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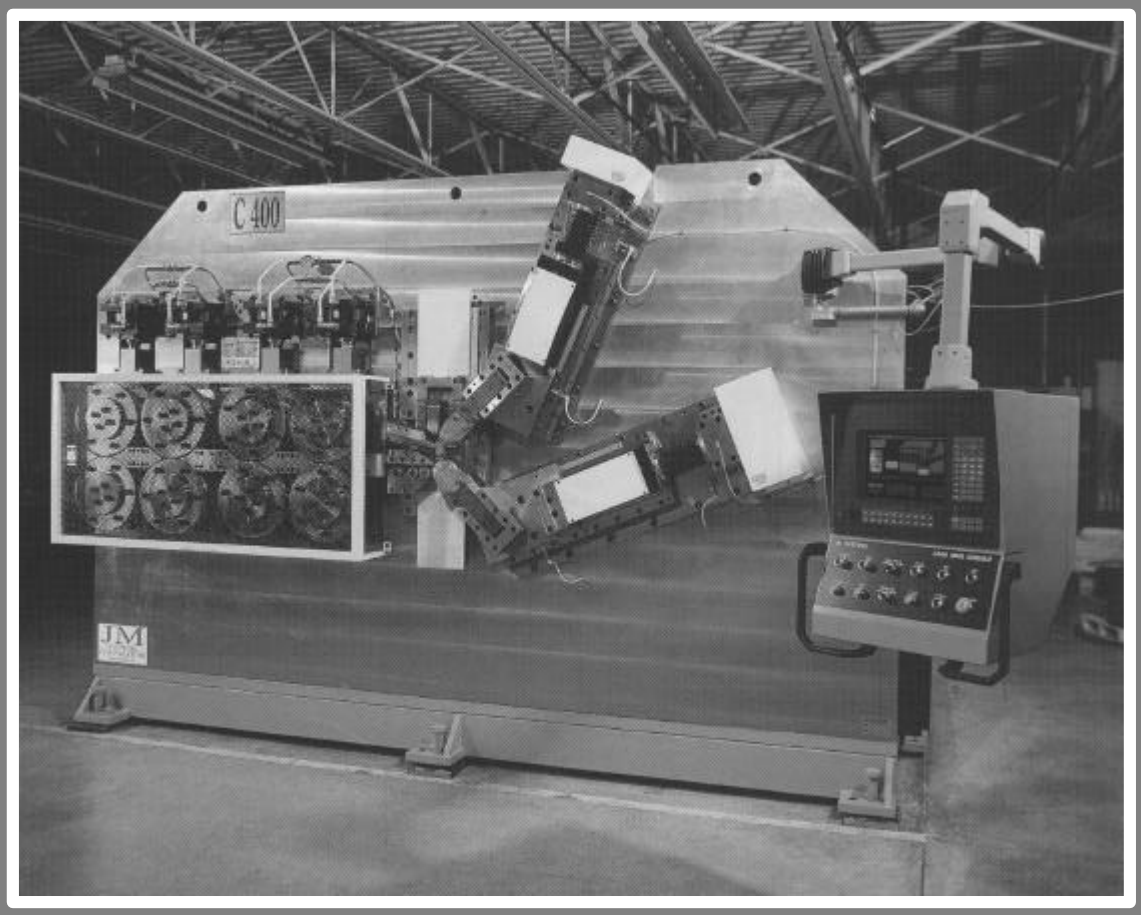
Wire Technology

International

Serving manufacturers, specifiers and users of wire and cable



INSIDE:

- **COVER ARTICLE: Cold Coiling Beyond the Limits**
- **EMPHASIS: SPRINGMAKING**
- **ROUNDUP: REELS**

Willingness to Innovate Provides Faster Throughput for Wire Manufacturer

Encore Wire, Inc., McKinney, TX, began operations in 1990. Since that time, the company has undergone three plant expansions and quadrupled its output of residential wire to 400,000 pounds per day. Key to its success has been management's enthusiasm for innovation, redesign, and collaboration with both U.S. and European engineers. A constant drive to upgrade extruders, printers, packers and other parts of the manufacturing line is an Encore hallmark.

"The guy designing a lot of this equipment is in an office and not in the field, so you have to communicate with him," explains Phillip Johnson, Encore's Vice President of Engineering. "You can't just say the design's no good. Sometimes, people are too quick to criticize instead of working together."

One of the company's first innovations was an upgraded basket coiler. Encore commissioned **Endex** to design a 42" basket coiler so that 200,000 feet (60,925 meters) could be put in the basket at one time, and the operator is not required to change the put-up as often.

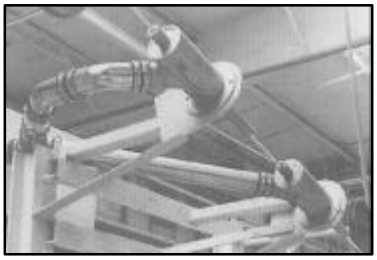
Encore also went the extra mile to redesign its cable packing machine. Prior to employment with Encore, Johnson had spent ten years in Sweden working with **Skaltec** engineers selling equipment and modifying Swedish designs for the U.S. market. While there, Johnson attended night school to learn Swedish to that he could better communicate with Skaltec engineers and technicians. The packing machine design evolved directly out of this collaboration.

Encore's goal of maximum quality output means constant fine-tuning of its lines for fastest throughput. "We consistently analyze our lines for anything that would force the operator to stop," Johnson continues. "We have modified our machines to go as fast as they can without self-destructing."

As Encore continued to increase its line speeds, faster throughput soon uncovered drying challenges. Compressed air was being used on all lines for drying. One hundred horsepower compressors were running on six lines and were using more than 35 horsepower per line to inadequately dry the wire. Energy costs were high and noise levels exceeded 100 dB. When drying proved substandard, operators tended to add hosing and ultimately starved the plant for air. This caused loss of synchronization of the packaging equipment cylinders and subsequent holdups in this area.

Inefficient airwipe collars compounded the problem. Encore experimented with different airwipe designs, including commercially available and experimental models. Johnson designed a vortex unit built onto the machine. It was efficient and quiet, but did not control the wire going into it. Also, frequent size changes wore a hole in the collar resulting in excess noise and loss of air.

Encore representatives discovered the **Sonic Air Systems, Inc.**, Airwipe Collar at an industry trade show in 1995. Two collars were installed on one line, powered by a 10 horsepower high-velocity Sonic Airblower. The system is now drying cable adequately.



Example of Sonic's Dual Airwipe Heads designed for high-speed throughput.

Predictably, Encore has noted energy savings with the Sonic system, as well as decreased sound levels. Less expected, were savings on the cost of the expensive methyethyl keytone ink used for the cable. With the old system, moisture laden wire would drip water into the ink bath, thereby diluting it and requiring its frequent replenishment.

"I told management that the equipment nearly pays for itself with the savings on this ink," Johnson says. " I expect we'll be installing others. As this first system ages, we'll work with Sonic to see if any modifications are necessary to extend its longevity."

Editor's Note: *Phillip Johnson has moved from Encore Wire to a new company called Retractable Technologies in Little Elm, TX.*