



APPLICATION NOTE

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Getting Credible Data on Cable Manufacturing

Cable-making is a continuous process, which can make it difficult to get accurate data on production and scrap. With its newest software version, the TSS monitor is adaptable to meet these needs.

Project Goals

Cable manufacturing is unlike many other types of manufacturing, in that each "piece" can be a continuous stream of product, hundreds of feet long. As a result, there are unique challenges to monitoring cable production, uptime of the process, and the byproduct scrap.

Honeywell Cable Products, a manufacturer of a variety of low voltage cables, was looking to expand their data collection, and make it more reliable. Their existing database was updated through manual reporting, but was contaminated with small errors, inaccurate quantities, typos, and gaps of time not accounted for.



Through the IMPAX products, they hoped to collect information (both on the footage of cable made and the number of completed pieces) that was tied more closely to actual production. They were also hoping to get more detailed information on any occurrences of material scrap, and on various adjustments made to the machine or the process.

Implementation Notes

In order to collect performance data, the IMPAX TSS machine efficiency monitor was selected by Honeywell's management. However, due to the application, the standard proximity sensor input was replaced with a high-speed input module to process an encoder input from the cable spindles. The runtime code was customized to allow calibration with each line's encoder. Additional monitor inputs were used to track each piece of cable as it cleared the take-up unit.

RUN	SCRAP ENTRY PAGE 2		12:00 PM 01/01/06
ENTER REASON FOR SCRAP			
SETUP	RE-SETUP	COLOR CHANGE	LINE BREAK
MISSED TRANSFER	DEFECTIVE RAW	DEFECTIVE WIP	PRINTER PROBLEMS
COMMISSIONING	MACHINE MALFUNCTION		
BACK TO SCRAP ENTRY			

Custom screens were developed for the TSS's touch screen interface, to allow logging machine adjustments by the maintenance staff, and to allow operators to enter details on each scrap occurrence. These logs, as well as historical production data from each line, were transferred across Ethernet through the TSS-NET PC program, and were loaded into the customer's SQL database for reporting.

Project Results

The customized TSS system was installed on all primary cable lines, and operators were trained in its use. Line status and production is now tracked directly from the process, instead of by hand. Honeywell reports that scrap data now correlates better with reality, and thanks to this data, they are able to attack their scrap issues via engineering. They are also taking advantage of the reporting options available through their database, and are exploring ways to obtain efficiency numbers by combining TSS data with scheduling information. After that, Honeywell is considering monitoring their secondary processes as well.