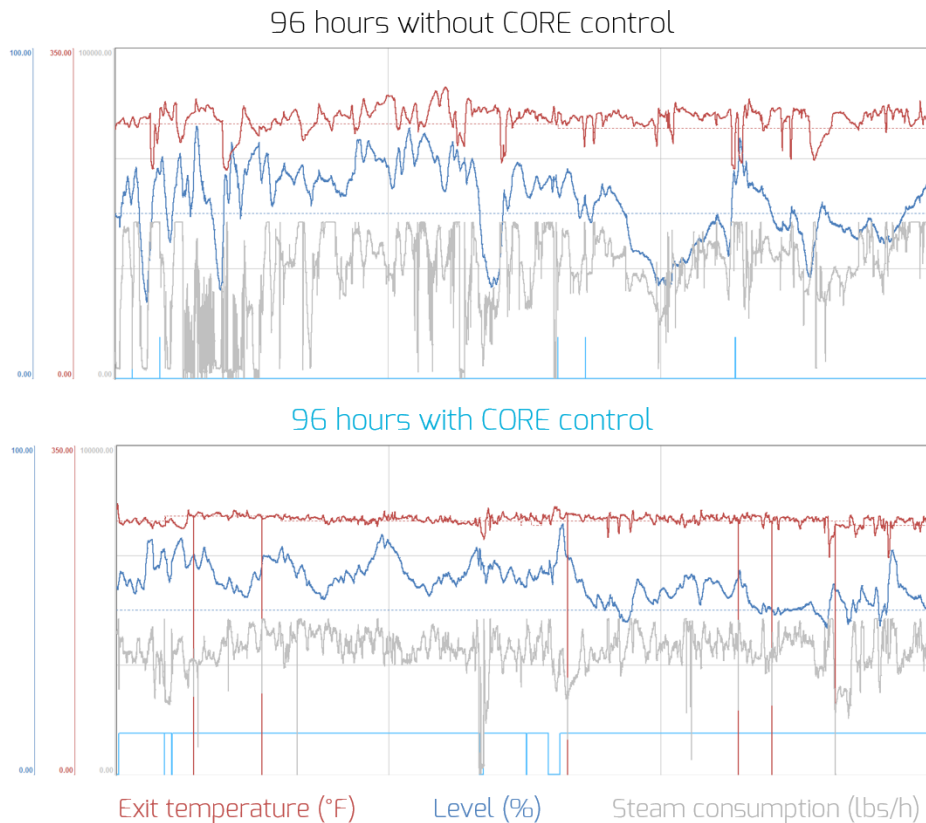
- 3D Corporate Solutions

“The capabilities of the CORE technology far exceeded the expectations we had. It allowed us to bring the moisture in the product up nearly one percent.”

*Dan Price
Division Manager
Pet Solutions*

STORY DETAILS

The 96-hour trend curves below show the difference in operation between manual operator control and CORE APC controlled production. With CORE control, significant stabilization of the **Exit Temperature** is accomplished.



Top: Cooker - Discharge temperature without CORE control.

Bottom: Cooker - Discharge temperature with CORE control, variations reduced over 18%.

In summary, the cooking and press processes have been improved with significantly lower variations, allowing for a higher energy efficiency, reduced quality variations, and a higher throughput.

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