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April 2022



**Stop Industrial Circuit Board Corrosion**

SEE PAGE 3



**Lean and The Great Resignation**

SEE PAGE 3

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It's April. April fools, and all that funny business goodness. So, we figured, why not change up the intro a bit and tell a joke. Sound good?

A manufacturing plant was in trouble, and nobody knew why. They finally brought in an expert to fix the problem.

The guy walks in, inspects the equipment, takes out a chalk piece, marks one unit with an X mark and leaves.

The plant's owner replaces the unit and voila! Everything's working again.

A week later, the guy's invoice reaches the owner. The total? \$5000. The owner is outraged. Five grand for drawing one measly X mark on one of his machines? No, this couldn't be right. So, he writes a letter to the chalk wielding expert demanding an itemized bill, so he could review the incurred expenses.

The expert obliges and supplies the plant owner his wish. His itemized bill was as follows:

\* X mark - \$1.00

\* Knowing where to put it - \$4,999.00

Okay, okay. Dry the tears from laughing so hard. We know... haha

This month's edition of the Gateway features a second installment to our friend Paul Critchley's "Lean" series of articles that he'll supply quarterly. Our other spotlight was penned by Del Williams and deals with the trials and tribulations of circuit board corrosion and a new product brought to market to help solve that unsavory condition.

Have a story you'd like to tell? Want to place the spotlight on something new happening at your facility? A new service? A success story? An interesting new green initiative? We'd love to hear it. Even if it's just a good ol' fashioned joke!

Kind regards,



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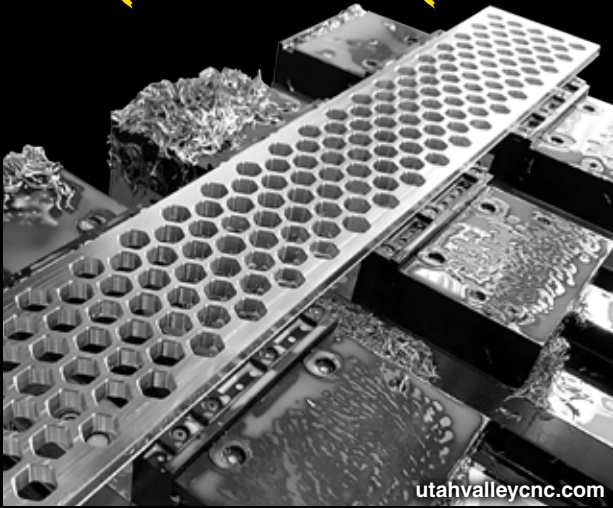
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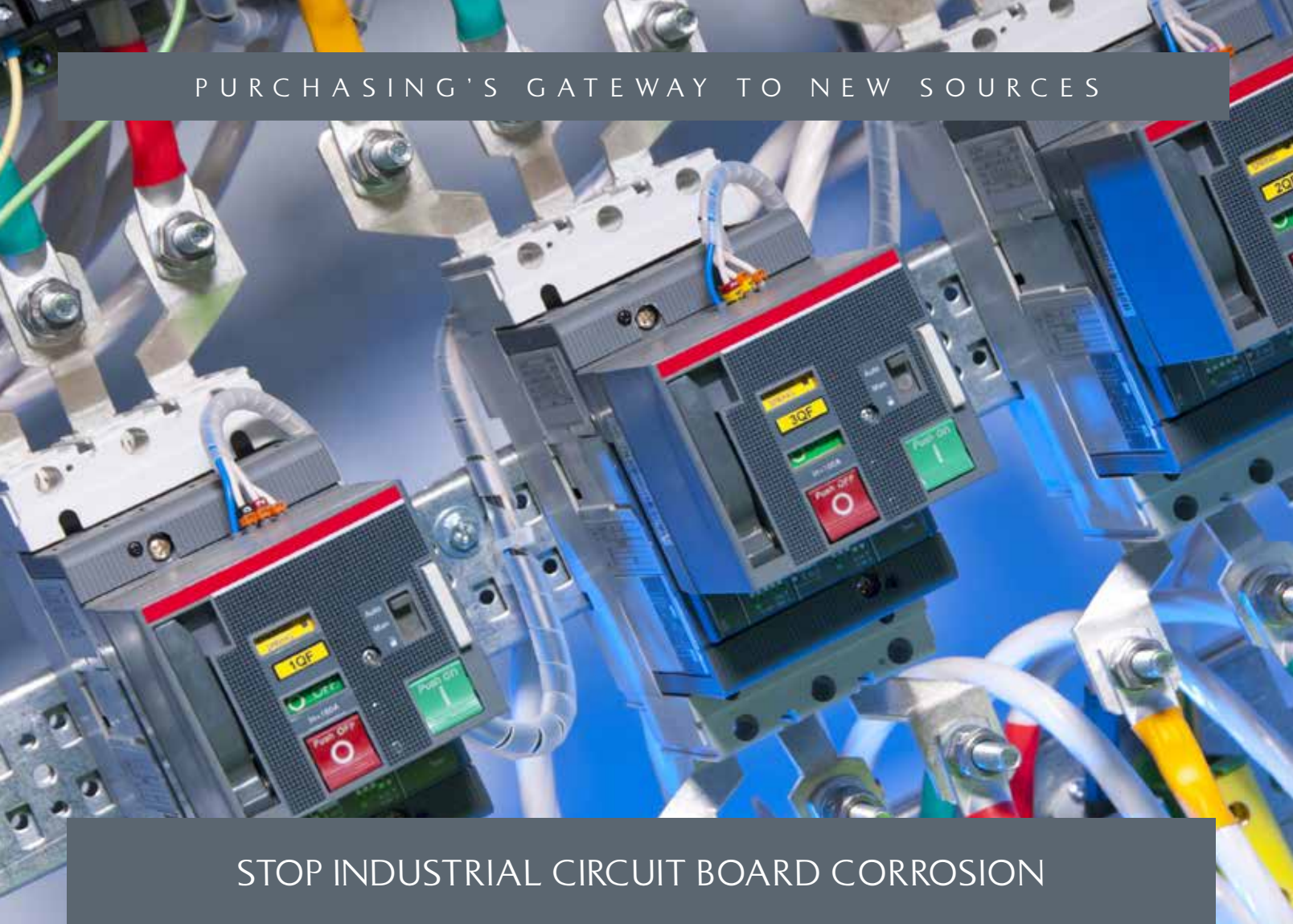
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"IT'S HARD TO ASK FOR HELP. IT'S EVEN HARDER TO ACCEPT IT WHEN PEOPLE OFFER IT.  
IF YOU NEED HELP, ASK FOR IT." – SCOTT HALL (AKA RAZOR RAMON)



## STOP INDUSTRIAL CIRCUIT BOARD CORROSION

**Anti-corrosion compound developed for the U.S. military protects against even airborne corrosion accelerators.**

*This month's industry spotlight is brought to us by Del Williams, a technical writer based in Torrance, California. He submitted this interesting piece on industrial circuit board corrosion (because, let's face it, a lot of our industrial machinery is exposed to any number of environmental factors given the nature of the facilities we're conducting our work) and how to stop it with a product called Strikehold—a newer product on the market. Anyhow, we thought this was a good read and felt could be of interest and benefit to our readership. If you've got an interesting story that you'd like to share, please submit it for potential placement in the pages of the Gateway Magazine!*

# STOP INDUSTRIAL CIRCUIT BOARD CORROSION

To produce various products at high-volume, industrial manufacturing plants rely on circuit boards and electronics to precisely and efficiently control the process from the receipt of raw materials onward. Over time, these crucial components can be compromised by processes, chemicals, and airborne vapors that promote corrosion. The result can be costly unscheduled production downtime.

“Circuit boards are in everything from electronically controlled valves, starters, motors, turbines, safety switches, boiler controls, and multi-million-dollar digital control systems. These devices are exposed to all manner of corrosive environmental pollutants. Even air-conditioned circuit boards in control rooms filtered with activated carbon can become corroded,” says Bobby Williams, who has a B.S. in Chemical Engineering from North Carolina State University.

Williams notes that industrial facilities often use corrosive chemicals to process and manufacture various products. Corrosion in controls, circuit boards and electrical systems is further accelerated by exposure to any moisture or humidity. Industrial electronic circuitry is also subject to electrolysis.

He points to a Benjamin Franklin quote to illustrate how corrosion is the root cause of much of industrial downtime when not sufficiently addressed: “For the want of a nail the shoe was lost, for the want of a shoe the horse was lost, for the want of a horse the rider was lost, for the want of a rider the battle was lost....”



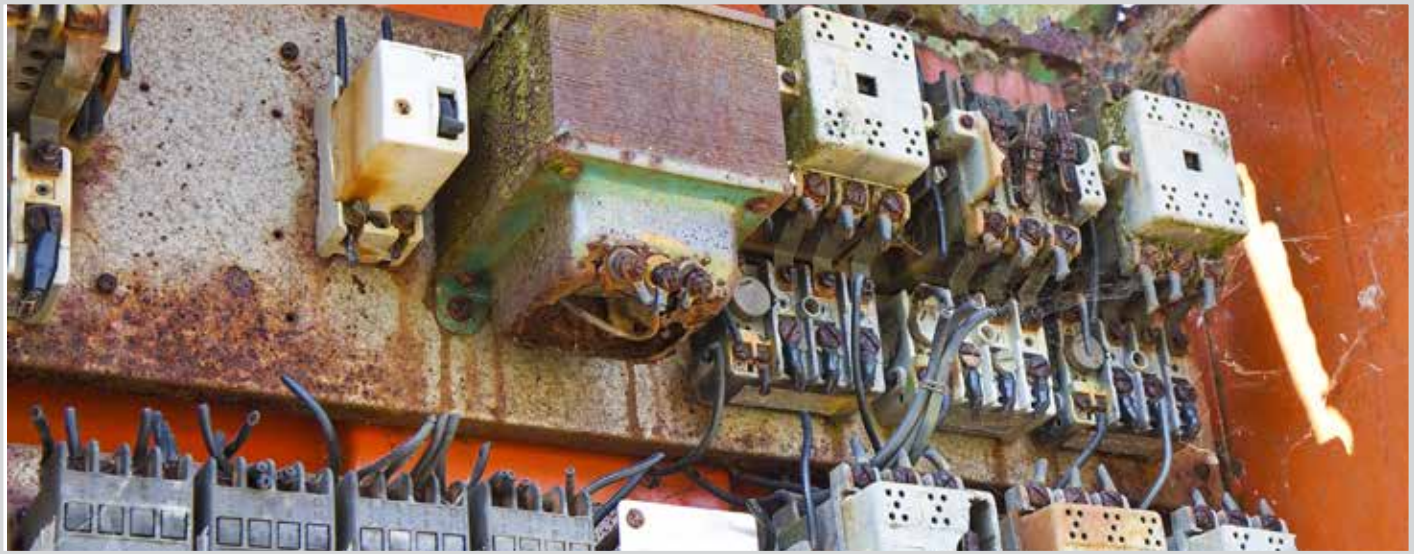
Williams observes that corrosion has long been a fact of life despite the best mitigation efforts of manufacturers. “Even with built-in redundancy and extra spending on materials and protection from the elements, circuit boards and components will corrode and fail anyway,” he says.

To fight corrosion, industrial plants are turning to a unique military grade compound called StrikeHold® that works as an anti-corrosion protectant, cleaner, and lubricant. This compound was originally developed to preserve, maintain, and lubricate U.S. military weapons and heavy equipment for use in some of the harshest working conditions in the world. Today it is used to protect circuit boards in corrosive environments in industries such as aerospace, agriculture, HVAC, heavy equipment, mining, oil and gas, and maritime operations.

The use of StrikeHold has the potential to largely eliminate the effects of corrosion and electrolysis on industrial production equipment. The compound prevents corrosion and electrolysis when applied to systems. The micro barrier that it forms on components is so complete that an electrical charge cannot be passed from the metal into water. It also improves the continuity of the connection when it is applied to both conductors of a circuit.

As an anti-corrosive protectant, it sprays on or applies wet and dries in place. A nano film coating protects equipment against the effects of corrosion and moisture while repelling corrosive airborne particles, dust, and dirt. The durable coating is not visible to the eye when it dries and can be reapplied as needed.





The protectant is designed to waterproof components as well as dry out wet gear and water-sensitive parts. Because it has a specific gravity greater than water (1.3 vs. 1.0 for water), when applied to a wet surface it penetrates to the hard exterior, pushes water from the surface and coats the area.

“The anti-corrosive compound is designed to make circuit boards, electrical circuits, and metal components virtually impenetrable to corrosion and moisture while improving electrical continuity and contact,” says Williams. He was so impressed with its properties that he became Managing Partner of Force 5 Products, LLC, StrikeHold Brands, a chemical company that has adapted its use to the specific needs of industrial markets.

Industries like oil and gas, marine, mining, and transportation commonly use StrikeHold to clean systems, deter corrosion and ensure the safe, reliable operation of crucial electronic controls, sensors, valves, and motors.

The Metropolitan Atlanta Rapid Transit Authority (MARTA) and Northern Indiana Commuter Transportation District (NICTD), as well as several utilities and EMCs utilize the anti-corrosive product on their electronic circuitry and controls. The Panama Canal Authority has used it on controls and limit switches for years.

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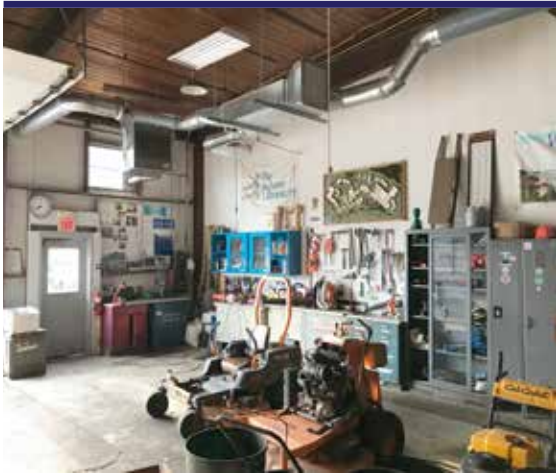
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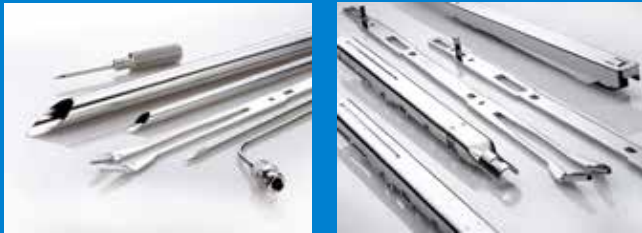
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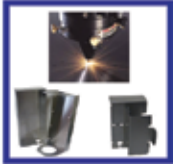
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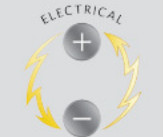
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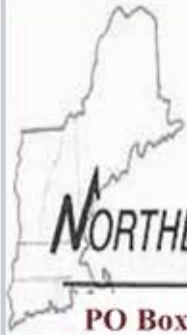
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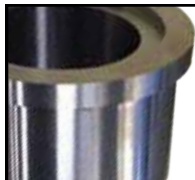
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## LEAN AND THE GREAT RESIGNATION

### THE GREAT RESIGNATION



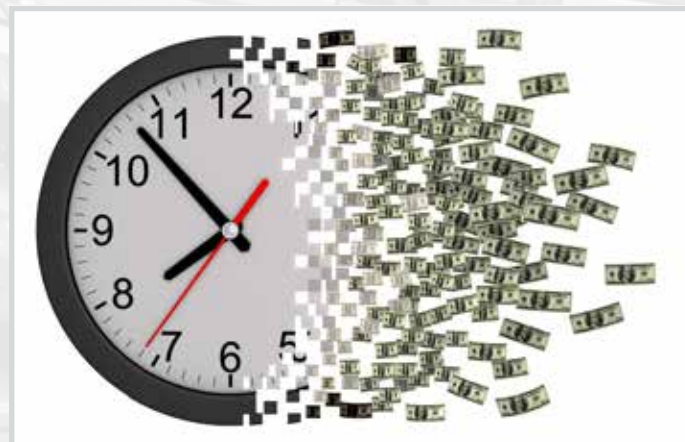
Written by Paul Critchley

As Lean practitioners, we spend a lot of time talking about and focusing the removal of wasteful practices and non-value-added work. This includes everything from moving parts around the shop to routing paperwork through an office – pretty much anything that doesn't move our product or service closer to the customer. But there's one waste – in my opinion, the biggest one of all – that we don't talk nearly enough about: the waste of employee turnover. It's a huge problem – in the United States alone, 4.5 million workers quit their job every month! It's gotten so bad that it has its own name – The Great Resignation.

## THE WASTE OF EMPLOYEE TURNOVER

Gallup surveys over the years consistently reveal that 67 percent of workers were either “not engaged in” or “actively disengaged from” their work, so it’s not hard to understand why so many of us quit our jobs. Forget about getting anyone excited about Continuous Improvement or putting in the extra effort that it takes to sustain those improvements... if folks already have one foot out the door, they probably aren’t willing to take on anything “extra”, and even if they do, they aren’t putting forth their best efforts. And can we blame them? Consider this: Monday through Friday, we spend more time at work than we do with our families, so why get out of bed every day, and go to a place where you’re not appreciated, or where the work isn’t fulfilling?

When someone leaves an organization, we have little choice but to jump into “reactive mode” to find a replacement: we place ads, make calls to recruiters, schedule phone interviews, coordinate bringing people for onsite visits, perform background and drug screens... On average, it takes 30-45 days and 20- 30% of the previous person’s salary *just to find a replacement person*, and all of that takes place prior to one second of productive work being accomplished by the new hire. Until this process has played itself out, those employees that are still around must pick up the slack from the departed teammate, which further deteriorates their job satisfaction. It’s a bit of a catch-22, but is it really any wonder why so many of us leave in search of greener pastures?



Although strides may have been taken within the organization to ensure that all our documentation was up to date and standards were set accurately (Work Instructions, SOP’s, Procedures and Forms), those who depart our organizations still take valuable things with them: The relationships they’ve formed with our customers and suppliers, the knowledge of our business systems and “how things really work”, and (perhaps the most important) the emotional investment of themselves that they’ve made into our businesses. None of these things are easily replaceable, and even when we get lucky enough to do so, we certainly cannot do it quickly.



## LEAN, RESPECT FOR PEOPLE AND KEEPING YOUR EMPLOYEES

I’ll admit that all of that sounds pretty bleak. The state of our economy doesn’t make it feel much better, either. The good news, though, is that all is not lost!

By practicing Lean principles, we can evolve from being reactive to being proactive, and especially when it comes to our people. Within any organization, in any industry, our people are our greatest assets. They hold the keys to our relative success or failure, and we should treat them as such. Kevin Hancock, CEO of Hancock Lumber in Casco, ME turns an old adage on its head. “We used to say that the customer comes first”, says Kevin. “At Hancock Lumber, we say that employees come

first, and customers are a wicked close second.” He goes on to explain how, if a company takes care of its employees, in turn they’ll take care of the customers. By taking this approach, not only are customers taken care of (which is the ultimate goal of any business), but the organization avoids all of the costs and disadvantages that come along with employee turnover.

### SET A VISION FOR A BETTER FUTURE

Although it does take effort, the steps to ensuring that people want to stay with your organization are easier than you may think, and are certainly less costly and more productive than the alternative. The first step is to Set a Vision, which means creating (and sharing!) a plan for the future that is so compelling that employees will want to invest themselves in it. Ultimately, we’re trying to help employees become fans of our organization. Imagine what life would be like if work was a place that people actually looked forward to going every day... a place they felt supported, trusted, and listened to. A place like that wouldn’t be a place people would be looking to leave... and the business is better for it!

Successful Lean organizations employ this model and enjoy all the financial and marketplace benefits that come along with doing so. Aside from that, though (and perhaps most importantly) they have a workforce that’s engaged, motivated, and inspired to get up, come to work every day and do their absolute best work. When you have a workforce that’s like that, you’re awfully tough to beat!

*Paul is a former Board Member of the Northeast Region of AME, holds a B.S. in Mechanical Engineering, a M.S. degree in Management and a M.S. in Organizational Leadership.*

*He is passionate about Lean and creating organizational cultures that are sustainably engaged. He co-authored his first book - The Whole Professional, A Collection of Essays to Help You Achieve a Full and Satisfying Life to bring a fresh perspective on Work/Life Balance and how individuals and organizations can work together to achieve greater levels of attainment.*



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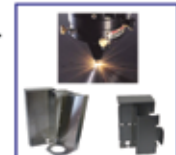
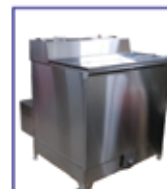
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“It was really something to see our team and our customer’s team working so closely to solve this problem within unbelievably tight time restrictions,” continued Anderson. “Ultimately, we formulated two different elastomer compounds and molded two different sets of low conductivity prototype isolators, in a unique shade of green, to identify them as high resistivity rubber mounts.”

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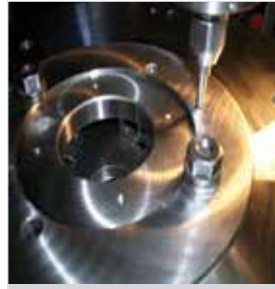


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