

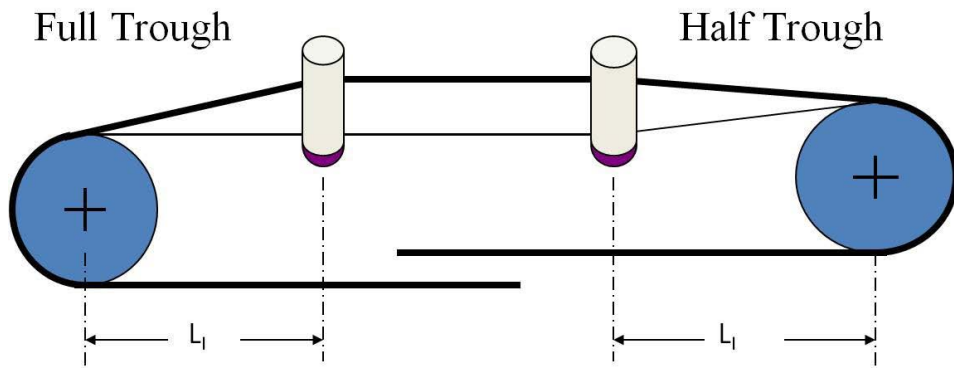


Belt Line

A publication of NIBA-The Belting Association

Conveyor Transitions

by Michael Cremeens, VP Training and Technical Support, Shaw Almex Industries



The following article is in response to the **Overland Conveyor Evaluation Case Study** by Alexandre de Oliveira, Mechanical Engineer at Kinross Mining in Brazil. Download the case study at http://bit.ly/overland_case_study

Bulk material conveyors with free-flowing products commonly use troughed idlers set along its length, increasing the belt load carrying capacity. Changing the cross belt profile to a wide U-shaped high capacity configuration, the belt must pass around flat faced terminal pulleys at each end of the system. Within these areas we find the conveyor transition.

As the conveyor belt changes from a flat profile to a troughed profile in its passage from the tail pulley, and the troughed profile to the flat profile at the head pulley, possible belt damaging tension and compressive forces can occur.

At the area of profile change, this transition must occur over sufficient conveyor length in order to avoid excessive tension in the belt edges (splice tearing) and avoid belt compression (center buckling). The conveyor system operating tension has a strong influence on the transition length as noted in the tables on the following pages.

Transition distances are measurements from the centerline of a terminal pulley to the first full angle system idler (LI). One or more belt supporting low angle transition

idlers may be between the terminal pulley and the first full angle system idler and should not be included in this measurement.

The two most common transition profile types are the full trough depth and ½ trough depth. The full trough is typically found at the tail, with the ½ trough typically found at the head. The full trough terminal pulley may be raised slightly to give a ½ trough configuration.

As you can see from the following full troughed profile drawings and charts, the belt is flat over a terminal pulley and has various lengths of transition distance. The charts below each transition drawing show how the cross belt tensions are affected by the change in transition length.

The following three drawings are typical of a fabric belt system. Full trough transition, operating at 70% rated belt tension, using 35° troughing idlers.

The first drawing shows a measured transition distance of 3/4 the belt width.

In Transition Drawing 1, the cross belt tension is far too great at the edges (more than 130%) and less than zero in the middle of the belt. Commonly resulting in splice edge failures and delaminating in the center of the belt.

You can visually identify this in the field as the belt center will have a buckle (lifting off the center idler roll). Left unchecked, an adhesion breakdown in the center of the belt will occur and thus propagate along the entire belt length.

President's Message

John Grasmeyer,
2020 NIBA President

With 2019 behind us and as NIBA evolves into 2020, we remain committed to our original mission of promoting the relationships and common business interests of all distributor/fabricators and manufacturers.

To this end, the Board and committees have set strategic goals to bring even more value to members based on what we have been hearing directly from you.

In 2020, we will reduce the cost to attend the Annual Convention, offer more trainings and technical resources at NIBA.org, and eliminate add-on fees for member companies.

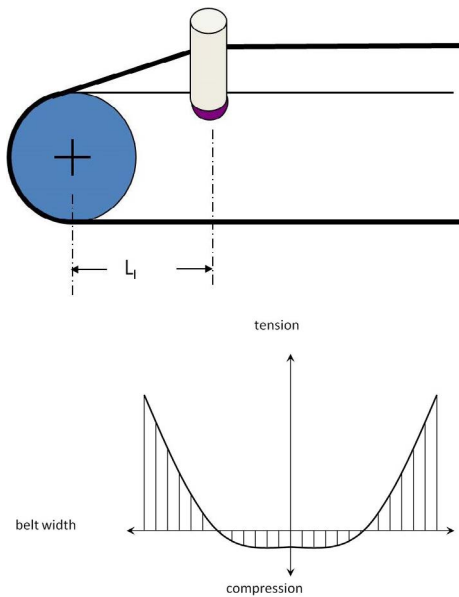
We will also launch a new certification program in the Spring, which will help grow your team's knowledge of basic belting concepts and material before they attend more advanced in-person training with your company or with NIBA. This program has been a vision for many years that is now coming to fruition. The support from the manufacturers and the work behind the scenes has been a great example of the dedication and teamwork of members in this industry. Look out for more on Certification by March 2020 at NIBA.org.

We take member feedback very seriously (thanks for filling out the surveys!) and while we

Continued on page 3



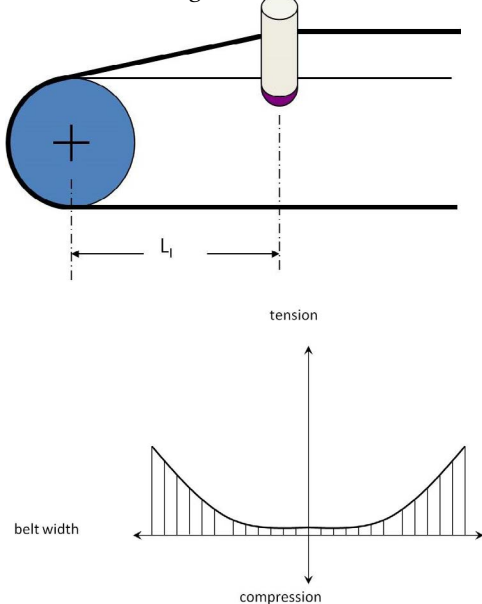
Transition Drawing 1



In Transition Drawing 2, the transition length is increased to 2 times the belt width. The edge tension is dropping to a workable limit. However, without adequate transition distance, an insufficient amount of tension is present and is not great enough to keep the bottom of the belt in the trough and avoid some buckling. While this effect is not easily seen, long term subsequent problems with the belt and the splices will be encountered.

In Transition Drawing 3, the transition length is increased to 2.5 times the belt width. This is the proper length for this configuration (see table). Excessive edge tensions are eliminated by keeping the carcass within its elastic range. Center belt tensions are increased to spread the total cross belt tensions more evenly across the width.

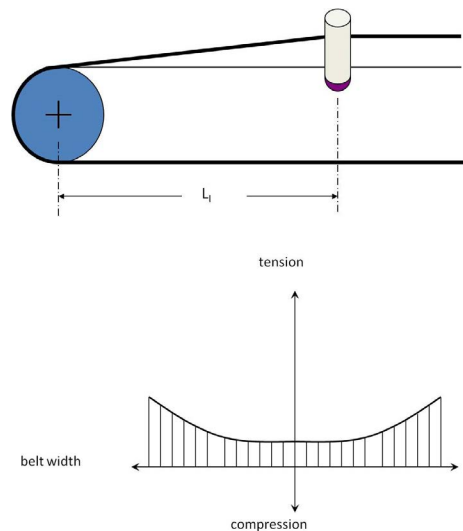
Transition Drawing 2



The next three drawings are typical of a fabric belt system, with half trough transition, operating at 70% rated belt tension, using 35° troughing idlers.

A properly configured half troughed transition has a unique cross belt tension profile. Since this is commonly used at high tension terminal pulley locations (head pulley), cross belt tensions are averaged by setting the terminal pulley so a tangent line from the pulley top (rim) is above the idler center roll by an amount equal to half the height of the first full troughing idler.

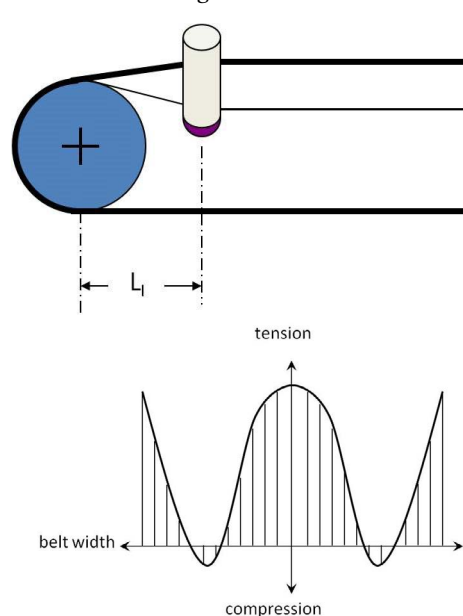
Transition Drawing 3



The first drawing shows a measured transition distance of 1/2 the belt width.

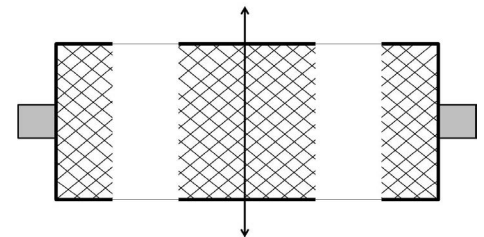
In Transition Drawing 4, the cross belt tension is poorly averaged and thus the belt edges and the belt center are more than 120% rated tension. The idler junction area of the belt is less than zero. As the belt moves

Transition Drawing 4



onto the pulley the tensions must equalize quickly across the belt width and “belt creep” in the low tension areas can occur.

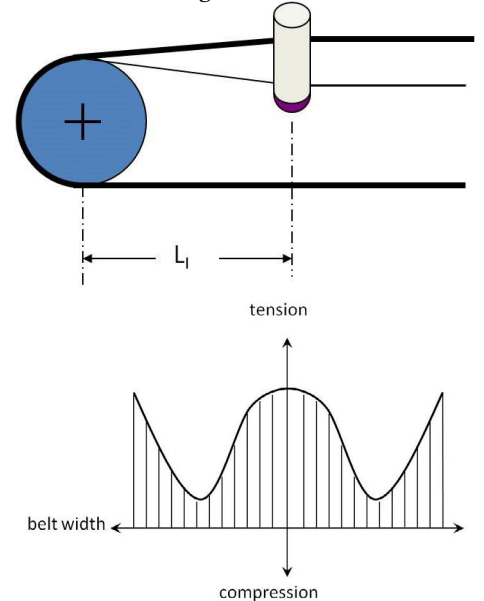
Adequate transition distances are extremely critical with the use of today’s high modulus, low stretch, conveyor belt carcasses. The stresses resulting from a short half trough transition distance at the high tension terminal pulley can be dramatically visible on the rubber pulley lagging wear pattern.



The belt creeps around the pulley face in the low tension areas near the idler junction, resulting in skidding, wearing a corresponding channel into the rubber lagging.

In Transition Drawing 5, the transition length is increased to the belt width. The cross belt tension at edge and center drop to workable limits. But without sufficient transition distance, too much shearing force across the splice width is encountered.

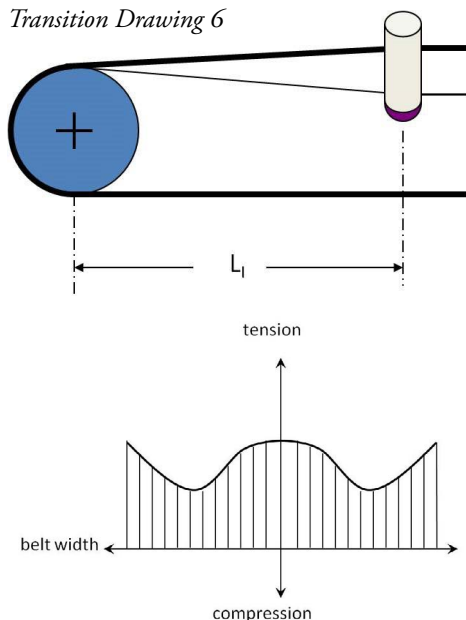
Transition Drawing 5



Left unchecked an adhesion breakdown in the idler junction areas of the splice will occur and thus propagate along the entire belt length.

In Transition Drawing 6, the transition length is increased to 1.5 times the belt width. This is more than the proper length for this configuration (see table). Excessive edge and center tensions are eliminated by keeping the carcass within its elastic range. Idler junction area tensions are increased,

Transition Drawing 6



Full Trough Transition Table

Idler Angle	% Rated Belt Tension	Belt Width x Factor = Transition Length (inch)	
		Fabric Belt	Steel Cord Belt
20°	Over 90		
	60 to 90	1.6	3.2
	Less than 90	1.2	2.8
35°	Over 90	3.2	6.8
	60 to 90	2.4	5.2
	Less than 90	1.8	3.6
45°	Over 90	4.0	8.0
	60 to 90	3.2	6.4
	Less than 90	2.4	4.4

½ Trough Transition Table

Idler Angle	% Rated Belt Tension	Belt Width x Factor = Transition Length (inch)	
		Fabric Belt	Steel Cord Belt
20°	Over 90	0.9	2.0
	60 to 90	0.8	1.6
	Less than 90	0.6	1.0
35°	Over 90	1.6	3.4
	60 to 90	1.3	2.6
	Less than 90	1.0	1.8
45°	Over 90	2.0	4.0
	60 to 90	1.6	3.2
	Less than 90	1.3	2.3

thus allowing better tension distribution across the belt width.

The following tables provide a guide to the proper transition length based on system idler angle and percent of rated belt tension. Multiplying the belt width (inches) by the table transition distance factor will give the minimum recommended transition distance (inches).

Remember, Transition distance, as defined by NIBA is the length from the center line of the first fully troughed idler roll to the center of the terminal pulley (either the head or tail pulley).

Since there are a variety of belt constructions with different properties and many conveyor systems with unique configurations, belt manufacturers should be consulted for their specific recommendation. ●

President's Message from page 1

can't react or adjust to every comment, we do listen. One recent example is the NIBA 2021 Annual Convention site selection. Typically, we like to book our events three years in advance and, for 2021, we had been looking at resort properties in the Denver, Colorado area. Based on your overall feedback at NIBA2019, the Executive Committee decided to shift and focus on contracting the meeting in Palm Springs, California at a resort where NIBA will take over most of the property, have the golf event on site, and get away from the big city hussle and bustle.

As you read this, the NIBA staff is working on our 2020 renewals cycle. I encourage you to renew your membership early and also to invite your friends or colleagues to join. NIBA has a referral program that awards VISA gift cards to any member company that successfully provides a new membership referral. Additionally, please make sure to also contribute to the NIBA scholarship fund in 2020. All money raised goes directly to providing more scholarships for students. We plan to showcase more past winners at the next Annual Convention, like we did last year in Washington, DC.

Finally, keep an eye out for other upcoming announcements such as

- Spring 2020 Technical seminars opening in January
- NIBA Scholarship applications open through April, and
- NIBA 2020 registration opening by April 15, 2020

Remember to also encourage your best people to apply for committee positions within NIBA at niba.org/committee-call-for-volunteers/. The next rotation of committee members will occur in June 2020. ●

Conveyor Belt Slip - Root Cause Analysis

by Buddy Wilson, Senior Director, Services Operations, Fenner Dunlop Conveyor Belting

Conveyor belt slip is a common occurrence that creates serious problems on a conveyor system. Like most conveyor related issues, this is a troublesome condition that hampers production and jeopardizes the lifecycle of conveyor belting and related components. Conveyor belt slip can be due to several conditions that adversely affect the conveyor system. These factors can include environmental, mechanical or design related conditions. One example is when a new belt is installed on a system, but the old pulley with its existing rubber lagging is kept in place. This creates a significant drop in the coefficient of friction between the pulley and the belt which often leads to belt slip. When evaluating all of the potential causes of a slippage problem, a process must be used to identify the culprit. It is unwise to make snap judgements or use anecdotal theory to find the root cause. Three of the most common areas to explore when conveyor belt slippage occurs are the take-up system, the drive system and the idler system.

The take-up assembly is a finicky component of any conveyor system. As we know, its only function is to “take-up” the slack within a conveyor belt when torque is applied and stretch occurs. Take-up systems and their proper maintenance can play a large role in creating slippage problems. I know you are saying to yourself... “Let’s add more weight, that’ll fix it.” Not so fast! Weight or pressure may not be the problem at all.

Make sure to check and evaluate all components of the take-up system. Is the take-up functioning/operating correctly? If not, this is likely a clue to the solution. The take-up system must operate in a dynamic state. There shouldn’t be any hang-ups along the travel of the system components. Without obstructions, the assembly will move freely and should never be static. The carriage will actuate in concert with the stretch and compression of the belt. If this is not occurring, this may be part of the root cause.

Vertical take-up arrangements should be plumb and level and slide freely along the guide poles. Damage to the poles causes excessive friction between the assembly and the poles. This will obstruct the ease of the vertical movement of the assembly and will create a condition for belt slip.



Photo 1. There’s a take up under here some-

More complex take-up designs involve off-set towers, wire ropes and sheaves. These require regular maintenance to ensure trouble free performance. Sheaves and wire ropes need to be inspected for fraying, bird-caging and other damage. Regular lubrication is required so the carriage moves freely. An unencumbered motion allows the take-up to do its job in taking up and releasing belt stretch as tensions vary.

When a belt slips, operators may immediately think the drive pulley is the culprit. While that is true in some instances, more investigation is needed before jumping to conclusions. Many companies have made a good living re-lagging pulleys that may or may not need it. Changing out pulley lagging can be a cost-effective method of upgrading a conveyor system but all aspects of a conveyor system need to be reviewed before a decision is reached. Checking the durometer (hardness) of the rubber lagging needs to be done before making a decision to change it. Wear, age hardening and other physical changes to rubber laggings occur over time as a result of environmental conditions or mechanical action between the belt and the pulley. The resulting change in durometer can often lead to belt slip when a new belt is applied to the system.

Re-lagging pulleys is a problem solver when correctly applied. However, when



Photo 2. Spillage causing “frozen” idlers

misapplied, lagging can lead to belt damage without solving the slippage issue. Rubber laggings are available in many thicknesses, hardnesses, patterns and profiles. It is important to note that the gauge, pattern or profile should be sufficient to properly off-set distortion created from the torque applied from the drive system. This distortion aids in frictional “grip” between the belt cover and lagging while also flushing moisture and/or material away from the lagging surface. Furthermore, the thickness should be sufficient to resist the shearing forces between the lagging and metal pulley shell. With proper rubber thickness, the bond between the rubber and the metal is protected.

Ceramic tile lagging is an excellent option when used correctly. However, when installed in unsuitable applications, the ceramic lagged pulley can burn through the belt or severely scar the belt pulley cover. As previously stated, slippage may not be caused solely at the drive. Sometimes the root cause is related to tension differential between the T1 and T2 values. When this differential becomes too great, the shear forces create a slip condition. And no amount or type of lagging will cure the problem.

As noted in the first two conditions, the root cause of belt slip is friction or the lack thereof. Any conveyor component that makes contact with the belt creates frictional forces. (photo 1). The one series of components that makes the most contact with the belt are the conveyor idlers. Over a span of 500 feet, there are roughly 750 individual points of contact made with the belt — and that’s just on the carrying side! This doesn’t take into account this contact is enhanced as the belt is under tension. Secondly, there are ~50 other potential points of contact installed in the return flight with the return idlers. With this in mind, it is paramount that all of these components operate with minimal drag.

Most conveyor systems easily overcome a limited amount of seal drag from the bearing assemblies within each idler roll. However, it becomes more difficult when the idler rolls are seized due to failed bearings, engulfed with tramp material, or a combination of both (photo 2). This can exponentially increase the frictional force that must be overcome by the drive system. Slippage will occur



It's Scholarship season!

For 2020, NIBA is pleased to once again offer scholarships worth thousands of dollars. This year, NIBA will make available four \$4,000 Presidential Scholarships and five \$2,000 Memorial Scholarships. Employees and children of employees of NIBA Distributor/Fabricator and Manufacturer member companies are eligible. Applications for the Memorial Scholarship close March 1. The Presidential Scholarship opens February 1 and closes May 1.

Tip: Copy the flyer on page 9 and share with your team!



It's easy to renew your 2020 membership

Primary NIBA member contacts: You should have received an email the week of December 19 that included your 2020 NIBA membership invoice. Invoices are also available online to primary contacts in the Info Hub of www.niba.org. Note that we are no longer asking you to self report, nor are we including add-on fees.

For questions about renewals, please call the NIBA office at 608-310-7549.



Thought about volunteering in 2020?

Looking for a way to give back to your profession while supporting NIBA and developing leadership skills? Consider putting your name forward to be considered for one of NIBA's four Committees: Education/Technical, Marketing, Membership or Program. Members are vital to the strength of the committees. Express your interest! www.niba.org/committee-call-for-volunteers/

when these frictional forces become excessive. This is a condition where only reducing the frictional forces will correct the problem. It is in these conditions where the adjustment of take-up weights and/or misapplication of pulley laggings can create a perfect storm resulting in belt damage without curing the slippage problem. This includes excessive belt stretch, splice fatigue/failure and or belt damage from scarring or burn-through.

In conclusion, belt slippage is an event that is not always limited to a single condition within the belt conveyor system. As discussed above, the root cause can be a singular condition or a combination of several factors. Vigilant attention and maintenance is required to prevent these issues from occurring. When faced with complicated situations that are causing belt slippage, it is always best to engage your conveyor expert to determine the best course of action. That way, all of the steps needed to identify the root cause(s) of the problem can be identified and a tailored solution can be implemented. ●

SHARE YOUR TECHNICAL KNOWLEDGE

Submit your technical articles to staff@niba.org.

Steve Fornier Was a NIBA Trainer, Mentor and Friend



It's with great sadness that we share the news of the passing of our friend and colleague Steve Fournier of Mi Conveyance Solutions Group.

Steve, age 60, passed away suddenly and unexpectedly on Tuesday, Nov. 26, 2019 in the company of his loving family.

NIBA will remember Steve fondly for his outstanding contributions to the association and the belting industry.

Steve was a valued lightweight trainer at our Key Principles and Best Practices of Lightweight Belting seminar and also served on the Education and Technical Committee. Steve's vast experience had a direct effect on the technical training program we run today, with its mix of classroom time, hands-on demonstration and site visits.

"His impact with our team, his peers, and the belting industry was enormous," said Seth Stoner, Product Manager at Mi Conveyance Solutions Group. "The void we all feel with his loss cannot be understated. He was an outstanding leader, colleague, and friend."

Gregg Hanson, Vice President of Sales, at Mi Conveyance Solutions Group, said, "Everyone who had the pleasure of working with Steve experienced the passion he had for our industry and how much joy he got from his interactions with customers and suppliers. Steve, personally, was a great friend and mentor to me and will be missed every day. I am so grateful I had the chance to work with him and call him a friend."

As part of NIBA's Memorial Fund, the association has made a donation in Steve's name to the Friends of Island Beach State Park.

Our sincerest condolences to the Fournier family.

Obituary: <https://vandermay.com/obituarydetail.html#/20294> ●

NIBA Member Spotlight

Beltservice Corporation

Tell us about your company

My company just reached its 50th anniversary in November! We have three generations in our workplace. We customize conveyor belts for our customer's specifications. We work directly with distributors and OEMs.

Describe what you do on a day-to-day basis

No two days are EVER the same in HR. My role as HR Manager is to balance the needs of the company with those of the individual employees. I navigate my time between high-level meetings discussing strategic initiatives and being down in the weeds working side-by-side with my team on things like payroll, hiring, recruiting, workers compensation, benefit administration, policy development, employee relations, etc.... In one day I may attend a production meeting, review payroll and interview candidates for one of our current openings. And not to forget that at any point in the day something completely unexpected could happen that derails everything!

What was your first industry job and how did it lead you to where you are today?

This is my first belting industry position. Previously I worked for a privately-owned envelope manufacturer. One of the things I love about Beltservice and the envelope company was the mix of employees: plant, office, sales, etc. No two days are ever the same and it is absolutely not boring. That is the very reason I like working in our industry.

What is the one piece of advice you wish someone had given you before you started in the belting industry?

In this industry everyone really does know everyone – it is tight-knit. If they don't know someone, they could make a few calls and learn about them. A bit like the game, six degrees of Kevin Bacon, or something like that.

How did you hear about NIBA?

My company is very active in it. We have been NIBA members since 1975.

How has NIBA impacted you, both personally and professionally?

From a personal and professional level it is really just starting to make an impact with me. I have enjoyed my interactions and hope to have more. It's all still very new for me.

In your opinion, what sets NIBA apart from other associations?

There are other associations for our industry? :) I do belong to other organizations that are HR-related. This is my first industry-related association.

What is the belting industry's biggest challenge?

From my perspective it is growing new talent and gaining interest in manufacturing jobs.

How can NIBA help to resolve it?

I think with sharing ideas and creating resources across the membership, along with open communication and a collaborative mindset. ●



Robin Wood
Human Resources Manager
Beltservice Corporation



NIBA WEBINAR SERIES

Did you miss NIBA's recent live webinar presented by Robin Wood? Robin discussed belting work-force development and strategies for effective employee retention, recruiting and productivity. You can watch it on demand at www.niba.org/niba-webinars.



uid2020

NIBA Registration Discount for UID2020

Registration is open for UID2020, held in Indianapolis, IN, March 8-11, 2020. Register early as rates increase \$200 by January 12.

Each year, NIBA has at least 5-10 members in attendance. We hope to plan a NIBA member meet-up this year if the group is large enough! ●

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MEMBER-TO-MEMBER NEWS

News submitted by and for NIBA members



Remembering Belting Leader Ernest Key

Ernest Deurell Key, Jr., a past president of NIBA, passed away on July 11, 2019.

Upon graduation from Marion Military Institute in Marion, Alabama, he joined the United States Air Force during the Korean Conflict. Completing his service, he returned to Atlanta and the family business. He ran the Monticello Bobbin Mill in Monticello, Georgia, where he served as Mayor for two terms. For the next 50 years, he ran the Atlanta Belting Company. He also formed the Tennessee Belting Company, Florida Belting Company, Piedmont Belting Company. He was president of NIBA-The Belting Association in 1973 and 1974.

For those he leaves behind, he will always be remembered as a true original in every sense; a Southern Gentleman, the greatest storyteller we will ever know, and a lover of his country.

NIBA has made a \$2,500 Memorial Fund donation to Marion Military Academy, where Ernest and other family members attended school. ●

FACILITIES

Flexco recently announced that its Grand Rapids, Michigan facility will be expanding its operation and moving to a new location in Walker, Michigan in early 2021, increasing its current 18-acre footprint to 36 acres. The facility will be 288,000 total sq. ft., with 65,000 sq. ft. of that being office, wellness, and training space, and the rest dedicated to manufacturing. The groundbreaking for a new Flexco facility took place on Nov. 18, 2019.

NEW PRODUCTS

ASGCO's X-Wear™ Magnetic Urethane Ceramic Wear Liner can be installed quickly and safely without the use of welders or bolt fastening systems. This allows for minimal downtime in repairing a leak or worn spot, that can be found on chutes or load points, to name a few. When time allows, the ASGCO® X-Wear™ Magnetic Urethane Ceramic Wear Liner can easily be removed, so that a more permanent repair can be performed. It is available in urethane and ceramic liners; quickly and easily installs into any pattern to help reduce wear in critical areas of your operation; and requires no welding, gluing or bolting.

ASGCO's Excalibur® is designed and configured to meet the most stringent sanitary requirements of the food manufacturing industry and uses USDA and FDA-approved materials. In fact, no other belt cleaner offers these crucial operational features, saving customers money while assuring safe, high quality manufacturing. It has primary and secondary conveyor belt cleaner mounting locations, is available with FDA Blue Metal Detectable blades, and is suited for light duty thermoplastic belts with widths from several inches to 10'. For more information contact info@asgco.com.

RECOGNITION

Davis Industrial is pleased to announce it was named one of 50 statewide companies selected as honorees of The Florida Companies to Watch award, a statewide program managed by GrowFL, in association with the Edward Lowe Foundation.

Davis Industrial's management team, competitive market position and strong community involvement were among several factors that put them in contention for

the award. "These stand-out companies are all led by entrepreneurs, and have demonstrated their capacity and intent to grow," said Dr. Tom O'Neal, GrowFL executive director. "They also all have critical intellectual property or a niche position that gives them a competitive edge in their markets," he said.

GRT Rubber Technologies is proud to announce the successful approval of its "Flameout SBR" conveyor belting by the Mine Safety and Health Administration for use in underground mining applications. Testing was completed in September and approval from the U.S Department of Labor was issued in October.

This standard specifies requirements for flame testing under Part 14, Title 30 Code of Federal Regulations (30 CFR Part 14). Conveyor belt constructions meeting this standard are all 3, 4 and 5 ply constructions currently manufactured by GRT. GRT's new approval number is "14-CBA190013."

Two **Flexco** products were recently recognized for excellence in sanitation at The International Baking Industry Exposition (IBIE). The Novitool® Aero® Splice Press received Top Honors for Sanitation in the 2019 BEST in Baking Program, while the FGP Food Grade Precleaner was a qualifier.

Flexco recently announced that its FGP Food Grade Precleaner has achieved Baking Industry Sanitation Standards Committee (BISSC) Certification. The FGP Food Grade Precleaner is an easy-to-install, easy-to-maintain food grade cleaner that can be disassembled in less than a minute for regular cleaning and sanitation. The BISSC develops and publishes voluntary standards for the design and construction of bakery equipment which today are recognized as the definitive sanitation standards for equipment used in the baking industry.

PERSONNEL

ASGCO® welcomes the following: Roy Wysong, Mid-West Service Manager based out of their South West office and Roberto Pizarro, Territory Manager of Northern Chile based out of Antofagasta, Chile. ●

WE WANT YOUR NEWS!

Send to staff@niba.org or complete the form at niba.org/members/submit-news



Technical Training Seminars Not Just for Those New to Belting

by Jackie Fowler, NIBA staff

Heavyweight Training

This fall's NIBA heavyweight technical seminar trainers Mike Cremeens, Dick McConnell, Buddy Wilson and Dell Gutknecht conducted the Track, Train, Troubleshoot course in Columbus, Ohio.

Prior to the start of each course, the trainers host an informal dinner for participants who arrive early to get to know not only the trainers but the other participants as well. The attendees were extremely welcoming and eager to find common ground.

Participants from Central America, to right down the road at the guest quarry were actively engaged in the course. They were excited to tell us "this class was great because of the variety of other's info and experience in the class" and about enjoying the diversity of the classroom. They were happy Buddy Wilson helped keep their attention by getting them to physically demonstrate belt behaviors. While Mike Cremeens taught them some helpful equations. Participants from the course "liked the specifics and the science that was given" and also found their favorite part to be the "calculations."

While day one of the Track, Train, Troubleshoot seminar is spent in the classroom, day two includes a trip to a nearby quarry as a way to practice what has been learned in the classroom. We owe a big thank you to the guest quarry for allowing us to come visit and inspect their belts. Participants of our Track, Train, Troubleshoot seminars always rate this as an invaluable experience.

Dick McConnell leads groups and encourages them to track potential issues and photograph them. Upon returning to the classroom the participants discuss methods for troubleshooting those issues. As a service to the quarry, this information is shared with them at the completion of the course. If you know a quarry that would like to participate please have them email jfowler@niba.org or dmccConnell@flexco.org.

"I thought the class would be too basic for me. I was wrong. This is excellent for people at all levels!"

Lightweight Training

Two lightweight technical training courses were conducted in fall 2019. Beth Miller, Don Rabb, Steve Fournier and Tom Archer taught the Key Principles of Lightweight Belting in Grand Rapids, Michigan.

The trainers were encouraged to see so many new members of the industry in the course and to help them get started in their belting careers. Many of those same participants attended the Lightweight Splice School, also in Grand Rapids, Michigan. Mark Green and Sander Romers have

structured the training with a combination of classroom theory and extensive hands-on training. This class is only offered once a year and is limited to 15 participants to ensure ample time for practicing splicing techniques.

NIBA's technical training seminars, while being helpful for those starting out in their careers, are not only for those new to the industry. As one participant let us know, "I've sent employees to this class [3T] for years. I did not attend because I felt it was too basic for me. I was completely wrong. I learned a great deal. This is excellent for people at all levels."

Registration will open for the spring technical training seminars in January. Be sure to sign up early, as classes sell out fast. Also, take advantage of early bird pricing and discounts for sending multiple attendees. ●



The Numbers

Manufacturers	112
Distributor/Fabricators	136
Affiliates	10
Total members	258

Our Newest Members

- **Belt Tech & Supply, Inc.** (D/F)
- **MRO Supply** (D/F)
- **Minet Lacing Technology, Inc.** (Component Manufacturer)



Supporting the Future

MEMORIAL SCHOLARSHIP

Applications due March 1

As a member of NIBA – The Belting Association, we are pleased to offer your employees and your children the opportunity to apply for scholarships from NIBA.

Both scholarships have been established to honor the memory of past officers, directors and committee members' strong leadership and dedication to the association.

Eligibility criteria varies by scholarship, but we look for applicants with a history of active participation in school, community, and especially leadership roles.

The **Presidential Scholarship** (\$4,000) is given to children with a parent employed by a NIBA Distributor/ Fabricator or Manufacturer company, who attend or will attend an accredited college, university or technical school of two or more years.

The **Memorial Scholarship** (\$2,000) is for employees and children of employees of NIBA Distributor/ Fabricator and Manufacturer member companies who make a difference through service in their communities and their schools.

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Memorial Scholarship: Opens December 1 and closes March 1.

Presidential Scholarship: Opens February 1 and closes May 1.



FOR DETAILS AND TO APPLY ONLINE VISIT: **WWW.NIBA.ORG/SCHOLARSHIP-FAQS**



NIBA-The Belting Association
1818 Parmenter St, Ste 300
Middleton, WI 53562



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