Case Study

ZSK Extruder at Tetra: Control System Upgrade in Record Time

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Coperion has successfully modernized the entire control system of a ZSK production extruder at Tetra, the leading manufacturer worldwide of fish food and water conditioners, within just a few weeks time. The ZSK extruder, which has been operating at high capacity for over 30 years producing various types of fish food pellets, has been upgraded with a new control unit and main drive. This retrofit updates the entire automation to the latest standards, improving performance and efficiency.

Within a few weeks, Coperion successfully implemented a comprehensive control system upgrade, allowing Tetra’s ZSK twin screw extruder to once again produce fish feed pellets at full productivity and efficiency. (Picture: Tetra, Melle, Germany)

Following this control system upgrade, Tetra can once again fully exploit the high productivity and efficiency of their ZSK extruder, which is consistently producing high quality fish food at full machine availability. Moreover, the update to the ZSK extruder’s automation allows for easy implementation of future upgrades and expansions. Any new guidelines can be seamlessly integrated into the production process. At the same time, energy savings can be expected thanks to the installation of a reluctance motor.

Control Upgrade in very short Time ensures rapid Return on Investment

Tetra has successfully produced fish food pellets for many years using the Coperion ZSK twin screw extruder at very high production capacity. Throughout its long operational life to date, Tetra has regularly implemented smaller upgrades to the production line. However, they now faced the task of a comprehensive modernization of the control system, where the challenge lay in the extruder’s high usage rate due to ongoing orders. There was only a very short window available during the annual shutdown period to perform the entire upgrade.

The extruder main drive’s control system was swapped out in the shortest possible time and the ZSK extruder’s entire automation was updated to the latest state of the art. (Picture: Tetra, Melle, Germany)

Tetra and Coperion were determined to make optimal use of the available time. During an intense coordination phase, Coperion service technicians and Tetra operation and maintenance personnel prepared a detailed plan of every necessary step. The motor, drive, and the control and drive cabinets were swapped out in no time. The automation was entirely updated and equipped with the latest Siemens components. The ZSK extruder was put back into production at full capacity according to plan.

“The ZSK extruder has been the heart of fish food production at Tetra for many years. Due to the extruder’s high production load, we only had a very brief time period available to complete the extensive modernization of the ZSK’s control system. The first-class coordination with Tetra’s team made it possible for us to optimally plan the complete upgrade and implement it in the shortest possible amount of time. Now Tetra once again has a state-of-the-art ZSK extruder that incorporates the latest technology and ensures maximum performance. We wish Tetra continued success with this ZSK twin screw extruder and we look forward to further collaboration”, Stefan Lachenmayer, Director of Sales – Aftermarket Performance Material at Coperion, said proudly.