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**ANNIVERSARY**

APRIL 2022

**PROS AND CONS OF  
IN-LINE SLITTING**

**18**

**ALSO IN THIS ISSUE**

AIMCAL ACTIVITIES

**8**

MATERIAL PROPERTIES,  
TESTING, APPLICATIONS

**14**

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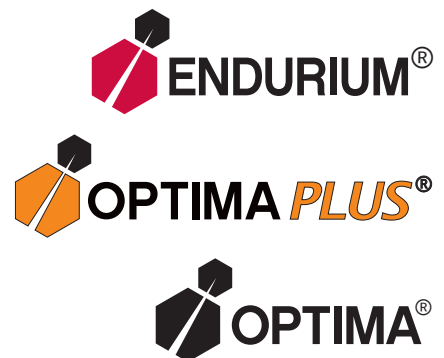
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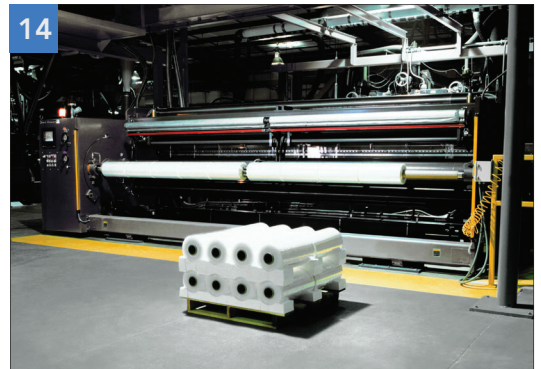
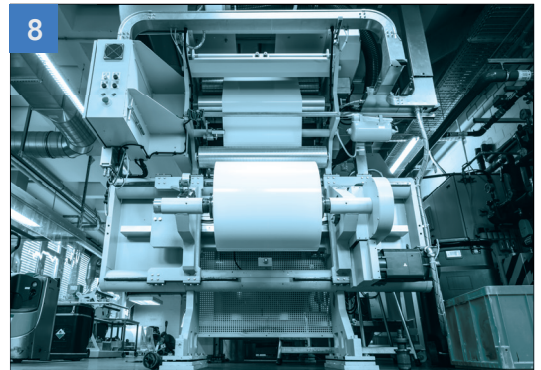
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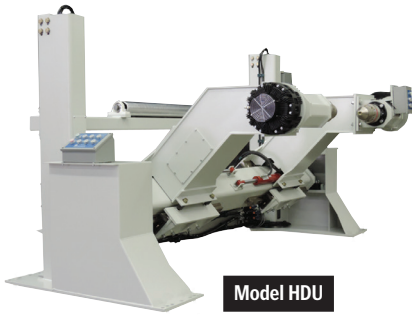
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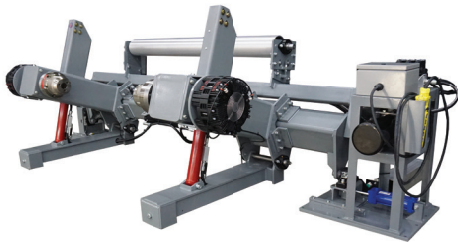
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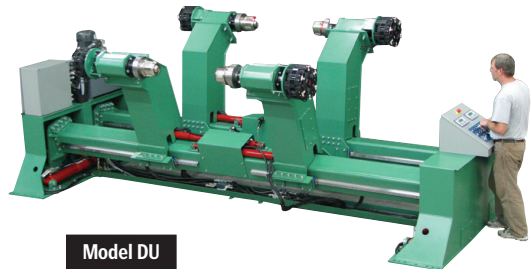
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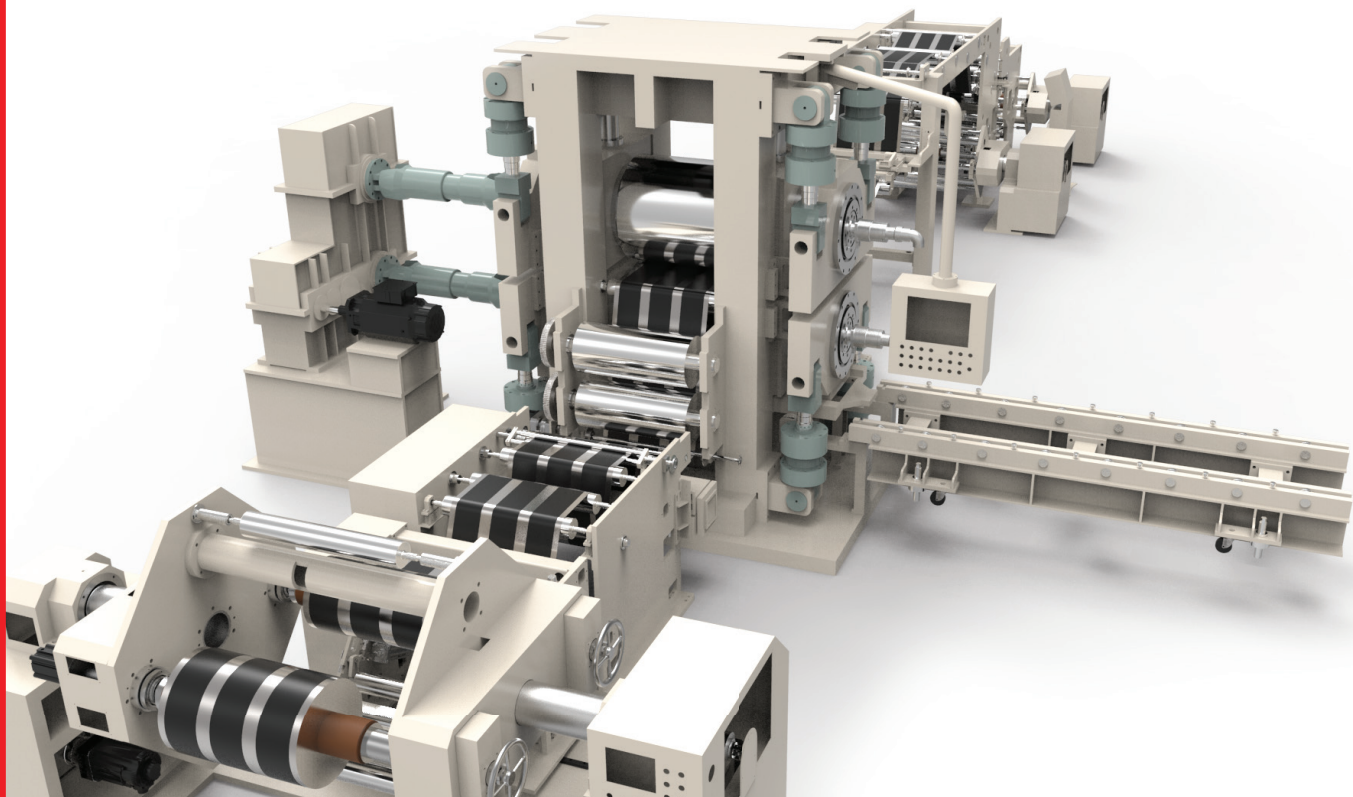




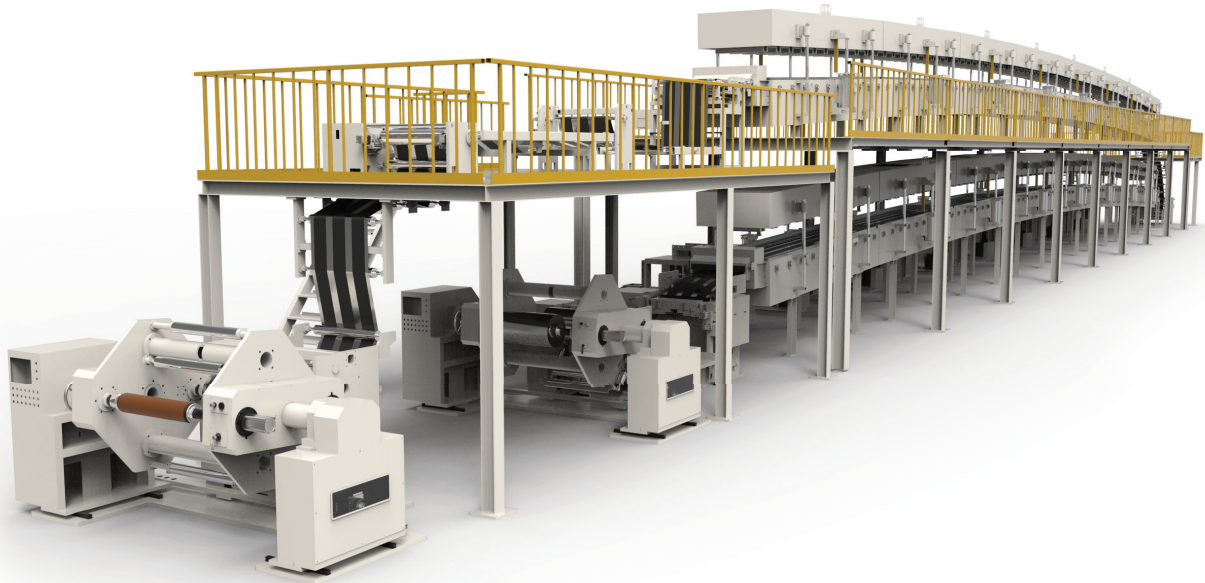
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## Springing Forward Face to Face



**Angel Morris**  
Editor

As we move into Spring and toward lessening COVID restrictions, the industry is gearing back up for more and more in-person conferences, events and presentations. While we've quite successfully adjusted to doing things remotely — even in some instances helping guide equipment setup and installation to companies via online instruction — there is no doubt that folks are excited about returning opportunities to connect and learn face to face. Undoubtedly, remote efforts have expanded communication capabilities and will always have their place; but here's to the chance to get together with experts in the field, share a smile, shake a hand

(followed by hand sanitizer, of course) and show what companies are made of without a screen in between.

This month kicks off with AIMCAL's Executive Leadership Conference April 4-5 at the NASCAR Hall of Fame in Charlotte, North Carolina. In keeping with the unique venue, the VIP Keynote Speaker is professional stock car racing champion and TV racing commentator Jeff Burton. The future of manufacturing and the roll-to-roll industry, plus a financial analysis and market outlook top the event agenda. Learn about trends in leadership, operational excellence, optimization, safety, sustainable packaging and more. Additional AIMCAL events are outlined in this issue, as well, not to mention four converting school classroom courses with face-to-face lessons from experts in coating, drying and laminating, the converting process, web handling and web winding.

More than a few other industry exhibits and expos take place the rest of this year both globally and in the states, from Valencia, Spain to Orlando, Florida. The AIMCAL R2R Europe Conference is June 7-9 (Spain) and R2R USA September 25-29 (Florida). LabelExpo Americas 2022 — the "Largest label and package printing event in the Americas" — lands in Chicago, Illinois, September 13-15.

This fall, K 2022 plastics and rubber trade fair is set for October 19-26 in Dusseldorf, Germany, while the Printing United Expo plays Las Vegas October 19-21. After four years, Pack Expo International returns October 23-26 in Chicago, uniting attendees from 40-plus vertical markets.

Check out the Conference Corner on the PFFC website for a running calendar of events this year, and be sure to send us your activities to be listed, too. In fact, ICEC USA — the International Converting and Exhibition Conference — already has its February 14-17 Orlando, Florida event listed here with pre-registration for 2023!

Shine your shoes and save the date as we spring forward face to face.

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## WISE Program Accepts Applications

The first recipients of AIMCAL's Women in Industry Scholarship for Excellence (WISE) will be announced at the R2R USA Conference, September 25-29 in Orlando, Florida. The scholarship recognizes women who have overcome significant challenges, invested in STEM degrees, chosen employment in the roll-to-roll converting sector and are continuing to make important contributions in the industry.

Recipients of the scholarship will receive funds to pay down student debt. To apply for this year's awards, complete the application form at: [www.AIMCAL.org](http://www.AIMCAL.org), click "About" and select "AIMCAL Committees." Scroll down and click "Women's Leadership Committee." Or access the application directly at: <https://www.aimcal.org/AIMCAL/AIMCAL-News/WISE-Scholarship.aspx>.



AIMCAL launched the WISE scholarship at the 2021 AIMCAL R2R USA Conference. Donations are needed to support the program and fund an endowment for long-term success and aid to women working in the web-converting field. A goal of \$100,000 has been set to fund the endowment, with a Fall 2022 deadline.

Current sponsors include Davis-Standard, LLC; Celplast Metallized Products; Nordmeccanica Group; Intellivation LLC; and Mahlo America, Inc. Sponsors receive recognition via the AIMCAL website, social-media posts and an exclusive scholarship sponsor plaque.

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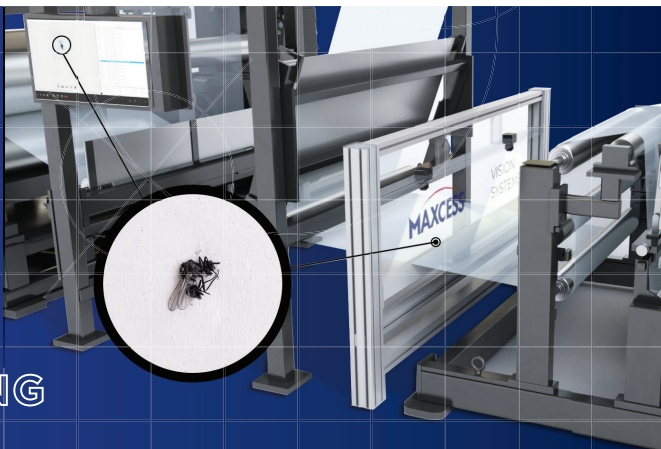
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apply for a scholarship, visit [www.AIMCAL.org](http://www.AIMCAL.org), click "About" and select "AIMCAL Committees." Scroll down and click "Women's Leadership Committee." For more information about the WISE or AIMCAL's Women's Leadership Committee, contact 803-948-9470 or [aimcal@aimcal.org](mailto:aimcal@aimcal.org).

## AIMCAL Academy Offers Courses in Green Bay

AIMCAL Academy will present four courses, April 25–26, 2022, in Green Bay, Wisconsin. Subjects include Coating/Drying/Laminating, Web Winding, Web Handling and Process Development. The full-day or half-day courses open on Monday, April 25, with a tour at Green Bay Packaging and a Happy Hour Meet & Greet session with instructors and attendees. Classes begin at 8 a.m. on Tuesday, April 26, conclude at 4 p.m. and include lunch.



### COURSE SCHEDULE:

#### Coating/Drying/Laminating

Overview, terminology, and basic challenges (eight-hour course). *Instructor: Ted Lightfoot*

#### Web Winding

Introduction to web winding (eight-hour course). *Instructor: David Roisum*

#### Process Development

Converting process development approaches to develop or improve work processes, ideation, concept selection and qualification (four-hour course, 8 a.m.-12 p.m., includes one-hour lunch). *Instructor: Steve Lange*

#### Web Handling

Introduction to Web Handling (four-hour course, noon-4 p.m., includes one-hour lunch).

*Instructor: Neal Michal*

Eight-hour courses cost \$799 for members, \$999 for non-members. Four-hour courses cost \$399 for

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members; \$499 for non-members. Course participants also may visit Converters Expo on April 27 at nearby Lambeau Field. Visit [www.aimcal.org](http://www.aimcal.org), click on “Education,” then “Courses.”

## AIMCAL Presents Hybrid Online Converting School Course

AIMCAL will present Zero Speed Splice Unwinds – Challenges & Solutions, May 16-20, 2022. The hybrid course features live online presentations by Neal Michal from 11 a.m.-1 p.m. EDT each day.

This course will describe the operation of common zero speed unwinds, which provide reliable, high-quality splices, to improve productivity. As speeds increase, accumulator dynamics become an important consideration, so the course will include a summary of more than 20 years of applied research to understand the accumulator and describe troubleshooting techniques.

Students who meet all course requirements receive a Certificate of Completion. The cost is \$699 for members, \$899 for non-members. Visit [www.aimcal.org](http://www.aimcal.org), click on “Education,” then “Courses.”

## AIMPLAS hosts the AIMCAL R2R Europe Conference

The AIMCAL R2R (roll-to-roll) Europe Conference will be held June 6–9, 2022, at the AIMPLAS Plastics Technology Centre in Valencia, Spain. The agenda includes sessions focused on Web Coating, Vacuum Web Coating, Gravure Coating & Printing, and Web Handling. Leading consultants and experts from academia and original equipment manufacturers will present best practices and advances related to coating process technology, oriented films, barrier, R2R vacuum technology, system developments, printed electronics, sustainability, strategies for improving productivity, converting technology, new materials, processing developments, monitoring and measurement, coating materials for key market applications, and flexible packaging and materials.



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The packed schedule will include Tabletop Exhibits during an evening reception and other networking opportunities including an AIMPLAS facility tour and guided tour of Valencia plus dinner.

Registration information and conference details may be found on the AIMCAL website, [www.aimcal.org](http://www.aimcal.org), click "Conference & Events." Prospective exhibitors should contact Tim Janes, AIMCAL member outreach director, at 803-948-9469 or [Tim@aimcal.org](mailto:Tim@aimcal.org).

## AIMCAL Mentor Program Connects Industry Veterans and Newcomers

AIMCAL has established a Mentor Program to help newcomers to the industry expand their knowledge and develop their careers. Mentors and newcomers are paired by expertise and interest areas. To share your experience in the industry or be matched with a mentor, sign up at: <https://www.aimcal.org/AIMCAL/Events/2021-R2R-USA/Mentor-Program.aspx>.

## Join AIMCAL and Access Valuable Resources for Your Entire Company

Complete the application for AIMCAL membership now and all your co-workers will receive access to an expansive array of member resources for 2022. Member benefits include an individual profile for each employee, online member Community forum, Ask AIMCAL business leads, access to the AIMCAL TV network (more than 225 technical presentations), access to 10-plus years of Conference Proceedings, committee involvement in your industry segment, technical training, marketing, networking, member pricing at events and global market research reports. Member companies are listed in the *AIMCAL SourceBook* directory and have the opportunity to present live webinars to the industry.

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# Atmospheric Plasma Treatment

A SOFTAL question-and-answer with 3DT LLC.

## What motivated SOFTAL Corona & Plasma to develop the LinearPlasma system?

With these limitations in mind, Hamburg-based SOFTAL Corona & Plasma developed its patented LinearPlasma system. This system uses a method similar to corona



LinearPlasma station plasma treats a polymer panel.

treatment, however LinearPlasma has the ability to process delicate substrates due to the lower temperature of plasma discharge. And without a counter electrode, there are no restrictions on a substrate's thickness or makeup. Unlike corona discharge, LinearPlasma does not cause streamers, heat damage, and flawed edges. Figure 2

## What types of materials and applications is LinearPlasma best suited?

LinearPlasma opens up numerous surface treating applications such as, treating wide materials (up to 2 meters wide) and thick materials without the necessity of a counter electrode. Plasma works well for surface treating panels and foam. LinearPlasma also effectively treats extruded boards without any problem.

SOFTAL's LinearPlasma capabilities include the surface treatment of printed electronics. These sensitive materials, which are increasingly embedded in state-of-the-art packaging and technical film, require non-conductive surface treatment. Electric circuits inside the film are damaged by corona treatment, but this is avoided when using LinearPlasma which is potential-free.

Are there other benefits unique to SOFTAL's atmospheric plasma system?

Beyond increasing surface energy and promoting powerful adhesion, atmospheric plasma will clean surfaces to remove contamination and physically etch surfaces aiding in bonding. LinearPlasma can be configured to produce a voltage-free stream of energy capable of cleaning the surfaces of stainless steel, aluminum, and various alloys for improved adhesion by removing lubricants, coolants, and release agents often used in the production of metallic components. LinearPlasma improves the adhesion for subsequent processes such as gluing, painting, laser welding and over-molding.

Plasma treatment is environmentally friendly because it does not produce ozone. LinearPlasma treated surfaces work well with water-based paints, inks, and adhesives and do not require primers. Plasma is safer than flame surface treatment.

Importantly, LinearPlasma is easy to use and integrate into production lines. It provides repeatable, process-controlled operation, with high efficiency with low operating costs.

## How does atmospheric plasma treatment function?

During Linear Plasma's treatment the plasma discharge causes chemical reactions in the air within the electrode gap and on the polymer surface. The result is the chemical



LinearPlasma treats 10mm foam.

restructuring of functional groups, such as hydroxides, ketones, ethers and carboxylic acids to the polymer surface. The newly created polar groups on the surface now readily form strong bonds with inks, coatings, adhesives, etc.

## What other solutions does SOFTAL Corona & Plasma provide for the film and converting industries?

SOFTAL Corona & Plasma produces a full range of powerful, dependable corona and plasma surface systems designed to raise the surface energy and adhesion properties of numerous substrates. Printing inks, lacquers and adhesives thoroughly wet out once treated with SOFTAL's technology. More than 60 years of surface treatment experience has made SOFTAL a world leader and the benchmark in surface treatment technology.

*SOFTAL is represented in the USA, Canada and Mexico by 3DT LLC of Germantown, Wisconsin; providing state-of-the-art German engineering with U.S. sales, service and support. This strategic partnership provides solutions to numerous adhesion challenges in both the film and 3D industries. 3DT manufactures a broad line of surface treatment systems, all customizable for unique applications. For more information contact [sales@3DTLLC.com](mailto:sales@3DTLLC.com) or visit our website at [www.3DTLLC.com](http://www.3DTLLC.com).*





# MATERIAL PROPERTIES, TESTING & APPLICATIONS: PART 1

By Neal Michal, Principal, Converting Expert, LLC

*This is Part 1 in a three-part series addressing what web properties are important. Parts 2 and 3 will discuss testing and applications.*

## Introduction

One rule of thumb is to tension a web at 10-25 percent of its yield point. Do you have tensile test data that describes the material yield point?

Another rule of thumb to reduce curl, is to laminate each layer with the same MD strain. Strain is a property of your process. How can you convert web tension to strain? Do you know your MD modulus?

There are many material

properties. Many companies rely solely on ultimate tensile strength (UTS). Rarely does UTS correlate to how you should run your process or how it will convert at your customer's site.

The caliper of high loft webs will vary dramatically thru roll and over time. Have you developed caliper tests based on the interlayer pressures your web will experience while stored in a wound roll?

To fundamentally understand poor lay flat (floppy, baggy, camber) one must develop computer models that predict MD stress that results in permanent plastic deformation. Do you know your ZD modulus?

Poor lay flat is associated with

viscoelastic creep. Have you measured your MD and ZD viscoelastic properties? Are they linear or non-linear?

Do you make or convert scratch-sensitive films? If so, do you know the five coefficients of friction (COF): web to idler, web to driven roll, web to nip roll, web to winding drum and web to web? Do you understand how the band brake equation can be used to document them?

Today begins a three-part study of material testing. We will focus on traditional in-plane tensile properties. What are they? Why are they important? How does one develop tensile tests that provide repeatable results?





Figure 1

How can these properties be used to optimize existing processes, troubleshoot customer complaints or design higher value laminates? Let's get into it.

## Tensile Tests

Figure 1 shows a common arrangement for a tensile test which includes two grips that hold the sample (coupon), load cell, electro-mechanical actuator, operator interface panel and computer to collect the load and elongation data. Software is used to convert this data to stress versus strain. Stress is load/cross sectional area. Strain is elongation/gauge length. Figure 2 shows a sample stress-strain curve for a ductile material.

## Definitions

**MD Modulus** is the initial slope of the stress/strain curve. It has units of  $\#/in^2$  (PSI) or Pascals (Pa) Modulus is the "spring rate" of your web. As the coupon is elongated the

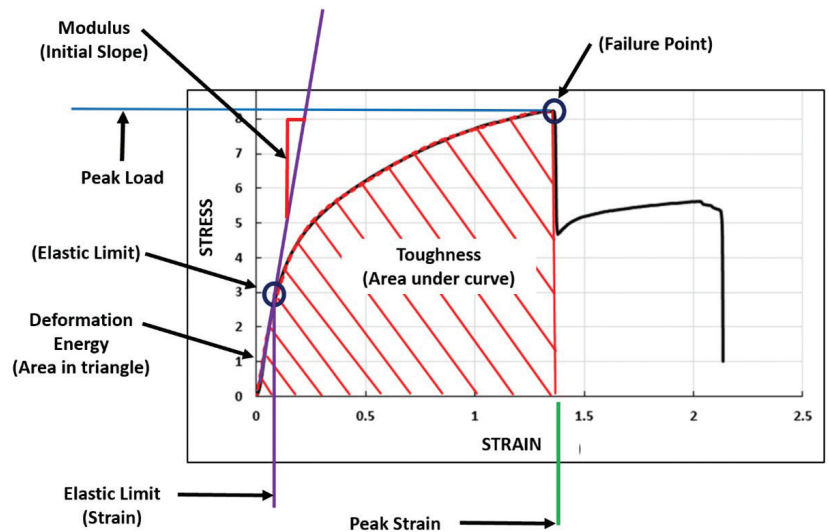


Figure 2

stress will vary linear to the strain.

**Elastic Limit** is defined as the point where the linear elastic behavior stops. Elastic Limit (aka Yield Point) has units of strain. Technically strain is unitless. However, it may be described as in/in, mm/mm or % which may provide additional understanding.

**Ultimate Tensile Strength** (aka "UTS") is the maximum amount of force that the web can withstand before failure. It is described in units of force (pounds or newtons). It may be described in units of  $\#/in$  (PLI) or N/m.

**Toughness** is the area under the stress-strain curve up to the failure point. Toughness (aka Total Energy Absorption) has units of inch-pound-force per cubic inch ( $in \cdot lbf \cdot in^{-3}$ ) or joules per cubic meter ( $J \cdot m^{-3}$ ). Toughness represents how much energy a material can absorb before failure.

**Deformation Energy** is similar to toughness with the same units. It is the area under the curve up to the elastic limit.

## Practical Considerations

What properties are important? It depends. Many materials are sold based on ultimate tensile strength. UTS is often based on the end use product. If your web meets the required strength and your process runs smoothly you are living the dream. Congrats. However, you might be incenting your competitors to sell cheaper materials to your customer.

**Safety Alert** regarding your material UTS: Is the mechanical design of your process strong enough to break the web long before the web breaks your process? You don't want idlers breaking or being sheared off of their bases when your operators are threading up the machine. It happens. What safety factors should be used?

The annual challenge is to do more with less. It is common to see cost cutting goals of 8 percent year over year. Should you focus on reducing caliper (mass), running faster or reducing waste?

Management answered, "Yes, I'll take all three." Note – never offer all three concurrently.

The probability for wrinkles is inversely proportional to the ~ square of caliper (or mass). Wrinkles are ~ eight times more likely if you drop the caliper by 50 percent. If you want to run lighter webs, you better understand your elastic limit and deformation energy. You will benefit from determining exactly where on the stress strain curve your process is currently running and where it should be for a new material.

If you are facing laminate curl issues you should calculate strain for each web as they enter the laminator. Strain is calculat-

ed based on the constituent web tension(s) and moduli.

If your customer experiences web breaks during splices you should focus on material toughness. It is often easier to increase elongation versus increasing the peak load. Using knowledge of material properties, you can trial different process settings to see how peak load can be exchanged for more elongation.

There are dozens (hundreds?) of other examples that we will not have time to discuss.

### Conclusion

Your web properties are important. You should document them.

You should understand the entire stress-strain curve and the value for the parameters described above. Monitor how your properties change during each campaign they are produced.

If you are running films look for daily and seasonal temperature changes. If you are running paper-based products look for daily and seasonal moisture trends. If you are working with nonwovens, correlate your properties with the frequency of die cleaning and pack changes.

I hope you will return next month when we discuss important considerations for tensile testing. There is more than meets the eye. ■

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### ABOUT THE AUTHOR

Neal Michal of Converting Expert is a well-known authority in web handling, process design and optimization. He worked with the Web Handling Research Center for 20 years. Currently serving as a technical advisor with AIMCAL, he can be reached at [neal@convertingexpert.com](mailto:neal@convertingexpert.com) or through [www.convertingexpert.com](http://www.convertingexpert.com).

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# Corona Treatment Considerations for Your Company

A question-and-answer with Alyxandria Klein, Marketing and Sales Director, QC Electronics.

## What are critical steps to guaranteeing adhesion in your process?

**Klein:** Guaranteed adhesion requires precise control of the material's surface energy. In order to control the surface energy, understanding watt density and the application of corona discharge is crucial. Companies understand their process and bonding application but are often unaware of the importance of the actual composition of the surface of their material. This is where problems become prevalent.

When bonding, companies must understand their coating type, process of application, and the characteristics/composition of the surface the bonding is occurring to in order to have a guaranteed successful process.

## What are factors that affect treatment that should be observed and understood?

**Klein:**

1. Knowledge of the adherent's bonding characteristics
2. Knowledge of the adherend's surface characteristics for bonding
3. Understanding of required dyne level/surface energy for your application
4. Environment/travel of product
5. Storage
6. Contaminants/Handling

## How can companies improve their converting processes?

**Klein:** Corona should be applied directly before bonding, with as little time between treatment and bonding as possible. The increased surface energy caused by application of corona decays over time at different rates depending on your material – this is another reason understanding your material is so important. The degradation rate should be understood when deciding where the corona treater will be placed on your line. If you are sheet treating, you should make sure the treated sheets are adhered to as soon as possible. This relates to any application.

Dyne levels are great for printing applications, but more complex applications require more accurate readings of surface energy to be able to guarantee bonding. Contact angle measurement is a great way to get those accurate readings to fully understand your adherent and adherend's bonding capabilities. KRUS's mobile surface analyzer is a great tool for measuring contact angle.

Following a maintenance schedule also ensures your corona treater is running at top performance. This



includes checking in on the equipment's components and cleaning and lubricating when necessary.

## What problems are associated with inconsistent or improper surface treatment?

**Klein:** Faulty corona treatment is obvious when looking at your end-product. The results will be visible in inconsistency of your adherent throughout the surface of material, or not

adhere at all if required surface energy is not understood and applied. Incorrect corona treatment is a leading cause of delamination and product failure.

If the entire surface is not treated properly and evenly, the surface energy of the substrate will vary from point to point on the material. This causes the adherent to adhere where it is treated, and separate where it is not to a sufficient surface energy for adhering. The surface energy of the substrate must be higher than the surface energy of the adherent in order for a bond to occur. The areas where the surface energy is not will fail.

## What are key factors converters should pay attention to when choosing the best solutions and manufacturer or supplier?

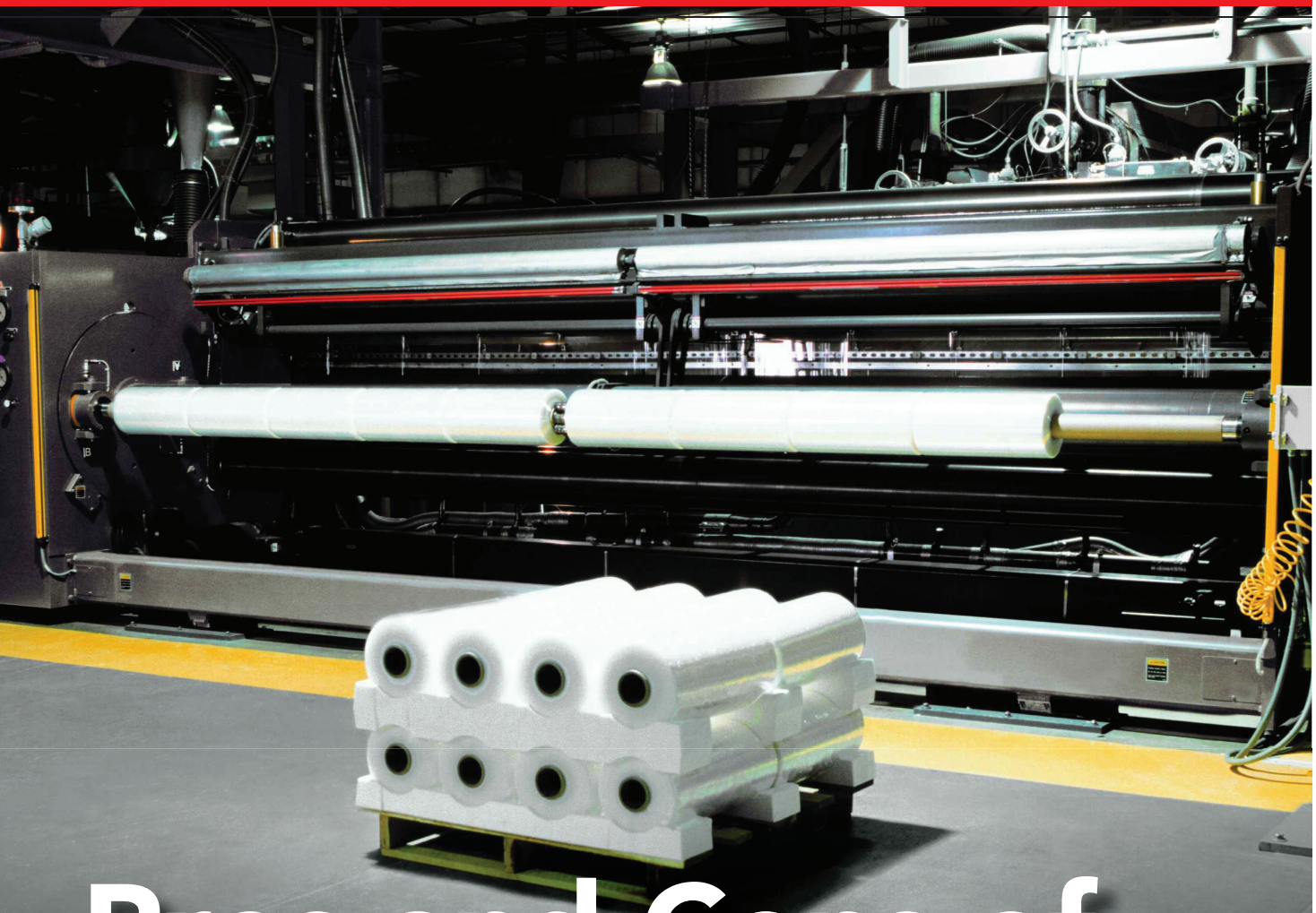
**Klein:**

- Reliability
- Quality
- Simplicity of operation/maintenance
- Consumables/rate of replacement
- Control of corona (High definition)
- Type of programming utilized
- Send samples to ensure success with your potential treater supplier
- Required maintenance schedule

When purchasing a corona treater, it is an accessory to your line. The corona treater is like oil in a car: a vital element, but a small component in the scheme of things. The oil should be easy to change when necessary and perform to run the engine at its best. When purchasing a corona treater, you want to make sure that it is going to perform as that vital element to allow the process to run as predicted. Oil in a car is often forgotten about. That's what you should be able to do with your corona treater – be confident that it will always perform its job and enjoy the fruits of your successful production line.

Learn more at [sales@qcelectronics.com](mailto:sales@qcelectronics.com) or [www.qcelectronics.com](http://www.qcelectronics.com). ■





# Pros and Cons of In-line Slitting

By Duane Smith, Process Manager – Web Handling and Specialty Winding, Davis-Standard

Producing quality, shippable rolls directly off your production line can increase productivity, lower manufacturing costs, decrease scrap and shorten production cycles. By eliminating an off-line slitting and rewinding operation, you can potentially save 5 and 10 cents per pound in production costs.

However, in order to take advantage of the pros (productivity and profitability) offered by in-line slitting, *the right mix of products*

*and equipment is essential.* The industry trend of wider and faster production lines makes this more challenging.

Extensible films wound to smaller diameters such as stretch wrap and food wrap films have traditionally been slit in-line. But, as the widths and speeds of these lines have increased, the consistent achievement of scrapless roll changes as well as the finished roll removal and re-coring process, plac-

es unique demands on equipment.

This can lead to several cons including lost production, increased production costs and more scrap. In order to succeed, there are six key requirements for a profitable in-line slitting operation.

**Consistent quality on the process:** Process quality of the material being produced must be consistent. Cutting off quality material from 12 slit rolls instead of one parent roll can



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significantly drive up production costs. Automated process control systems have substantially reduced off-quality process problems.

**Changeover time for slit-width changes for roll removal and shaft re-coring:** Automated slitter positioning systems and roll/re-coring systems make it possible to achieve fast and efficient set-width changes, roll changes and re-coring. However, downtime and/or scrap can be a negative when making product width changes or when slitter blade maintenance is required.

**Ability to consistently spread and wind shippable quality rolls:** The winder must have a properly designed slit web spreading system and the ability to use all three of the TNT (Tension/Nip/Torque)

winding principles to consistently produce properly wound rolls. This includes the ability to wind on differential shafts for materials with cross-machine thickness variations, which need to be wound to larger diameters.

**High quality, high-speed transfers and good starts on new cores with 100 percent consistency:** New transfer systems produce straight-line cuts and transfer the slit web directly to the new cores. Stationary knife transfer concepts provide roll change consistency approaching 100 percent, regardless of web width or operation speed. They also provide clean web starts on new cores.

**Scrap generation during the roll change operation:** Quality rolls call for the first and last wraps

to be as good as those in-between. Controlled tension, nip and torque must be maintained throughout the entire winding cycle, including the roll change.

**Core size consideration:** As production lines increase in width and speed, the core shaft critical speed and deflection criteria determine the minimum core ID (inside diameter) that your material can be wound on. Just by taking a single-center slit, the stiffness of the roll no longer contributes to the stiffness of the shaft. Off-line slitting and rewinding is still needed for customers with small core sizes.

These guidelines may help you determine if in-line slitting is the right process for your operation. ■

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# 5 Tips When Starting a Succession Planning Program in your Organization

By **Jackie Danbury**, Director of People & Culture, Pro Tapes & Specialties, Inc.

According to data from the United States Census Bureau, nearly a quarter of the manufacturing workforce in the United States is age 55 or older. Not only do these Baby Boomer retirements lead to hiring challenges, they could also

result in the loss of substantial company and industry knowledge, if not successfully planned for in advance. This is the motivation behind our Succession Planning Program at Pro Tapes & Specialties, Inc.® We are now almost

one year into our maiden voyage of succession planning, and I would like to share five tips I have learned from the process:

1. A position does not need to be filled with the same duties and responsibilities

## **A robust succession plan affects almost every aspect of Human Resources, especially recruiting, training and employee engagement.**

that exist currently. This is a good opportunity to evaluate what is and is not being done, and redistribute work if necessary.

2. When discussing potential successors, get input from a variety of sources – 360 Feedback Surveys are a great way to gather confidential information from employees throughout the organization. The results could either support or alter your successor decision.
3. Have conversations with potential successors to ensure they are even interested in moving to another role and assuming other responsibilities. Sometimes, people are happy as individual contributors, and that is OK. We set others up for failure if we assume they want more at this point in their career. Also, if an employee passes on the successor opportunity now, do not assume that is always going to be the case – their answer could change based on their personal situation, their skillset, their desire, etc.
4. A succession plan cannot be a static document that is completed once a year, or less. It must be a process that is repeated frequently, given the changing needs of the business and its employees. The program should be process-oriented, but also fluid.
5. A robust succession plan affects almost every aspect of Human Resources, especially recruiting, training and employee engagement. All of these specialties must work together to ensure the company is prepared for the future.

Succession planning is certainly about playing the long game. You will not see the results of your efforts right away, but know that the work being done today will have an impact on the organization for years to come! ■

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# The Importance of Roll Cleaning and Maintenance

A question-and-answer with Joe Walczak, President of Sonic Solutions.

## What are the main types of roll cleaning methods and the differences between them?

**Walczak:** There are really three types of cleaning processes in the marketplace: wash/blasting, laser and ultrasonics methods.

With wash/blasting methods you're taking a cleaning solution or other particle like sodium bicarbonate and forcing it under high pressure against the roll. The hope is that the pressure will chip or wash away built up dirt. These systems are typically big, bulky and expensive. With bicarbonate blasting systems you need to be careful about the white powdery substance getting all over the plant in case of a leak in the pressure system. They're not that common anymore.

Laser cleaners basically burn dirt and debris off the roll. At these high temperatures, contaminants are basically evaporated off and turned into dust. These systems are the most expensive in the marketplace and have a good niche with the largest of anilox rolls – 7 feet or longer – as well as rolls that don't come off the press easily. Repairs to these systems can be quite costly due to the type of technology used, easily exceeding \$100,000.

Ultrasonic systems have evolved into a great way to thoroughly clean anilox rolls. The cleaning solution works to soften debris in the cells of the anilox and then the ultrasonics gently and safely vacuums dirt off the anilox. Ultrasonics is a proven technology used in numerous industries where precise cleaning is needed and required, such as, hospital operating rooms, NASA and the space industry. It's a simple but effective way to clean an anilox. Ultrasonic cleaning systems for anilox rolls vary in cost depending on size of rolls. They can range from under \$10,000 for small 16-inch anilox rolls to under \$40,000 for a 72-inch sleeve.

## What problems are associated with inconsistent or improper roller maintenance and cleaning?

**Walczak:** Maintaining an anilox roll is of great importance. Every label company has as its highest priority to get label customers, print labels and keep that customer coming back. Maintaining your anilox rolls won't necessarily help get customers, but it can impact printing labels and keeping customers.

The anilox roll is one of a few factors with a direct impact on labels. If an anilox is dirty then it's not delivering the right amount of ink to the label. That will impact colors. If press operators aren't getting the right density of color, then that press is running bad labels or



sitting idle while the operator is hunting for the problem. Those bad labels and idle time cost the company money. Using clean anilox rolls each time a press is set up to run a job will be one big headache operators will avoid. Keep your rolls clean!

## What solutions can your company provide to address these problems?

**Walczak:** Well that's specifically what Sonic Solutions provides. For over 20 years we've provided quality, durable, safe and inexpensive cleaning alternatives for anilox rolls. Thousands of customers throughout the world rely on our equipment daily to keep their anilox rolls clean. Some larger customers have several units side by side with rolls going on and off the system all day long. They'll clean rolls after every press run so they know colors will come out right on target each time.

## What key factors should converters keep in mind when choosing roller cleaning solutions?

**Walczak:** When seeking a solution to keep anilox rolls clean, consider lots of factors: Reliability. Safety for your anilox. Price. Ease of use. What have your operators used in the past? And service.

Sonic Solutions scores an A+ in each of these categories. Customers come back to us time and again to help them. We take pride in providing the most personal service we can and solving cleaning problems, big or small.

## Anilox sleeves are becoming prevalent in the wider web presses. Does Sonic Solutions have a product to service these?

**Walczak:** Our Phoenix line of cleaning systems is uniquely designed to work exceptionally with anilox sleeves. We can custom make a system to clean either one or two sleeves at one time. These systems' quality is equivalent to the standards we keep with our smaller systems. But the most impactful part of our sleeves systems is price. Our prices are less than half the cost of wash or laser systems. When wash and laser systems for sleeves can exceed \$100,000 easily that means a lot.

*Joe Walczak co-owns Sonic Solutions with his wife, Marie, and they have been helping flexo printers for more than 25 years. They can be reached at Joe\_Walczak@SonicSolutionsUSA.com, Marie\_Walczak@SonicSolutionsUSA.com or (877) 654-7800.*



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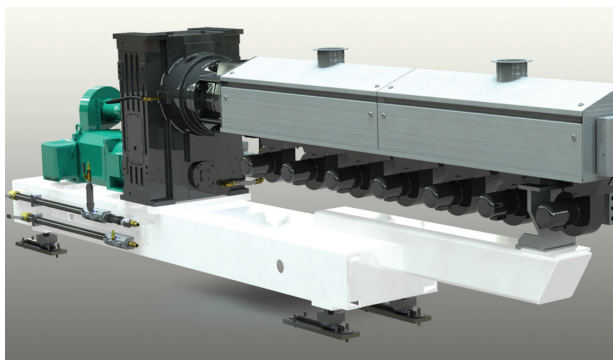
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## Davis-Standard to Market Nonwovens and Converting Solutions at Techtextil North America

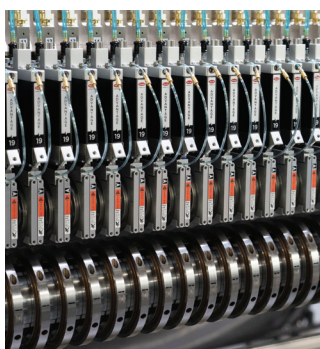
Davis-Standard, LLC will market the company's non-wovens and converting solutions technology at booth #2604 during Techtextil North America May 17-19, 2022, in Atlanta, Georgia. Davis-Standard offers a range of performance technology for high-volume fabric coating applications and engineered textile composite applications. This includes extruders, controls, feed-screws, unwinds and winders, laminators, extrusion coaters and web handling equipment. Davis-Standard will also promote the company's new DS Activ-Check™ cloud-based platform as well as R&D opportunities.

For more information, visit [www.davis-standard.com/converting\\_system/extrusion-coating/](http://www.davis-standard.com/converting_system/extrusion-coating/).

## Maxcess Launches the Tidland Advantage Series Knifeholder

Maxcess recently unveiled the Tidland, a Maxcess Brand's Advantage Series Knifeholder. Ideal for packaging, tag and label and converting customers who require quality narrow width slits, the Advantage Series offers quality and easy maintenance at an attractive price point.

Featuring minimum slit widths of only 19.5 mm (0.768 inches), the Advantage Series offers precision depth control adjustment for blade



Maxcess Tidland Advantage Series.

overlap and extended side-stroke distance to simplify setup. It is backward compatible with legacy W19 knifeholder systems, as well as Performance Series Class I knifeholders and guidebars.

Visit [www.Maxcessintl.com](http://www.Maxcessintl.com) to learn more.



Comexi, RMEA & Madayn Plastic.

## Comexi to Expand Middle East Presence with Showroom at Madayn Plastic Company

Comexi, a specialist in solutions for the flexible packaging, printing and converting industry, will set up a showroom in the Middle East as a result of an agreement reached with Madayn Plastic Company. The Omani company has ventured into the flexible packaging sector with Reifenhäuser and Comexi, with the intention of investing a large percentage of the Sultanate's market share.

For this reason, Madayn Plastic has acquired a Comexi F2 ML flexographic press and a Comexi ML2 Evolution laminator, as well as a Reifenhäuser Blown Film. The three machines will be installed in the facility that the company is building in Sohar.

Learn more at [www.comexi.com](http://www.comexi.com).

## Mega Label Chooses Martin Automatic Technology; Installs with Video Assistance from U.S. Technicians

Martin Automatic has developed ways of servicing customers during the global pandemic. Testament to the company's equipment design, which makes it relatively straightforward to commission, is a recent installation in Malaysia for Mega Label.

Mega Label's first Martin Automatic technology was an MBSC non-stop unwind/splicer and an STR automatic transfer rewinder, fitted to a 10-colour Gallus ECS 340 press. So effective was the technology that



Mega Label ordered a second set in 2020 for their latest Gallus press, another ECS 340 – the only problem was pandemic travel restrictions.

Mega Label and Martin Automatic technicians created a remote installation plan with pre-installation video conference for reviewing all drawings and instructions. Due to the remote installation's success, Martin Automatic will be releasing installation videos to assist customers in locations that cannot be visited in person.

Learn more at [www.martinautomatic.com](http://www.martinautomatic.com).

### Double E Welcomes Mark Mayo as Vice President of Sales

Double E Company LLC recently announced the promotion of Mark Mayo to the role of vice president of sales. Mark will be responsible for driving revenue growth across the complete Double E Group of Converting Industry Specialists — Double E, Epoch, Appleton, Converttech and Schlumpf.

Mark will lead the Double E Group's world-wide direct-to-the-end-user sales force as they support customer's manufacturing efforts by applying their unique knowledge of the converting industry to speed production, improve quality and drive safety improvements in their customer's operations.

Learn more at <http://www.ee-co.com>.



Mark Mayo Double E VP-Sales.

### Integrated Corona Treating System for Labs and Offline Production

Enercon offers a fully integrated, turnkey corona treating system that improves surface energy of films for printing, coating and laminating. This free standing, offline surface treating system includes unwind, rewind, corona or plasma treater, power supply and high voltage transformer. The turnkey option is available for narrow web applications up to 32" wide featuring Enercon's CoronaFlex for standard corona treating applications. The system is also available with Enercon's Atmospheric Plasma3™ treater.



Enercon unwind rewind station.

This treatment structure is an economical solution perfect for lab use as well as offline production when manufacturing limitations prevent inline treating. Deluxe options include web tension control that automatically adjusts as the roll diameters change. Plus, there is an option to change the motor speed to keep a constant line speed.

Learn more at [www.enerconind.com](http://www.enerconind.com).

### H.B. Fuller Joins 4evergreen Alliance

H.B. Fuller Company, a leading global adhesives provider, recently joined the 4evergreen alliance, a cross-industry alliance hosted by the Confederation of European Paper Industries (CEPI) to improve the circularity of fiber-based packaging.

The initiative brings together a diverse network of around 90 organizations and stakeholders throughout the packaging value chain to push for innovation throughout the sector and develop robust, fact-based guidelines for the future of fiber-based packaging. The goal of the alliance is to raise the overall recycling rate of fiber-based packaging to 90 percent by 2030 and contribute to a climate neutral and sustainable society. Learn more at [www.hbfuller.com](http://www.hbfuller.com).



### Corotec Corporation Joins Inductotherm Group of Companies

Corotec Corporation, manufacturer of corona treating systems for surface treatment applications, has become part of the Inductotherm Group of companies.

Inductotherm Group leads the industry in the development and manufacturing of advanced technologies, products, and systems for the heat-driven transformation of metals and specialty materials. Inductotherm Group is a global organization, with 40 full-service companies structured to provide localized manufacturing, engineering, service and support in every region of the world.

### New Management

Tom Ignatowski has been named Corotec's new president. Tom, a veteran employee of Thermatool Corp., originally took over managing Corotec after its former President, Bruce Stobbe, retired in 2018. Tom has more than 30 years of experience in the industry and is a specialist in designing and producing power supplies.

For more information, visit [www.corotec.com](http://www.corotec.com).

# From Surface Treatment to Support

A question-and-answer with Mark Plantier, VP Marketing & Communication, Enercon Industries.

## What is the process that Enercon uses for specifying surface treating equipment?

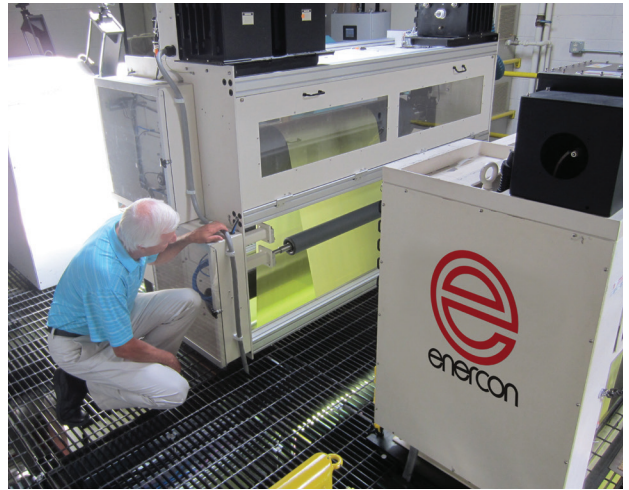
**Plantier:** Our approach begins and ends with the details of the customer's application. Over the last several decades, Enercon has compiled the largest database of surface treating application data on printing, coating, laminating and film extrusion applications. We know what works and we know what can lead to potential problems or restrict future production flexibility. We also know that each OEM has preferences in how they prefer to integrate corona treating. So, whether we are working directly with the end user or an OEM, we customize not just the technology (corona, plasma or flame), but also the system components (electrodes, roll coverings, power supplies and web handling) to provide the optimal treating solution.

## Which is the best surface treatment technology: corona, plasma, flame or ozone?

**Plantier:** That's a popular question and as the only manufacturer that offers all of these technologies, Enercon has a uniquely qualified perspective. Once again, the answer is that the application defines the best solution. For the vast majority of traditional converting applications, corona is the most popular choice because it is economic and effective. Atmospheric plasma is used when corona or flame cannot produce the desired results. For these applications, Enercon pioneered the development of plasma and earned recognition for our Plasma3™ and Plasma4™ designs, which optimize gas



The Compak™  
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Enercon's web corona treater lab

consumption at high line speeds. Flame is a good option for treating certain types of foils as well as paperboard on extrusion coating lines. And ozone is also used on extrusion coating lines to enhance bonding and provide operational benefits.

## What challenges are converters currently facing?

**Plantier:** It's no secret that finding and keeping good employees is a challenge. We're seeing more employee turnover at converting operations and that creates gaps in knowledge and experience. Enercon has always led the industry in providing educational materials on the best practices for operating surface treating equipment and the importance of understanding and managing application variables, which affect surface treating success. Between our webinars, technical papers, best practice guides and personalized training, we help our customers get their employees up to speed.

## How is Enercon set up to support customers?

**Plantier:** Support always starts with people and Enercon does not take any shortcuts when it comes to supporting our customers. Enercon's Technical Support Team is comprised of electrical and mechanical engineers. These are not technicians. These are highly educated professionals specifically trained to rapidly identify, troubleshoot and resolve issues. Of course, we also leverage technology. Our Compak™ Pro power supplies have artificial intelligence, remote connectivity and integrated troubleshooting to help our customers resolve issues in real time.

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