“We have been able to solve our technical problems and meet our continuous needs for the most updated process automation technology without comprising initial investments. All our upgrades have been completed and we now have a solution primed for our future.”

Dag Skjeltorp, Chief Engineer, Borregaard, Ind. Ltd

Benefits

Since 2001, Borregaard has gone through various installation phases of automation control. The start of a five year project that culminated in a complete upgrade of the automation systems at the company, Borregaard now has six Honeywell Experion® Process Knowledge Systems (PKS) installed running on three different releases at its pulp mill in Sarpsborg, Norway. Utilizing both FOUNDATION Fieldbus and Profibus technology, the pulp mill helped establish a mill-wide standard that handled continuous upgrades and established a vertical migration strategy enabling the company to utilize new technology without any production loss.

Borregaard needed a partner for the long haul from the inception of the first system to the latest centralized controller. The company’s specifications included:

- Ability to standardize on a platform that afforded flexibility and increased reliability and efficiency
- Centralized control room with common operator interface for improved effectiveness and operator confidence
- New automated system to reduce number required resources and provide more accurate information for faster decision making
- Human Machine Interface (HMI) to help operators perform their jobs more efficiently and effectively

Background

Borregaard is an international company with strong global positions in wood-based chemicals and other selected niches of organic chemicals. The company develops and supplies specialty cellulose, lignin products and other wood-based specialty chemicals for a wide range of applications. Borregaard has 20 production plants in 12 countries and sales offices in Europe, America, Asia and Africa. Borregaard has 1,800 employees and expects sales to total NOK 5 billion (USD 800 million) in 2007.
Challenges
In 2001, two Honeywell PlantScape R400 systems were installed in Borregaard’s pulp mill and chemical plant in Sarpsborg, Norway. The installation was the beginning of a five year project focused on centralizing process automation under a single control room. Older PLC systems and Honeywell TDC 2000/3000 systems needed to be replaced or interfaced. During this period the project faced technical challenges and had to figure out the most expeditious way for a continuous upgrade from PlantScape R400 to Experion R210.

“We needed to continue our technology upgrade and investigated various migration paths,” said Dag Skjeltorp, Chief Engineer, Borregaard. “By employing a vertical strategy we looked to replace all system components in one process area – we really needed a new automation system and not just a 'band-aid' on the old one.”

Solution
With a long standing partnership already in place, Borregaard turned to Honeywell for an upgrade to an advanced Process Knowledge System. With a long term five-year timeline in mind, the company looked to replace its older PLC systems and outdated TDC 2000/3000 systems. The company executed a continuous and fast upgrade to the latest Honeywell Experion PKS systems.

“We looked for a supplier that could support our onsite needs in Norway and work with us and our current investments in various releases of their automation systems.” continued Skjeltorp

Upgrading from existing Honeywell technology was completed with the support of Honeywell’s services team and local support. With continuous evolution and backwards compatibility, Borregaard was able to upgrade the system to meet process control needs.

“We were clear to identify the project and develop models to identify our needs beforehand” continued Skjeltorp. “This included not only all the upgrades and patches we would need throughout the years, but also a three year services contract to help support our mission.”

From 2001 – 2005 (and to the present day), Borregaard implemented five different versions of Honeywell’s advanced control applications from Plantscape R400 to Experion R300 – the latest release of Honeywell’s powerful Process Knowledge System.

Borregaard also implemented FOUNDATION Fieldbus, which when integrated with Experion delivers outstanding system performance and unparalleled ease of use while reducing installation costs, decreasing commissioning time and lowering maintenance expenses.

“We are happy with our investment to date,” said Skjeltorp. “In looking at the project now, we see a centralized control room that is more automated and, as a result, more efficient and informative to help us make better decisions to improve our business performance.”