Honeywell

BSK Improves Extrusion Coating Results with Honeywell's Integrated Solution

"The single vendor solution offered by Honeywell for temperature controls, gauge measurement, speed control and profile control together with its process knowledge gives us a solution we can count on for improved performance."

Mike Speller, Manufacturing Manager, BSK Materials

Background

In 1986, BSK Materials installed an MX 2002 extrusion coating system with integrated controls of extruder and die temperatures. After 17 years of use, BSK migrated to Honeywell's HC900 hybrid controller integrated with the MXProLine™ quality control system. By keeping the installed scanners and sensors while replacing the 2002 system components, BSK created value without unnecessary expenditure or risk. By automating the production process in a single system, BSK has experienced increases in productivity and product quality.

Challenge

After using the same Honeywell measurement and control system for 17 years, BSK decided it was time to consider migrating the system to overcome the linkages to obsolete third-party temperature controllers.

Despite years of continuous use, the scanners and sensors were still in good condition and the investment needed to be protected. The third-party controller needed to be replaced and integrated with the line controls.

Based on a long, successful history, BSK believed that Honeywell had the technology and expertise to deliver a cost-effective solution that would help BSK to maintain its world-class role in the extrusion coating market.

Solution

After an audit of the installed systems, BSK decided to upgrade to Honeywell's MXProLine system integrated with the HC900 hybrid controller. The MXProLine system utilizes the existing scanners and sensors, a tribute to the quality and longevity of Honeywell engineering.
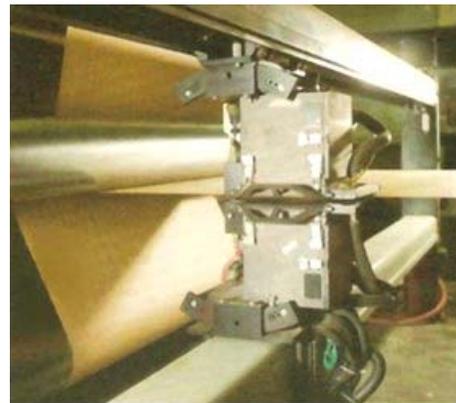
Scanning coat weight sensor

Honeywell's integrated solution was installed on one of three coating lines at BSK. All have Honeywell control systems helping BSK to produce the highest quality product, increased throughput and raw material savings.

MXProLine's operator interface provides a single window to the process.
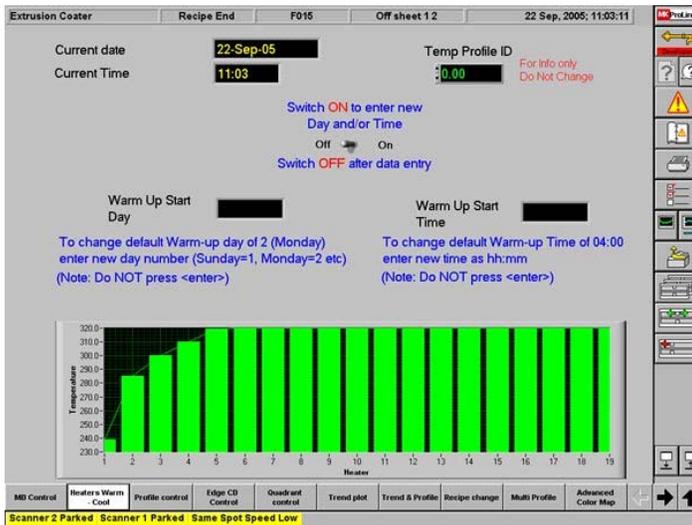
The HC900 hybrid controller, with its operator-friendly interface, provides control of all extruder and die temperature zones, control of line and screw speeds, and monitors inputs from several instrumentation devices to optimize the performance and availability of the machine.

All extruder zone temperature setpoints are stored and downloaded from the MXProLine system, providing BSK with:

• Temperature setpoints by product recipe

• Warm-up and soak temperature setpoints

• Cool down and setback temperatures

• Monday morning startups

Integrated line control with Honeywell's HC900 and MXProLine means better control of throughput and coating weight quality. Throughput optimization maximizes production within multiple recipe-dependent operating constraints. Target adaptive control minimizes coating without violating recipe-dependent quality constraints. Extruder temperatures are set up and supervised on a recipe basis with automatic warm-up from cold start.

Integration is complete with MXProLine's automatic profile control, using robust mapping models and predictive model-based control to achieve best-in-class standards in cross-directional control performance. Integration is enhanced through MXProLine's advanced process controls, fully able to decouple interactions between controls to avoid quality upsets during transient process conditions.

MXProLine™ is a trademark of Honeywell International Inc.

More Information
For more information on MXProLine and HC900, visit www.honeywell.com/ps or contact your Honeywell account manager.

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