

KEYSTONE REVIEW

APRIL

MAY

JUNE

2007

Crawford Industries Raises Outputs with Davis-Standard XP Express™

A newly installed XP Express™ roll stand from Davis-Standard, LLC has helped Crawford Industries increase outputs on one of its extrusion lines by 120 percent. Crawford Industries, based in Crawfordsville, Indiana, is a leading national sheet extruder and converter of graphic quality PE and PP for the custom packaging and graphics arts industries. The XP Express was purchased as an upgrade to an older line and the results have been impressive. Not only have outputs increased significantly, but the company is able to change rolls in 20 minutes versus two to three hours with the old roll stand.

"The simplicity and efficiency of this machine is impressive," said John Nowotarski, Plant Manager at Crawford Industries' plant

in Thomasville, Georgia. "It runs off a touch screen and has outstanding capabilities for fast roll changes and production of thin gauge sheet. As an added benefit, the installation was one of the easiest I've experienced in years. We were up and running within a week."

Crawford Industries has been a Davis-Standard customer since the early 1960s, purchasing extruders in various size and roll stands. The company's new XP Express was customized to include a cooling fan and an offset top roll. The roll stand is being used to process PP and PE thin gauge sheet with a thickness range from .01 to .045 inches (.25 to 1mm). This version of the XP Express is the "CS" version for custom sheet applications. A "PS" model is available for custom packaging applications.



Pictured is John Nowotarski standing with Crawford Industries' new XP Express™ during final inspection before delivery.

The XP Express is Davis-Standard's most versatile roll stand for sheet and packaging applications, with capabilities for lamination, solution coating, auxiliary cooling, slitting

Crawford continued on page 5

InterWrap to Boost Production in India with Tandem Coating Line

InterWrap of Mission, British Columbia, Canada, will soon have one of the fastest and widest tandem extrusion coating lines in the woven fabric industry in India. In April, the company will add a second extrusion coating station to its existing Davis-Standard line to create a tandem system that is 153 inches (3,800mm) wide and capable of line speeds in excess of 700 feet per minute (213 meters per



InterWrap's tandem extrusion coating line will be one of the fastest in India with line speeds of 700 feet per minute (213 meters per minute).

minute). This is the second phase of a project that began in 2002-03 with the installation of a monolayer extrusion coating line at InterWrap's facility outside of Mumbai. The line was engineered with a modular concept to grow as InterWrap's production demands grew. After installation, the expanded line may more than double InterWrap's production

capabilities in India.

"It was ideal for us to start with a mono extrusion coating line because it served our needs at the time, enabled us to lower our initial capital investment, and gave us the flexibility to train people on a simple machine," explained Harj Cheema, InterWrap's Manager of Capital Projects.

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J J Jenkins Finds Ongoing Success with Merritt Extruders

For almost 20 years, J J Jenkins, Inc. has relied on Merritt extruders to satisfy nearly 70 percent of its extruder needs. J J Jenkins, a small to mid-size OEM for the synthetic fiber, film fiber and monofilament markets, has been working with Merritt since the company got its start in 1989. Since then, J J Jenkins has purchased an average of six to seven Merritt extruders annually in sizes ranging from 3/4-inch (19mm) to 6 inches (150mm) to fulfill custom extrusion requirements for customers worldwide.

"In my previous company, we had a very good relationship with the folks who would later establish Merritt Extruder. They were always willing to adapt and supply custom features and were very quick to work with us when problems existed," explained Joe Jenkins, President and sole owner of J J Jenkins. "Merritt started up with the key people from Sterling Extruder, so it was a natural fit to work with people I knew had the same business philosophy I did. We have always felt our partnership with Merritt was just that, a partnership. This is evident in the mutual respect we have for each other and our ability to do what is necessary to get the job done."

Although J J Jenkins is a small to mid-size OEM, they are the largest U.S.-based supplier of extrusion systems for the custom market within the synthetic fibers industry. The custom aspect of the business is what makes J J Jenkins unique and is a primary reason the relationship with Merritt has worked so well. Merritt product managers and sales engineers readily make adjustments and modifications to support the custom demands of J J Jenkins. Most importantly, J J Jenkins'

customers are pleased with the performance of the extruders and the after-sale service which has continued with Davis-Standard, LLC's Merritt brand product line.

Jenkins said, "We never do the same thing twice and that's our advantage. We listen to customer needs, make suggestions, and work as an ally and partner. When equipment is delivered, customers know what they are getting and know to expect prompt and professional answers and assistance. In this regard, the Merritt team has been an integral part of helping us keep customers returning time after time. It's the people behind the product that make the difference."

J J Jenkins supplies a range of extrusion systems including slit tape, monofilament, multifilament, strapping, medical filament, and research and pilot extrusion systems. The company designs and builds most of its downstream equipment in-house, but relies on several trusted suppliers such as Merritt for other components. In addition to quality equipment, J J Jenkins is known for extensive technical and troubleshooting assistance as well as an extensive spare parts inventory. Nearly 60 percent of the company's business is in the United States, but the global element is quickly catching up with recent installations in China and customers in Canada, Mexico, South America, Central America, Europe and elsewhere.

For more information about J J Jenkins, visit www.jjenkinsinc.com. For more information about Davis-Standard's Merritt brand extruders, contact Sandy Guthrie at sguthrie@merrittruder.com.

Personnel News

Davis-Standard, LLC announces the following personnel news:

Mark Woodgate

was recently promoted to Business Director, Extrusion Systems Europe for Davis-Standard, LLC. In his new



Mark Woodgate

post, Woodgate will oversee the sales and marketing for both the D-S Brookes and Davis-Standard pipe and profile product lines throughout Europe, the Middle East and parts of Asia. Woodgate will also lead the European extrusion sales team, which includes the equipment sales team, aftermarket sales team and technical team.

Fabian Umbach

has been appointed Global Business Manager Liquid Coating for the ER-WE-PA product line in Erkrath, Germany. In his new role, Umbach will be



Fabian Umbach

responsible for managing the engineering and sales functions for Davis-Standard's liquid coating business. Davis-Standard's Germany location services customers throughout Europe, the Middle East, and parts of Asia.

New Supplier Rating System Launched

In an effort to collaboratively improve supplier communication and performance, Davis-Standard, LLC launched a "Supplier Rating System" last fall to evaluate its key suppliers. The rating system assesses supplier performance on the basis of quality, on-time delivery and lead-time responsiveness. It also enables Davis-Standard to provide feedback to suppliers and make better informed buying decisions. Using the new metrics/measurements, Davis-Standard is gaining a better understanding of its supply chain process both internally and externally, which will further strengthen delivery times,

cost-competitiveness and responsiveness to customers.

"It's important that our suppliers understand our goals and objectives and that we have a means of evaluating their performance," said Al Fabricant, Director, Corporate Purchasing. "When we make promises to customers on delivery and performance, we need to keep them. Ensuring that our suppliers come through on a consistent basis is a fundamental part of that equation."

To facilitate this process, Davis-Standard developed an on-line "Delivery Promise" tool to assist with gathering data and maintaining

communication. Suppliers log-in and enter all pertinent information whenever they make a delivery guarantee to Davis-Standard. Data is intended to help both Davis-Standard and the supplier in meeting business objectives and achieving long-term goals. Davis-Standard piloted the system for several months before fully implementing it and has seen very positive results.

For more information, contact Al Fabricant at afabricant@davis-standard.com.

Interwire, CMM and ANTEC News...

Interwire

Equipment from all of Davis-Standard's wire and cable product lines will be shown at the upcoming Interwire Trade Exposition in Cleveland, Ohio, May 7-10. Located at **booth #3400**, Davis-Standard will show a 2 1/2-inch (64mm) 24:1 Super Blue® air-cooled extruder, MESA III process control system, and a 1 1/2-inch (38mm) 24:1 high temperature MX Series Merritt extruder along with a Clipper model PA-24 dual reel parallel axis take-up, Davis Electric 72-inch (1,828mm) shaftless payoff and 48-inch (1,219mm) CatTrak linear capstan. All of Davis-Standard's key personnel will be available to discuss this technology with booth visitors.

The combined technologies of

Davis-Standard, Merritt Davis Electric and Clipper Machinery have created a powerful force in the wire and cable marketplace. Several designs are available for high speed wire and cable extrusion systems and components for datacom, construction/building, optical fiber and automotive as well as power cable, high temperature and specialty wire applications. Systems can be equipped with a wide range of extruders, payoffs and tension brakes, take-ups, and auxiliary equipment including cooling troughs, capstans, caterpillars, and accumulator systems. Laboratory equipment, customized feedscrews, and control systems are also available.

For more information, contact John Zachow at jzachow@davis-standard.com.

CMM International

Davis-Standard, LLC will exhibit at **booth #807** during the CMM show in Rosemont, Illinois, June 4-7. The company's team of flexible packaging and converting experts will be available to discuss the full range of cast film, blown film, extrusion coating and liquid coating technology. This includes information about the Black Clawson Converting Machinery, Egan, ER-WE-PA and Davis-Standard product lines. A visual simulation showing the Killion inspection

system, which automatically detects and classifies defects such as gels, contamination, black specs and pin holes in cast film, blown film, sheet and nonwovens, will be at the booth. A special version of this system is available as a problem solving tool for film producers or for improved product quality for resin and chemical companies.

For more information prior to the show, contact Christine Maxam at maxamc@bc-egan.com.

ANTEC/Plastics Encounter Conference

Davis-Standard, LLC, **booth #223**, is playing an active role at the upcoming ANTEC/Plastics Encounter Conference in Cincinnati, Ohio, May 6 - 10. John Christiano, Davis-Standard's Director of Extrusion Process Technology, is organizing and managing the technical program content at this year's conference, which will consist of nine different sessions. Sessions will include topics on single screw extrusion, twin screw extrusion, extrusion dies, films and tutorials. Christiano is currently serving as the Technical Program Chair for the Extrusion Division of SPE.

In addition, Senior Process Consultant Kevin Slusarz will be giving a presentation on "Screw Design Optimization for Single Screw Extruders." This will be a



John Christiano

tutorial session discussing the differences between conventional screw design versus barrier screw technology and how it applies to grooved feed and smooth bore extrusion. Slusarz also co-authored a paper with engineers from Sunoco, Inc. which will be presented at ANTEC by Antonios Doufas, Polymer Processing Engineer - Rheologist of Sunoco. This paper entitled "Experimental Studies of Polypropylene Extrusion Instability" will discuss the extrusion (in) stability characteristics of homopolymer polypropylene in a 2 1/2-inch lab scale single screw extruder. Specifically, the effect of screw design, metering vs. barrier screw, on extrusion stability will be presented.

For more information about the conference, contact John Christiano at jchristiano@davis-standard.com.

Safety Bulletin #2

Cast Film Station Safety

The safety bulletin being highlighted in this issue of the Keystone covers safe operating procedures for a cast film station. Topics include in-running nip points, draw-down adjustment, die area, roll replacement, threading, carriage retraction, rotating shafts, maintenance and more. Following are a few points from the bulletin. To read the bulletin in its entirety, visit www.bc-egan.com/images/PDFs/safety_castfilm.pdf.

- Do you know that in-running nip points can cause serious personal injury and that all in-running nip points need to be guarded, either physically or by location, whenever practical to prevent accidental contact?

- Do you know that pieces of plastic or other material that may end up in the water pan during wet embossed film coating must never be removed by hand while the machine is running? To prevent serious personal injury, materials must be removed with the line stopped and the embossing section nips open.

- Do you know that some rotary unions may have exposed fasteners or other rotating components that may create a hazard if they are within reach? To prevent possible injury, all of these hazards that are within reach must be guarded.

- Do you know that "drool" from a die may damage or spoil the product, damage the nip roll, or wrap up on the nip roll? Edge drool must never be removed by hand, even when wearing a protective glove. To avoid serious injury, always use an extended tool for this task.

- Do you know that in the case of roll wrap-ups, never attempt to remove the wrap-up while the machine is running? When wrap-up occurs, avoid serious injury by shutting down the line and backing the casting station off the line. In some casting section designs, easy operator access is provided to the plate-out roll. When such operator access is provided and there is a partial wrap-up of the plate-out roll, slow the line down, open the plate-out roll nip to stop its rotation, and proceed with caution, working from the outgoing side of the nip only. If your design requires the operator to step over or crawl under roll to access the plate-out rolls, the line must be shut down to remove even a partial plate-out roll wrap-up. Be careful when removing the wrap-up, so as to not damage the roll.

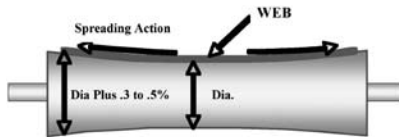
Consultant's Corner

How to Get the Most from Your Web Spreader

By R. Duane Smith, Davis-Standard, LLC
Product Manager – Specialty Winding

Almost all web processing systems require web spreading before critical components to remove wrinkles or for slit web separations. Unfortunately, many of the spreader devices used by converters are misapplied or not properly adjusted. When this happens, it is not possible to achieve the desired web spreading action. This consultant's corner offers helpful information about commonly used spreaders in the web converting industries. This includes a description of the spreading mechanism, application information, and pros and cons of each device.

Reverse Crown Spreader



DESCRIPTION: This is a conventional roll (normally an idler but may be driven) that has a diameter at the ends slightly larger than the diameter in the center of the roll. Since the roll has a constant rpm, the surface speed is greater at the ends than at the center. The surface speed difference causes an ingoing web tension distribution that is shaped similar to the speed profile. The roll's spreading action is a function of this web tension profile difference. This roll needs a good traction surface to achieve the desired spreading action.

APPLICATION:

- Wrinkle removal
- Most effective on extensible materials
- Web wrap should be greater than 90 degrees
- Poor man's reverse crown roll is tape on ends of roll at edges of web

PROS:

- Simplest to operate and adjust
- Least expensive type of web spreader

CONS:

- Very product dependant as the amount of reverse crown depends on extensibility of web

Flex Spreader

DESCRIPTION: A straight roller with a special grooving cut into a soft outer cover. The grooving is undercut at an angle so the web tension deflects the lands outward, carrying the web with it to accomplish the spreading action. The amount of spreading is a function of rubber hardness and web tension.

APPLICATION:

- Wrinkle removal
- Pre-wind web spreading with no slitting
- Pre-slit web spreading with slitting
- Most effective on non-extensible materials
- Web wrap should be greater than 90 degrees

PROS:

- Relatively low cost, easily retrofit, easily operated
- Self-compensates for tight or loose areas across for more uniform web tension
- Grooving eliminates slippage due to air entrapment

CONS:

- Needs web tension to provide spreading action
- Limited control of spread flexibility

Bowed Roll Spreader

DESCRIPTION: A curved roll with a stationary axle on which segmented metal rotating sleeves are mounted on numerous bearing sets. The metal sleeves are typically covered with a soft, synthetic rubber. Under high wear conditions, the outer rubber sleeve can be eliminated and the metal sleeves traction coated. The web is spread by the curved axis of the bowed roll by applying the "Normal Entry" web guidance principle where the web always tries to enter the roll at 90 degrees to its (curved) axis. Spreading action is a function of amount of bow, wrap and web tension. Variable bow rolls have a split stationary axle where an applied force can change the amount of bow.

APPLICATION:

- Slit web separation
- Wrinkle removal
- Can be used on both extensible and non-extensible materials
- Cover or steel sleeve grooving reduces slippage from air entrapment
- Lead-in and lead-out geometry are critical for effective spreading

PROS:

- Can be used on processes having a wide range of material types
- Can be adjusted to tighten the center or end of the web

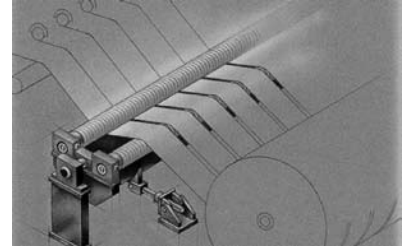
CONS:

- More complex and costly than other spreaders
- Needs to be driven on light

tension applications

- Bow position and amount of bow on variable bow rollers may be misadjusted by operators
- Bearings are not able to be re-lubricated and are difficult to replace
- Web slitting applications usually limited to spreading four slit rolls or less

Dual Bowed Roll Spreader



DESCRIPTION: Two bowed rolls that can be fixed or variable so that the lead-in and lead-out webs are parallel with the bows pointing 90 degrees to the lead-in and lead-out web paths as shown. The spreading action takes place between the two bowed rolls with no spreading effect upstream or downstream. Additional spreading flexibility is possible by providing a rotatable mounting to vary the amount of wrap.

APPLICATION:

- Slit web separation for slitting and spreading multiple rolls (usually five or more)
- Can be used for a wide range of material and slitting variations
- Roll may be fixed or variable bow
- Spreading action is a function of amount of wrap, bow and web tension

Note: Parallel lead-in and lead-out web leads and sufficient distance between rollers for web separation are critical. The first and second rolls will most likely have different amounts of bow due to deflection from tension vector.

PROS:

- Web path length is the same at the center and ends
- No upstream or downstream spreading action
- Excellent control of spreading action
- Can be adjusted to tighten the center or edges of web by slight bow direction

CONS:

- More complex and costly than other spreaders
- Needs to be driven on light tension applications
- Bearings difficult to lubricate and replace, and may be difficult to thread
- Bow position and amount of bow of variable rollers often not adjusted correctly

Crawford *continued from page 1*

and trimming, embossing and protective film. It is equipped with high speed features, thermal cooling, individual roll speed control, repeatable roll positioning and accurate linear roll adjustment for various roll diameters in any position. The roll stand can be configured in an upstack, downstack, offset top or an offset bottom arrangement with roll cooling for three, four or five rolls. It also includes a hands-free roll gap system with automatic roll gap control and/or load force control for additional operator safety and efficiency.

InterWrap *continued from page 1*

“Now that our business has grown and we need simultaneous coating capabilities, we’re adding a second extrusion laminator which will enable us to address production demands. Even better, the modular design will allow us to continue production while most of the installation work is being completed. We anticipate minimal downtime assuming all pre-installation work is complete.”

InterWrap is a major player in the coated wovens and multi-layer substrate lamination markets, and the only company in this sector of its size that is privately held. The company is a leader in the industrial and metal packaging, converted fabrics, agricultural, construction, wood packaging and building markets. InterWrap processes a broad range of products including tarpaulin fabric, woven bags, shelters and wrap for agricultural use, polycoated wrap for consumer products, steel packaging, roofing underlayment, and lumber covers among others.

“We really pushed Davis-Standard to raise the bar on this machine. We wanted more speed, reduced scrap, improved uptime; you name it. They were very good with developing

“I am not an engineer, so I appreciate being able to explain what I want to Davis-Standard’s engineers without getting into the specific aspects of the technology,” added Nowotarski. “They always supply exactly what I need. We will definitely look at purchasing more of these machines for future upgrades.”

For more information about Crawford Industries, visit www.crawford-industries.com. For more information on the XP Express, contact Al Chrisbacher at achrisbacher@davis-standard.com.

this custom solution for us and went beyond the call of duty,” he said. “I can name an entire team of people including Ken Piora and Frank Orsini who made this possible for us. They bring exceptional knowledge, breadth of experience and technical support to the table. That is one of the main reasons we are a return customer.”

Phase one of the project included an extrusion laminator with a 6-inch extruder, unwind and surface winder. Phase two adds a second extrusion laminator with a 6-inch extruder and an unwind upgrade so that material can be run off the core. In addition to this line, InterWrap has four Davis-Standard lines and an NRM Extrusion extruder at its facilities in Canada. The company has been a Davis-Standard customer for more than 15 years.

For more information about InterWrap, visit www.interwrap.com. For more information about the extrusion coating capabilities of the Converting Systems Group of Davis-Standard, LLC, contact Ken Piora at piorak@bc-egan.com.

Thank You

InterWrap would also like to thank the rest of Davis-Standard’s engineering team who helped with this project: Rick Yama, John Figa, John Baldino, Christine Ronahan, Earl Clymer and Andy Chu.

LMI *continued from page 6*

to a minimum.”

Davis-Standard recently sold another roll-ex gear extruder to a major North American company with the capability to strain 6 metric tons (13,000 pounds) per hour. All Uth machines sold by Davis-Standard include Davis-Standard control and temperature systems. According to Joe Wnuk, Business Area Manager of Davis-Standard’s elastomer product group, this machine is ideal for custom rubber compounders and high volume

EPDM producers.

“High volume, fine mesh straining has been a growing trend in Europe and we are starting to see that happen here in North America. This is especially applicable to mill room operations where high volumes of strained product are becoming essential for maintaining a competitive advantage,” said Wnuk.

Davis-Standard has been selling Uth gear extruders in North America since 1998 when the company entered into an

Upcoming Tradeshows

Davis-Standard, LLC will be exhibiting at the following tradeshows during April, May and June. We will also be hosting a seminar at our Pawcatuck, Connecticut, facility.

The Basics of Plastics Extrusion

Pawcatuck, Connecticut
April 3-4, 2007

IDEA07

April 24-26, 2007
Miami Beach, Florida
Booth 1770

Plast-EX

May 1-3, 2007
Toronto, Canada
Booth 1835

ANTEC/Plastics Encounter

May 6-10, 2007
Cincinnati, Ohio
Booth 223

Interwire

May 7-10, 2007
Cleveland, Ohio
Booth 3400

BrasilPlast

May 7-11, 2007
Sao Paulo, Brazil
Booth L99

Chinaplas

May 21-24, 2007
Guangzhou, China
Booth 1B551

Wire Russia

May 28-31, 2007
Moscow, Russia
Booth G19

CMM

June 4-7, 2007
Rosemont, Illinois
Booth 807

exclusive agreement with Uth GmbH of Fulda, Germany. Uth has been engineering and manufacturing innovative machinery for the plastics and rubber industries since 1985. For more information about the Davis-Standard-Uth roll-ex gear extruder, contact Joe Wnuk at jwnuk@davis-standard.com for North America and Winfried Trost at wtrost@uth-gmbh.com for Europe and other parts of the world.

European Extrusion Systems Business Moves to UK

Davis-Standard, LLC recently relocated the Extrusion Systems portion of its European business from Erkrath, Germany, to the D-S Brookes facility in Birmingham, United Kingdom. The Converting Systems business will

remain in Erkrath. The move is part of a reorganization effort that will enable Davis-Standard to focus on its core customer base in Europe and key heritage brands, Betol and Repiquet.

"The relocation will provide customers with extensive facilities for final machine assembly and machine acceptance testing," said Jim Murphy, President of Davis-Standard's Extrusion Systems Group. "This facility is also undergoing a lean manufacturing transformation to improve cycle times on barrels and screws. Once this is complete, we will do the same for our machine building operation in order to meet customer demands for shorter lead times. We believe this is a good move from both a business and

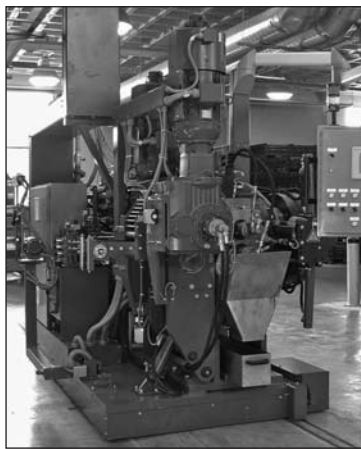
customer service perspective and emphasizes our determination to strengthen our position in the European market."

In addition to serving as the European base for Betol and Repiquet brands and Davis-Standard pipe and profile systems, this facility will continue to manufacture screws and barrels. Under the leadership of Mark Woodgate, Business Director, and Ivor Watts, Manufacturing Manager, Davis-Standard's Extrusion Systems team in Europe will focus on future growth with a strong technical and sales effort.

For more information, contact Mark Woodgate at mwoodgate@davis-standard.com or visit www.dsbrookes.com.

LMI Adds Fine Mesh Straining Capabilities with Roll-Ex® Gear Extruder

A Davis-Standard Uth roll-ex® gear extruder has expanded mill room operations for LMI Custom Mixing of Cambridge, Ohio. LMI is the state-of-the-art rubber mixing facility established as part of a joint venture between Lauren International and Meteor Gummiwerke. With the addition of the roll-ex, LMI has added capabilities for high-volume fine mesh rubber straining. The machine, installed in December 2006, strains in-line an average of 1.5 metric tons (3,300 pounds) of rubber per hour while reducing scrap and producing a higher quality rubber with minimal to zero defects.



LMI strains in-line an average of 1.5 metric tons (3,300 pounds) of rubber per hour using the roll-ex® gear extruder.

"In our opinion, this is the finest piece of machinery on the market for straining technical grade rubber," said Jim Nixon, General Manager at LMI. "It has broadened our product offering while

allowing us to produce compounds with a higher degree of perfection. With the roll-ex, we can process sulfur-cured dense and sponge compounds designed for continuous vulcanization, which are ordinarily very sensitive to heat. Prior to the roll-ex, we were limited to primarily masterbatch and peroxide-cured compounds."

A distinct advantage of the Davis-Standard Uth design is the two-roll feeder (TRF) system that feeds the compound into the gear extruder/strainer section without requiring a screw extruder as a feeder. This feeding approach eliminates extruder shear, reduces extrudate temperature, and allows for higher output rates with highly accelerated compound formulations over conventional screw feed type systems. As an added benefit the roll-ex is modular in design with a small footprint, which makes it ideal for mill room mixing or for use within a mixing line.

Other advantages include a minimal material dwell time, low temperature increase and a hydraulic system which gives operators access to all major components. Rubber processors also benefit from energy and cost savings gained from straining rubber in a warm state, and from the high viscosity and hardness characteristics

achieved when straining compounds. The roll-ex is available in models for processing from .45 to 6 metric tons (990 to 13,000 pounds) per hour.

"Our joint venture partner in Germany

was about eight months ahead of us in integrating the roll-ex technology and they've experienced a great deal of success. Our operation is very similar to theirs, so it made sense for us to follow suit and add a gear extruder here," Nixon added. "There has been a minor learning curve, but overall it's been relatively easy for us to use. Screen changes and compound changeovers are relatively simple and efficient, keeping line downtime

LMI continued on page 5

D-S Davis-Standard®

1 Extrusion Drive
Pawcatuck, CT 06379 U.S.A.
www.davis-standard.com
email: info@davis-standard.com

Telephone: +1 860-599-1010
Fax: +1 860-599-6258

24/7 Support

Extrusion Systems:
+1 800-480-8105

Converting Systems:
+1 800-338-3660

Europe:
+49 173-710-6407

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