Mondi Increases Production and Quality at Russian Paper Mill with Experion

“Two key goals at our mill were to replace obsolete technologies and to increase the quality and production of our products. Honeywell has helped us do just that and has been a vital partner in this revitalization project.”

Vladimir Moskokov, Deputy Discipline Manager, Mondi Syktyvkar

Benefits
As a leading producer of pulp and paper in Russia, Mondi was eager to increase the overall capacity of its paper machines at its mill in Syktyvkar. The company faced challenges with inadequate pulp supplies and relied on third-party suppliers for the additional pulp. Mondi decided the right solution was to build the necessary infrastructure to generate adequate amounts of pulp and that required the installation of a new pulp line. In order to create a new pulp line, Mondi needed to build a new chemical regeneration plant, including a new soda boiler and wood yard. Mondi turned to Honeywell for a fully automated system for its chemical regeneration plant and wood yard.

Mondi Syktyvkar implemented Honeywell’s Experion® Process Knowledge System (PKS) with C300 controllers and Honeywell’s Field Device Manager (FDM) to manage the new wood yard, white liquor plant, new soda recovery boiler, new evaporation plant and two new cooling towers. The Experion system transforms process control beyond traditional distributed control system functionality by unifying people with process variables, business requirements and asset management. FDM simplifies tasks and enables remote management of smart instruments.

Mondi named the Syktyvkar upgrade project STEP, and it is the largest upgrade in the mill’s 40-year history. With the increased capacity, total paper and board production will amount to one million tons, a 20 percent increase over previous capacity. Additional benefits at the Mondi facility include:

- Increased safety of mill personnel
- Increased quality and competitiveness of products
- Decreased environmental impact of operations
- Better access to mill data allows operators to make faster, more informed decisions
- Enhanced overall mill efficiency and performance
- Data is now available in Experion graphics and displays so it is easier to view and analyze

Background
Mondi is an international paper and packaging company with production operations in 31 countries. The company is fully integrated across the paper and packaging process, from the growing of wood and the manufacture of pulp and paper, to the conversion of packaging papers into corrugated packaging and industrial bags. The group is principally involved in the manufacture of uncoated fine paper, packaging paper and converted packaging products, as well as specialty products.
Mondi operates one board machine within the mill at Syktyvkar, one of the largest producers in the Russian pulp and paper industry. Production capacity of this board machine is more than 200,000 tons of containerboard paper a year, a significant proportion of the mill’s annual production.

The Syktyvkar mill controls several logging companies in the Komi Republic that supply the mill with wood.

Challenge
Mondi has owned the Syktyvkar mill since 2003. The modernization and upgrade project called STEP was planned since 2006. The company wanted to increase the overall capacity of its paper machines but didn’t have enough pulp. In order to make enough pulp to meet its growth target, the project expanded to include a new chemical regeneration plant and wood yard. Project STEP will effectively rebuild the complex.

“We simply couldn’t produce enough pulp to meet our production needs,” said Vladimir Moskokov, Deputy Discipline Manager E&I, Automation Mill Expansion and Development Department, Mondi Syktyvkar. “We were relying on third-party suppliers to obtain the extra pulp.”

Solution
A longtime Honeywell customer, Mondi was familiar with Honeywell’s products and had experienced firsthand the benefits that could be achieved by advanced automation solutions. Mondi chose Honeywell’s Experion PKS, C300 controllers and Field Device Manager for its mill rebuild.

As a strategic partner in the STEP project, Honeywell helped Mondi Syktyvkar:

- Automate new wood yard capable of handling four million m³ of wood per year
- Rebuild white liquor plant with new lime kiln with the capacity of 700 tons of CaO per day
- Automate new soda recovery boiler with the capacity of 3560 tons of dry substances per day
- Automate new evaporation plant with the capacity of 550 tons of water per hour, and two new cooling towers

Honeywell’s Experion PKS and C300 controllers allow the Syktyvkar mill to operate with all energy and regeneration units. Field Device Manager provides the ability to perform common tasks on instruments remotely, greatly reducing the number of field trips required. FDM automatically highlights instruments that have faults or need diagnosis. FDM is integrated into Experion so that Mondi operators can view and configure FDM data via an embedded Flex Station client.

The aggressive plans of the project got the attention of the industry and Mondi Syktyvkar was given the 2010 Forest Lesprom Award for the Russian pulp and paper industry’s Investment Project of the Year. Mondi Syktyvkar also won the Lesprom award for the industry’s Most Dynamically Developing Company.

“The Syktyvkar STEP project is very far reaching. We essentially rebuilt the 40-year-old facility. Honeywell helped us replace obsolete technologies while at the same time increase the quality and production of our products. They have been a critical partner in this revitalization project,” said Moskokov.

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