

# ADVANCED ADHESIVES REPORT

YOUR CORRUGATING NEWSLETTER FROM HARPERLOVE

August 2017

## Rex Woodville-Price 11/16/1960 - 7/23/2017



A lifelong interest in the corrugated industry began at age 30 in the maintenance department of the Armuelles Box Plant in Panama. Chiquita, Goettsch International, and Interfic, Inc. would experience his passion before he joined HarperLove on June 1, 2000.

Within months, Rex had published his first article for the company newsletter entitled "Rider Roll Replacement Devices." It would not be long before another article would be published, and another. Each article addressed a topic or concern that he had encountered in the field. Each article sought to not only explain some problem, but to offer possible methods of addressing it. Upon reading an article by Rex, you very quickly understood that he had studied a problem and sought to express its importance in a fundamental manner, and then offered a series of solutions or observations that would both help with the problem and improve the readers' knowledge. He shared his knowledge, and he was careful and thorough. When you needed a helping hand, he offered both of his.

He was inquisitive and didn't take things at face value. If you asked

him about something that he didn't know, it wasn't surprising for him to go home and begin an inquiry. Mondays were great. What had Rex been thinking about? What was on his mind? What continued to puzzle him? He would arrive at the office fresh with an alternate way to handle something or had progressed his understanding of some puzzle that caught his attention. He was observant. At the most recent SuperCorr, while walking around the floor, someone walked up to Rex and asked, "Rex, there is a lot going on here. What do I need to make sure and see?" You trusted his insight. You valued his eye toward our company's perpetual assault upon the moment when the chemistry in starch and additives collides with paper during the mechanics of corrugated manufacturing. Is it any wonder that he graduated from the University of Missouri with a B.S. in Agricultural Mechanization and Agronomy?

He was often called in to assist with tough situations or new installations of equipment. This usually meant weekend travel and odd-houred work. But for Rex it was the opportunity for more serendipity, more chances to see new things and meet new people. Don Wolfe recalled that Rex always found the shiny objects that tickled his brain. Sometimes, they came in the form of new equipment, a fellow engineer, or something unusual he hadn't noticed before. Once, the shiny object appeared in the form of a music store. Rex implored that a few moments must be granted to investigate. Soon, Rex's wallet was lighter by \$150, but his homemade ukulele moved a bit further along. He had many talents.

He was one of those people who quickly evaluated your understanding of making corrugated board, and then sought to round out and enhance your skills and knowledge. While some tend to hoard or impress with their knowledge, Rex preferred to aid and assist, to teach and train. It was his passion and it was a passion that so many benefited from. It is why all who knew him or were blessed to interact with him called him. They called him at night. They called him on the weekends. They called him in five different languages. And he answered those calls patiently and clearly.

When called upon to problem solve in person or over the phone, he would try to understand what you saw, then he would try to interpret it. And, he wasn't satisfied until both of you understood it and developed a shared understanding of how to begin addressing it. Such is the talent of someone who possesses wisdom, a depth of understanding, and a keen interest in sharing knowledge. He would go anywhere to help anyone, at any time.

There is a lengthy quote from Rudyard Kipling that speaks to keeping your cool when others are losing theirs. Rex possessed that type of confidence. I believe his frustrations were centered upon improvement and seeking excellence. He wanted HarperLove's service to excel and dazzle. He wanted to find better ways to use the data and information that we retrieved at every customer visit. He wanted to find better processes for teaching and training. He wanted better, and he kept lofty standards.

If you think this is all too serious or that Rex was a serious fellow, then a few words need to be shared about his rapturous interest in bad puns, poor jokes and simple jests. When telling some joke, he smiled before he finished and a wry chuckle accompanied the punchline. He loved to eat lots of spicy food. He dined heartily and often in volume. He remained thin, but the rest of us put on the infamous HarperLove 20 pounds - those 20 pounds which come from dining on the road and spending nights away from home. Conversations ranged across topics. He laughed and had a quick wit. He shared his interests, but he also found out what interested you and he probed to learn from everyone that he met. You felt that he cared about you. He talked of his wife Esther, his daughter Tilcia, and son Rex, Jr. They were important to him, he was proud of them, and he loved them very much. They were at his side when he passed.

The poem that accompanies this reflection reminded me of how Rex treated those he knew and those fortunate enough to have met him. I am still reeling from the news of his incurable illness. It simply can't be. I will miss him. Many will miss him. However, he left us with a gift. He told me that he was at peace, that he was not afraid. He was comforting me, and he was comforting those around him. If he said it, then he meant it. In my last conversation with Rex, while he rested in a bed in Panama the conversation trailed off. He was tired, his voice had softened, and our eyes



were wet. I told him of a saying in Swahili. It is a form of goodbye even though there isn't a word for goodbye in Swahili. It goes "tu tao nana." It translates as: "We will meet again." So, I look forward to that meeting as I know many of you do. When I meet Rex, I expect to see a wry smile, endure a bad pun and then hear a gentle sweet laugh. Then Rex will ask a few questions. You can count on it.

**Thomas Evans**

## My Day is Ending

O, Lord,  
Let me hear the voices of my neighbors,  
So often drowned out,  
By the clamor of my own needs.  
Let me not fool myself into thinking  
That I can hear your voice  
If I do not listen to theirs.  
You speak to me in the voice of my neighbors.  
I cannot claim to love you if I do not love them  
even as I love myself.  
Help them, I pray,  
To carry their burdens, even as I hope, with your help,  
to carry mine.

**Teresa de Avila (1515-1582)**

# Monday Startup

By Rex Woodville-Price

Everybody hates Mondays, but in a box plant a Monday startup is the butt of jokes because everything goes wrong: the machine is cold, the adhesive has sat all weekend, and half the crew is hung over. Then to top it off, the schedule has changed and there is an urgent order for doublewall.

While this may seem exaggerated and many plants have their startup routines sorted out, there are still issues that crop up on a startup that could be prevented with better planning. And yes, while many plants start on Sunday night, the startup issues are still the same.

## ADHESIVE

The adhesive can potentially cause lots of problems during a startup. If a lot of adhesive was left over from the shutdown, it will likely have degraded and lost many of its performance properties. The gel temp will have risen, and the viscosity will likely have changed. There are some practices that will help minimize the adhesive issues.



It is important to have [proper machine washup procedures](#) to minimize the amount of water that contaminates the adhesive. Valves must be set so washup water in the lines doesn't end up in the storage tanks. Good washup practices also minimize bacteria problems. Adhesive which remains in the lines is susceptible to bacterial contamination. Warm starch-based adhesive is an ideal breeding ground for bacteria. Many plants add an anti-bacterial agent to the adhesive remaining in the storage tanks to help control bacteria.

[Minimize the amount of adhesive remaining](#) in the storage tanks when the plant shuts down for the week. On most corrugators there is considerable volume of adhesive in the pipes and lines. When the machine is shut down, this adhesive will return to the storage tank along with the adhesive from the glue pans, run tanks or dosers. If you run dual formulas, consider running out the single facer adhesive and only making doublebacker adhesive for the entire machine as you approach the time to shut down. This way you will only have to deal with managing one last batch as opposed to two.

Before starting up, [check the properties of the leftover adhesive](#) in the storage tank. Measure its temperature, gel point, and viscosity so you will know exactly what you are dealing with. If the adhesive does not meet the plant's desired specifications, it may be best to segregate it into a separate tank. Make fresh adhesive to start the machine and then later blend the old adhesive slowly into the line so that it is used up little by little and won't affect board quality. Your

plant's adhesive service technician can be very helpful in setting up protocols for how to do this and for determining if the leftover adhesive can be used directly, should be blended in, or needs to be discarded.

## MAINTENANCE

Maintenance work is often performed over the weekend and is not communicated to the crew. A valve may have inadvertently been left closed or a switch turned off. It could take the crew a long time to find the problem because this is an unusual situation and is not part of a routine startup. If the crew knew about the maintenance work, they might more quickly zero in on the problem. Communication is important.

## SCHEDULING

It is not a good idea to run difficult and challenging orders at a stressful time for the crew nor at a time when the machine is not in optimal condition. It makes more sense to let the crew start up on something easier, like some B-Flute singlewall. Then wait until the machine has properly warmed up, is running a fresh batch of starch, and the operators have had their second cup of coffee before you thread up that tricky order.

## SHUT DOWN

There are several steps that should be taken at shut down to help ensure a good start up:

- Run out as much adhesive as possible so the amount of leftover adhesive is minimized.
- Ensure the TVC system is in good working order with the appropriate temperature settings for the adhesive in the storage tank and with the agitators cycling on and off at the proper interval.
- Perform a good cleanup of the machine after shutdown. Not only is it much easier at that time, but it will have a positive impact on the startup.
- Check all adhesive valves and make sure they are in the desired positions. There should be a written protocol for this, preferably with photos identifying all the valves.
- If any maintenance is performed on the machine, ensure the shift supervisor has a report which highlights the work. Chances are the mechanics on duty at startup won't be the same ones that did the work.

With careful attention to the adhesive, maintenance, scheduling, and shut down procedures, your Monday morning startups can go much more smoothly.



11101 Westlake Drive  
P.O. Box 410408  
Charlotte, NC 28241-0408

704.588.1350 • harperlove.com  
email: salestech@harperlove.com

PRESORTED  
STANDARD  
U.S. POSTAGE  
**PAID**  
Charlotte, NC  
Permit #3307

## IN THIS ISSUE:

- Rex Woodville-Price
- Monday Startup

# MULTIBOND EDGE III™

## Increase Speeds on Triple Wall.

Multibond Edge III™, the next generation of the of the proven Multibond line, is especially formulated to address bonding issues with heavyweight papers and multi-wall board, with specific attention to edge delamination.

The resulting overall board quality improvement will increase corrugator speed and performance, while decreasing waste and consumption.



TO EXPLORE THE BENEFITS MULTIBOND EDGE III™ CAN PROVIDE YOUR OPERATION,  
CONTACT YOUR HARPERLOVE REPRESENTATIVE OR CALL US AT 704.588.1350.