

PLANT FINDS HANDS-OFF CONTROL REWARDING

For Great Northern Corp., automation means combining order entry, trimming, corrugator control and material handling into one package

By Chris Howes
Managing Editor

THE MANAGEMENT TEAM AT Great Northern Corp., an Appleton, WI-based corrugated company, recently gained an appreciation for hands-off control.

Last year the company installed a system that links its corrugator's wet end, dry end and conveyors, finalizing the installation of a network of computers that completely automates the entire corrugating process, starting with order entry, moving through the scheduling function and ultimately ending with the plant's conveyors.

Now, customer orders are typed into a Harry Rohde Management System (HRMS) — this is the last time that order data are "touched" by human hands — and then downloaded to Corrugated Technologies Inc.'s (CTI) Corr-Trim® system, which puts the corrugator's schedule together and then loads that information through Corr-Link®, another CTI device used for data transfer, to the Marquip Data Master™ 3 (DM3). The DM3 transfers the information through even further, to the Copar wet-end computers, the Marquip dry-end computers and the Pentek conveyor system.

The Copar wet-end control uses the data to track roll-stock usage and provides synchronized splicing for roll changes, while the Pentek system can identify and track each unit coming off of the corrugator.

In the meantime, schedule data



The Marquip Data Master 3 is located in the corrugator control room at Great Northern. Information from the Corr-Trim scheduling system is downloaded to the Data Master and, through that, into the Marquip equipment, the Copar wet-end computers and the Pentek conveyor computers.

can be uploaded to the Harry Rohde Management System so that production analysis reports, run schedules, trim sheets and load tags can be printed. Also, history information can be uploaded to HRMS so that the consumer service department can determine the status of a certain order.

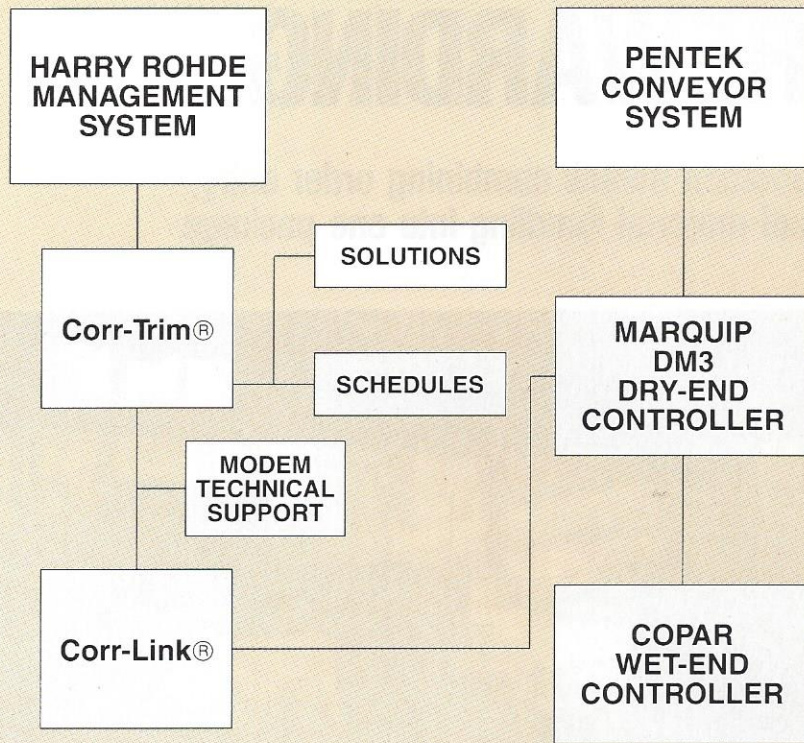
THE STORY REALLY FINDS ITS roots in 1987, when Great Northern first discovered the Corr-Trim system. Although they felt that the people who were already doing the scheduling could do it quite well without computer assistance, management decided to try Corr-Trim for a three-month trial period to at-

tempt to find the final pieces of a fully computerized order-entry and material-handling system.

A unique supplier relationship developed when Corrugated Technologies began working with Harry Rohde to develop an interface between the two companies' systems. Permanent installation of Corr-Trim took only a few days, although it was several weeks before the trimmers fully understood the interface and how to use the two systems together.

"Our people have adapted well," said Gene Coy, director of manufacturing services. "Computerization can cause some anxieties, and time is needed for complete understanding of new systems and com-

Great Northern System Configuration



fort levels to develop.

"We are fortunate to have employees who adapt to change. They seem to understand our ultimate goal of customer satisfaction."

Management came to have high hopes for the Corr-Trim system: to reduce side-trim waste and to increase average run width.

"Corr-Trim has given us a nice savings every year. For example, in 1990 we were again able to increase our average run width substantially, and the increase translated to a savings in excess of \$50,000," said Coy.

One secondary benefit has been that Corr-Trim forces runs into higher widths, enabling the company to cut roll-stock sizes, allowing for considerable space savings on the floor.

LAST YEAR CORR-LINK WAS added to the system, combining corrugator and conveyor operations into one seamless unit, meaning that "if the spec is entered correctly, everything else

should be completed correctly because it's downloaded automatically," said Coy. "There can be potential trouble with manual intervention, and a complete system helps to eliminate human errors."

Great Northern's scheduling office is in a different building than the corrugator, so in the past trimmers had to manually carry schedules across the road to the converting plant. The information is now transmitted by computer directly to the corrugator. In addition to saving scheduling time, the system frees up the corrugator operators' time for quality-related activities.

"Quicker reaction time is another benefit of this system," said Coy. Through Corr-Link, operators can change the schedule's running sequence, change information on orders, locate particular orders and setups, find chains of linked orders or calculate the total running time and lineal footage of groups of setups. Also, they can swap orders between cutoff

knives, calculate and display absolute slitter and scoring values, assign the score shaft and calculate the score-head polarity.

"There really is no disadvantage to the system other than the exactness required," said Coy about the linkup between the three systems. "We often do things in production out of the ordinary and find that there are still more improvements to be made with the systems to make them work correctly. It is a never-ending process to make improvements."

Designing a system that downloads spec sheet data is part of a process that results in fewer run errors and customer complaints. "That's why we keep chipping away at things like data transfer," said Coy. "If an outsider were to look at us, the payback might not seem to be there, but we think it's one more step to where we want to be years from now."

Great Northern's Appleton facility was started in 1962 as an independent corrugated converting plant and remains independent today. Shortly after its inception the company had another building constructed across the street from the main office building so that the corrugator and other high-speed converting equipment could be in the same location, making for a smoother flow of materials. The building housing the corrugator has more than doubled in size since it was built.

Today, in addition to the Appleton facility, a specialty corrugated converting plant with significant point-of-purchase display and packaging capabilities in Racine, WI, has been serving the country for many years.

"We've done some point-of-purchase work here," said Coy, "but we feel that there is a certain amount of expertise involved."

"We feel that Great Northern is a company that responds to market needs. As long as we have certain customers that want certain types of products, we will do what we can to make sure we can produce for them." ■