

straight talk

Heaven or Hell

Anyone can buy a nice machine, but it's up to you to get the most out of your purchase with proper maintenance and upkeep.

For better than twenty years now, some of you have been listening to me sing the praises of automation. For about the first eight to ten years I felt a lot like John the Baptist crying in the wilderness. I was preaching the automation gospel but not many were listening. Conversions were few and far between!

In the early nineties, a few of the major equipment suppliers began singing the same song. Gradually the crowd of believers grew. Now most everyone has heard the message and most have shown at least a casual interest in learning more about what automation can do for them. To carry the Biblical theme a bit further, and to summarize the main point of this article, if they decide to go down the automation path, will it be heaven...or hell!

Most all of the articles and advertising that the industry is exposed to preach the heavenly side. When all is going as advertised and the customer does his part, he'll reap the blessings of outstanding production, lower labor costs per part (wall panel or truss), improved quality, lower waste factors, more production per man hour, perfectly cut and marked parts, fewer call backs, fewer safety risks, and best of all, much improved bottom lines.

Let me assure you that all of the above is possible and, in the majority of cases, reality. But, is there the potential for a darker side...the hell of automation? The answer is...absolutely!

You might expect me to begin singing the praises of our equipment over the competitors' to avoid that darker side. I hate to disappoint you, but *SBC* doesn't allow advertorials. I wouldn't anyway. Things can go dark with anybody's automated equipment. While all of the major vendors, including me, have had our occasional challenges and difficulties with various machines over the years, for the most part, when you buy an automated machine in today's market from a major vendor, you are probably getting a pretty stable design that's been debugged for some time and will likely do what the salesperson says it will do.

No... the trip to hell I'm referring to is caused by the sins or failings of the user...not the machinery vendor. Let me share some insights and experiences.

About twenty five years ago, the machine tool industry was going through its conversion to automated machine tools. "Going to CNC" was a phrase that you may have heard. Prior to that, the industry's machines were hand-cranked for the most part, similar in concept to the manual component saws of our industry. The effi-

ciency and accuracy of the machine was greatly dependent on the operator. In addition, the maintenance on most of these machines was minimal. You cleaned and lubricated it regularly and tried not to abuse it, but that was about all.

With the introduction of computer controlled automated machine tools (CNC), the industry changed. Suddenly, programmers and technically trained operators were necessary to run these new machines. Very competent old time operators of manual equipment often quit instead of adapting to the new technology. In addition, the new machines often required a new level of maintenance, as well as someone who could troubleshoot and repair the electronics that were driving these automated machines.

In spite of these challenges, the machine tool industry bought into automation. The benefits in production, accuracy and profit far outweighed the challenges. In truth, competition was so intense that in most instances a company had to automate to survive. Today, even the smallest of machine shops will likely have some form of automated machine in their equipment inventory.

All of this automation has been going on for several decades now despite the fact that their profit margins are typically far lower than we expect in the truss industry.

Our industry, namely truss and wall panel fabricators, have been buying into automation more aggressively with every passing year. Most perhaps recognize that there will be new challenges once they've made the commitment to automate. They have, no doubt, heard the expression, "No pain, no gain!" That's not just a catchy phrase...it's a fact. However, for the most part, the buyer of a new automated machine can limit or at least control his level and exposure to pain—the darker side of automation—by recognizing that there is more to getting into automation than just writing out a check for a few hundred thousand dollars.

As I said in an *SBC* article several years ago, "You can buy a Boeing 747, but you aren't in the airline business until you have all of the infrastructure that goes with it."

The first commandment of automation:
Take care of your equipment!

Keep this commandment and you'll not likely end up in automation hell!
Break it and you'll pay the price.

For the most part, automated machines aren't a simple matter of "plug and play." Prior to shipping our saws, we invite (actually insist) the customer send two or three responsible persons to our plant for training. I'm not talking about training the sawyer. We do that on the truss plant site in a matter of an hour or less.

No, I'm talking about training the people who will be responsible for giving the machine the TLC it will require as well as handling the troubleshooting when something goes wrong or doesn't work because someone did something stupid but won't admit to it.

Our long years of experience, covering millions of hours of machine time, confirm that the companies that take the best care of their machines are the ones that are also the most productive and profitable. What you've just heard is the first commandment of automation. Keep it and you'll not likely end up in hell! Break it and you'll pay the price.

Some companies may have the opinion that because they paid a quarter of a million dollars for a saw or other high-tech machine, they shouldn't have to do any maintenance nor should the machine ever have a hiccup. They've never heard of "preventative maintenance," nor do they intend to practice it. Let me assure you, the price you pay for the machine will likely have little to do with the problems you experience.

The price is usually associated with what the machine's capabilities are. In general, the more complex the machine, the greater its capabilities. It also goes without saying (but I'll say it anyway), the greater its capabilities and complexity, the greater the probability of occasional trouble. Quite simply, there are more things to go wrong. It's at those times that the customer must assume the role of "healer" or be prepared to accept the pain!

Most truss fabricators today probably work on what approximates a "just in time" theory of production, either by plan or perhaps because it just works out that way since sales have outgrown the company's production capacity. If your company operates in this mode, you need at least one of two

Continued on page 76

at a glance

- When you buy an automated machine in today's market, you are probably getting a stable design that will likely do what the salesperson says it will do.
- Consider this analogy before purchasing automated equipment: "You can buy a Boeing 747, but you aren't in the airline business until you have the infrastructure that goes with it."
- Companies that take the best care of their machines are the ones that are also the most productive and profitable.

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Automation Straight Talk

Continued from page 75

backup plans: either you need excess machine capacity or you need the ability to handle downtime efficiently.

If you have, or intend to have, a piece of automated equipment in your machinery inventory, you will need a capable person to assist in troubleshooting problems when things go wrong. Note: I said *when*, not *if*! This person need not be a technician per se, but rather a good observer with the ability to follow instructions and communicate what he sees.

Most of the time, when problems do occur, they will be minor in nature. A tripped circuit breaker, a loose connector, a sensor gone bad, or a sawyer who caused a problem but won't 'fess up! Lightning strikes are extremely rare.

I suspect that all machinery vendors have a list of common malfunctions that are easily identified and resolved when searching the "Troubleshooting" section of the machine's operation manual. Failing there, someone needs to clearly describe the symptom to the machine vendor's service engineers or technicians and precisely follow their instructions. Doing so will likely yield a solution to the problem in the most expeditious fashion. My point is this: don't expect the equipment vendor to drop everything and send a service tech out to solve your problem. If that sounds cruel or obstinate, let me give the logic behind it.

I believe it's safe to say that machinery vendors don't have enough service technicians to go around. Today there are perhaps in excess of a thousand saws in the field that claim some level of computer controlled automation. Certainly we vendors wouldn't have enough techs to send someone out

every time a customer has a problem—real or imagined. Even if we did staff for just that, in most instances it would be at least twenty-four hours before a technician would be on your site, let alone solve the problem. Far longer than that if the customer happens to be in Australia, Japan, China or Russia.

As you can see, the fastest way to get back into production is with a capable person on your staff that can either solve the problem or, at worst, work with the vendor's service techs over the phone. Compare the cost of being out of production for twenty-four hours or more with the wage of a capable maintenance man. His wage pales in comparison, especially if you have more than one machine or run multiple shifts.

That's where the need for a good observer and follower of instructions comes in.

You simply can't afford not to have such a person on your staff. In our experience, most of the time a problem can be handled in an hour or so. Rarely do we actually send a tech out, even after a lightning strike! If we have a competent person on the other end of the phone, we'll usually get the problem solved in a timely fashion. I suspect most vendors would say the same.

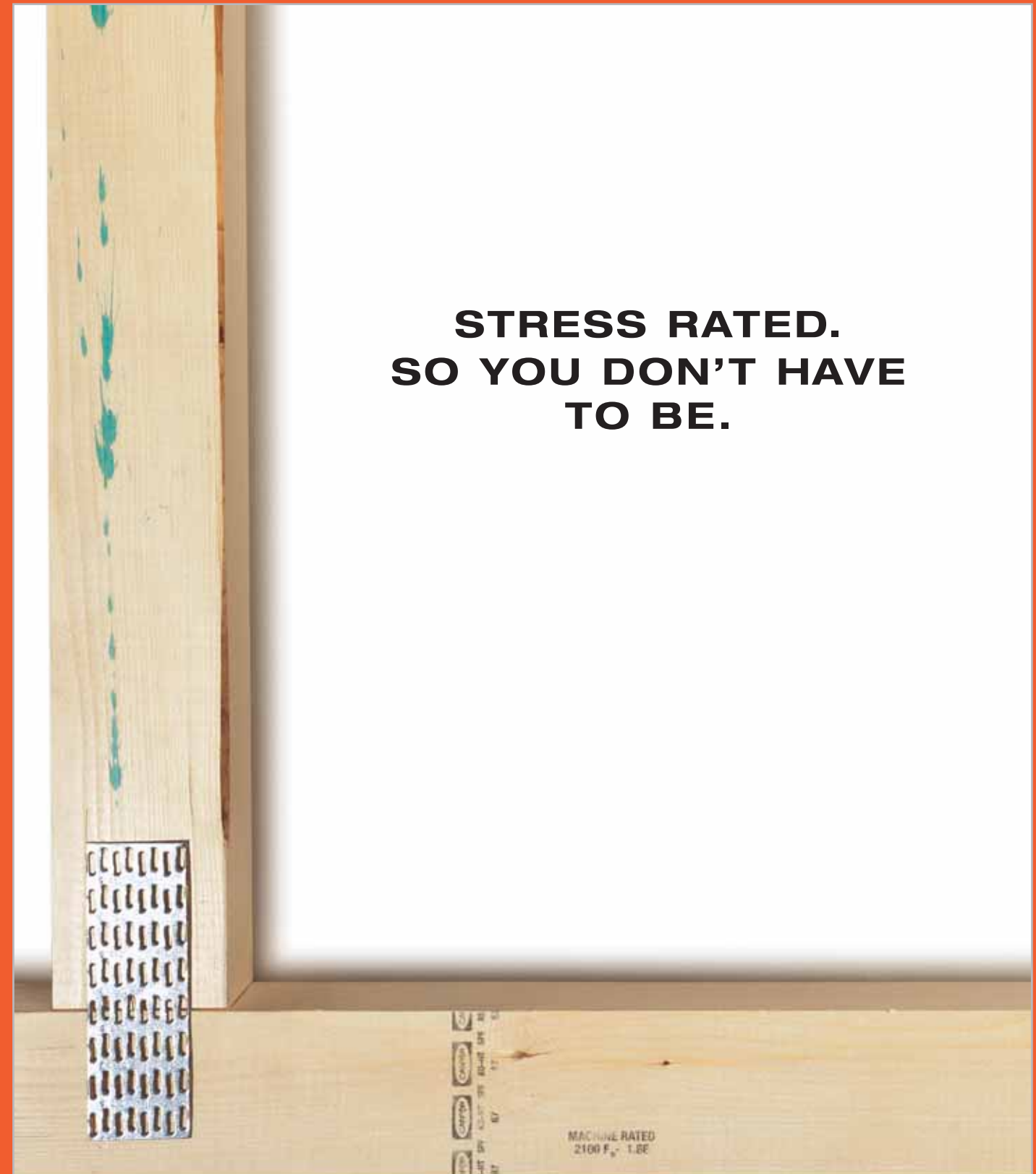
Finally, if you are already into automation and have a competent staff, give preventive maintenance (PM) top priority. Every company, in this industry and many other industries that use machines to make their products, are occasionally faced with product demand and delivery schedules that would seem to preempt the necessity to do the PM. In some instances, they may not even practice PM. They just wait until something breaks! Don't fall into that trap. Eventually, you'll pay the price. And, Murphy's Law being what it is, it will always happen at the worst possible time.

One of our reps said it best: "Why is it that the truss plant owner immediately gets his Lexus to the service shop at the slightest hint of a problem, but the automated component saw that paid for the Lexus never gets any attention?!" Compare the price and value of the two machines—the Lexus comes out a distant second!

So, if you're into or considering automation, don't forget to account for and evaluate your maintenance personnel. Stay out of the darker side...the hell of it.

Hope you have a Heavenly experience with your venture into automation! **SBC**

Jerry Koskovich is President of The Koskovich Company in Rochester, MN.



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