CORE

How a Fish Processing Plant Optimized their Production

CHALLENGE

One of the leading suppliers of fish meal in Northern Europe has excellent loading facilities and a state-of-the-art production plant. Products are acknowledged and valued as efficient ingredients in nutritional and functional feed for the aquaculture, agriculture and pet food industry.

The customer wants to expand their instrumentation and automation of production with a view to further optimizing their production processes and establishing a platform that provides significantly better visualization, analysis and control of production. They experienced the following challenges:

- Large variations in the discharge temperature from the fish cooker.
- High energy consumption.
- Variations in press amperage, lower oil yield and higher energy usage in drying the press cake.
- High number of production stops.

Industry
- Industrial fisheries

Process optimized
- Wet Rendering
- Fish cooker
- Twin screw press

Country
- Denmark

SOLUTION

The purpose of optimizing the control of the fish cooker and associated twin screw press was to achieve lower energy consumption, increased capacity and improved oil yield. A particular focus was on increasing stability of the discharge temperature from the fish cooker. For the wet press, the focus was on reducing amperage fluctuations and thereby reducing the oil content in the press cake´s dry matter as well as reducing the excessive press torques, that cause production stops. In order to achieve these improvements, CORE's advanced process control (APC) was implemented.

RESULTS

After adding CORE APC to their operation, they achieved:

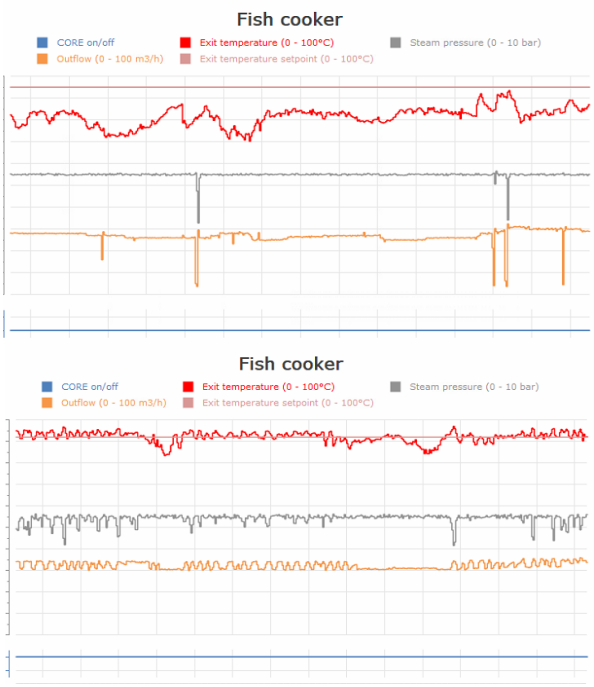
- **3%** increase in throughput
- **3%** steam savings
- **1.2%** oil yield increase
- **22%** reduction in torque variations
- **8%** increase in average press torque, leaving less water and oil in the press cake

Reduce your carbon footprint!

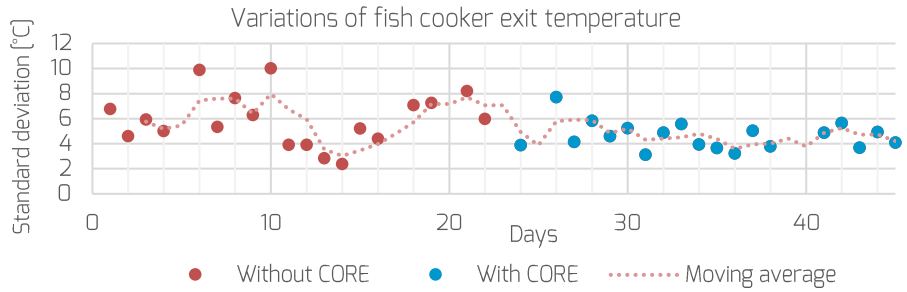
Presently, the CORE controllers saves the environment for 30,000 tons CO_2 every year, and for every new installation this number grows with 500 - 1,500 tons CO_2.

STORY DETAILS

The trend curves below show some of the results obtained by the implementation of the advanced CORE controllers.



Top: Without CORE control. Bottom: With CORE control.
Fish cooker with CORE - Changes in the output flow ensure that the outlet temperature is maintained at the set point while maintaining a stable high steam pressure.



With CORE, the standard deviation of the discharge temperature is stable below 6°C.

The control has reduced the variations in the fish cooker output temperature and optimized the fish cooker flow without compromising the required outlet temperature. For the press, the average torque has been increased and the peaks in the press torque that previously led to production stoppages have been avoided.

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

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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