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Wire & Cable Technology

International

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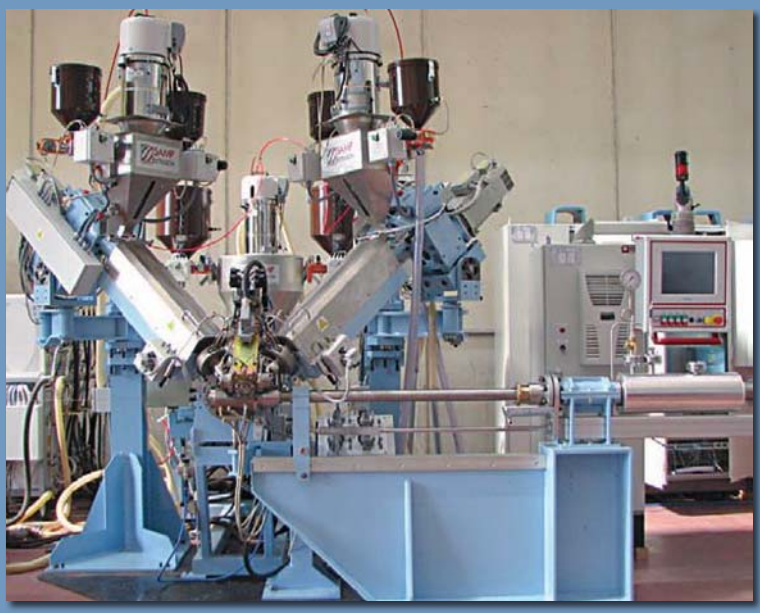

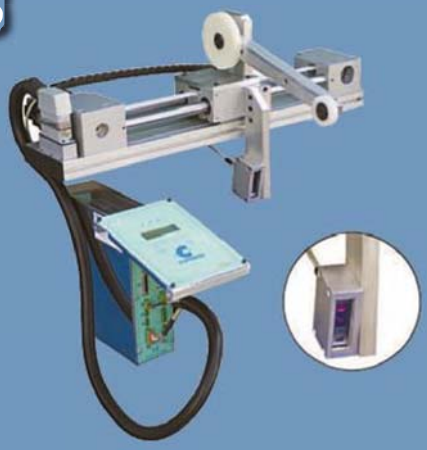

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TECH BRIEF

Cable Drying in the Fast Lane

by:
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Basic dryer module offered by Sonic Air Systems, Inc.

Not too many years ago, wire and cable production was considered fast when the take-up reels were spooling the finished product at 2000 fpm. Oh, how times have changed. Production speeds now routinely match that of a speeding automobile.

With communication cable dominating today's manufacturing market, it is commonplace to have copper and fiber optic products moving at a blistering 6000-plus fpm (63 mph). However, these high speeds are no longer reserved for only the smallest diameter wire and cables. Insulators and jackets for a wide range of more common wire products are also being extruded at three to five times faster than just 10 years ago.

It is also true that drying methods for wire and cable, after the extrusion water cooling bath, can be a source of downstream quality problems and a major operating cost component of the entire line. Any cooling water left on the cable by inadequate air blow-off devices (air wipes) after the cooling bath can also cause false pin hole rejects, jacket thickness measurement faults, poor printing and ink jet quality, slipping on the take-up reels or water hazards on the plant floor.

One option, and the last that anyone would willingly choose, is to slow down the line speed to allow the dryer to work better. In reality, high speeds must be maintained and the wire and cable industry standard drying method (the same in many industries) is to add more compressed air blow-off devices to keep drying from being the bottleneck on the line. Of course, the consequence of "drying cable at any cost" is that drying can become a tremendous plant utility expense.

How One Firm Took Advantage of the Latest Drying Technology

Founded in 1996, **Kobrex Cable**, in Monterrey, Mexico, is one of North America's newest cabling products companies, and one which has quickly established itself as a premier manufacturer supplying wire and cable to a wide variety of industries and applications.

As in any competitive market, the wire/cable industry demands continuous product quality improvements and manufacturing efficiencies for long-term success. Kobrex is committed to state-of-the-art manufacturing technology to help keep its edge, and so when the Kobrex manufacturing team identified drying processes as the next target of their factory wide energy reduction initiatives, the search was on for the latest in wire and cable drying technology.

To dry its wire, Kobrex was using air wipes powered by air compressors. "We weren't able to increase our speeds, because the ink in our printers would get contaminated with water, and our spark testers would get wet and not work," said Plant Manager, **Felipe A. Martinez**.

Sonic Air Systems has a long-standing reputation for efficient drying of wire and cable up to 2000 fpm with a full line of centrifugal blowers and air wipe systems, but Kobrex needed something to accommodate its five lines which were only able to run at a maximum of 2300 fpm. Each line had an endless array of air wipes averaging 75 HP of compressed air for each extrusion line.

Based on Sonic's success with Kobrex for its over 1000 fpm trunk cable lines, Martinez called the local Sonic representative to see if Sonic had anything to offer which exceeded Sonic's previous speed limit of over 2000 fpm. As a result of this growing demand for higher wire industry speeds, Sonic had only recently completed trials on a new-generation dryer for up to 6000 fpm wire and cable.

Sonic used the its 6K-20 High Speed Wire Dryer with a 20 brake HP Sonic blower to solve Kobrex' challenge and to reduce power consumption on all three lines by average of 55 HP (38 kW) each. Kobrex also needed the blower/dryer system to run at less than 85 dBA and the dryer module to fit in under 48" of space at the end of the cooling bath. The Sonic blower and High Speed Wire Dryer enclosures exceeded Kobrex's expectations with noise level of less than 80 dbA.

Successful Increase in Line Speeds

Today, the three Kobrex lines with Sonic Air Systems technology operate at up to 5800 fpm, depending on the product being run.

"With the Sonic equipment, we have increased line speeds by about 40%," said Martinez. "We can now print the cable at the higher speeds with no loss in quality and with a very low energy cost." *www.kobrex.com*
www.sonicairsystems.com

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Sonic 6K-20 High Speed Wire Dryer installation at Kobrex Cable.

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