



In Dire Need of Maintenance

EVERYTHING THAT SURROUNDS us, and everything that is us, needs maintenance, John Kravontka says. Look at roads and buildings. Look at your body. Even better, he says, look at your car.

When it has 50,000 or 100,000 miles

Manufacturing's ongoing skills gap, plus its overall neglect in regards to keeping with the times and proper maintenance procedures, have developed something of a new crisis: fewer than 10 percent of manufacturing companies are estimated to have effective maintenance programs in place to keep their equipment and related systems running effectively, resulting in costly interruptions and machinery breakdowns. What can manufacturers do to right their ways? One expert weighs in.

under its belt, it takes a certain amount of maintenance to keep it in optimum running condition. If you defer its regularly-scheduled maintenance, you will ultimately encounter repairs – expensive, difficult fix-ups – that likely would have been averted had you maintained your vehicle properly in the first place.

The same philosophy applies for manufacturers – and their equipment. Or at least it should.

But according to Kravontka, a Certified Maintenance Reliability Professional and President of Fuss & O’Neill Manufacturing Solutions LLC, in Manchester, Conn., it surprisingly doesn’t.

In fact, he says fewer than 10 percent of manufacturing companies have efficient maintenance programs in place to keep their equipment and related systems operating effectively.

“It doesn’t matter if the manufacturer is in the aerospace manufacturing sector, or automotive, or medical, or energy, or any other sector – much of the equipment that makes their products typically do not run well,” Kravontka tells *Industry Today*. “The quality coming off is, at certain percentages, not acceptable, and over time those manufacturing plants have deferred their maintenance.”

The repercussions of inadequate and

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insufficient maintenance can be catastrophic for manufacturers, Kravontka says. Equipment breakdowns and interrupted runs can cost billions in lost productivity, not to mention the subsequent expense of getting that machinery back up and running.

He adds that his organization finds that the typical OEE – or overall equipment effectiveness – for most manufacturers' equipment hovers right around an unacceptable 50 percent.

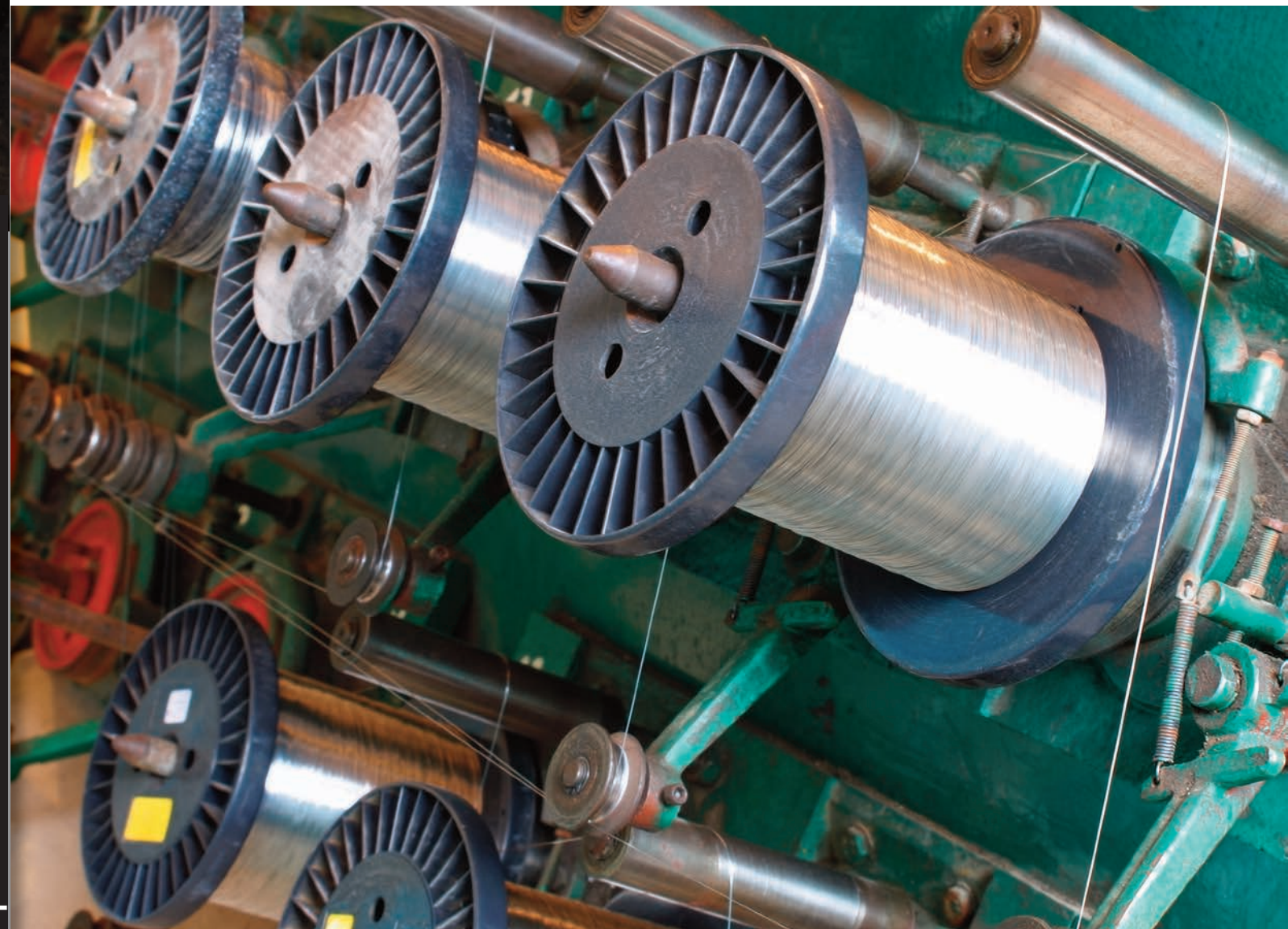
In addition, a typical breakdown, he

adds, can cost anywhere between five and ten times what the cost of regular preventive work would ordinarily cost – not just in equipment and productivity expenses, but in labor costs too.

“Even when equipment does not run well – let's say it has a lot of breakdowns or manufactures products at a slower pace – production still has to make the product,” he explains. “So a lot of times production people have to work overtime, sometimes even on weekends, when its time and a half

ABOUT JOHN KRAVONTKA

John Kravontka is a Certified Maintenance and Reliability Professional, a Training Specialist, Maintenance Professional, and Continuous Improvement Consultant. He has more than 40 years of training, troubleshooting and rebuild/retrofit experience, with all types of machine tools and equipment. Kravontka uses many Lean Manufacturing methodologies to help his clients increase their equipment productivity and reliability. His strength has been to transfer that knowledge and experience, providing immediate and sustainable results for his clients. He is also a recent author of the newly published book "Seeing the Invisible – Single Point Lessons" available at www.gbmp.org. He can be reached at jkravontka@fando.com



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on Saturday and double time on Sunday. That's even more costs to the manufacturer."

Sometimes, he explains, manufacturers fail to see that they even have a maintenance problem. Constant breakdowns, stoppages and a low OEE are the norm, and management believes that the maintenance department is doing all it can in prevention but they'll actually spend most of their time fixing broken equipment.

"A lot of manufacturing plants don't see it yet," Kravontka says. "They haven't made the connection between the equipment not running well and the maintenance organization having serious issues."

FAULTY MANAGEMENT

Maintenance is not about fixing faulty equipment – it's about keeping equipment from breaking. But that has not been the case in years, Kravontka says.

Most maintenance personnel are fundamentally stuck in what he calls Breakdown Mode. That means, Kravontka says, that approximately 95 percent of everything they do daily involves fixing equipment. Proper preventive measures, he explains, is regularly put off or not done at all. They simply do not have the time.

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departments are stuck in this condition," Kravontka says. "Since a breakdown is much more expensive, and 95 percent of your work is fixing breakdowns, it's very expensive for that plant to stay in top-performing condition."

He adds, "But there are a lot of reasons for getting in that mode. It didn't happen overnight. It happened over a period of years."

A key driver, he says, is that experienced maintenance personnel – those with formal training, a variety of apprenticeships, and years or even decades of machinery experience – are retiring or soon will retire. In their place, unfortunately, are candidates who typically possess none of the above.

"They have no formal training at all," Kravontka says. "I've heard this statistic for a while, and it would suggest that over 90 percent of all maintenance people now in the U.S. have not been formally trained. The new ones coming in are basically not even nearly knowledgeable enough to ensure that the machines are running properly and continue the job that the retirees did."

Consequently, there is now a nationwide shortage of qualified maintenance managers.

"There's really no place for them to be formally trained because the apprenticeships and training programs that

“What we’re trying to show, and we’ve shown it, is that if we do the right things, if we can get out of that breakdown mode – and remember, a breakdown is much more costly than doing something preventive – it is going to have a huge impact on maintenance costs and manufacturing productivity.”

companies used to have are gone,” he explains. “A typical manufacturing plant greatly struggles to find experienced maintenance people. It typically takes a long time to find someone knowledgeable.”

And those who are brought often confuse simple machinery problems with complex ones because “they don’t know where to start,” Kravontka says, adding this organization is able to spot deficiencies right away because the staff is made up of former apprentices, former maintenance managers, and certified maintenance and reliability professionals.

“We see minor defects all over the equipment, things that just aren’t right,” he

explains. “We can see them when we walk up to the equipment, but most of the maintenance techs cannot. It’s invisible to them.”

And as new technologies are introduced into the manufacturing landscape, most companies have done a rather poor job of keeping abreast of maintenance best practices. In fact, a large number of manufacturers have instead cut a portion from their maintenance budget, labeling it something of a “necessary evil,” Kravontka says. This strategy, of course, does little to nothing in improving, fixing, or better maintaining defective equipment and machinery.

“Most plants just treat maintenance as a cost to be minimized instead of treating it

what it is: a cost center,” he says. “If maintenance is done correctly, and we get out of that breakdown mode, not only can you get the equipment to run better, but we can ultimately lower our maintenance costs if we can get out of that breakdown mode.”

A LONG RECOVERY

Fixing maintenance’s maintenance problem, Kravontka explains, will undoubtedly be a time-consuming process.

“It will not be easy, and it will not be fixed in a day, a month, or even a year,” he says. “This storm of experienced maintenance people retiring and the lack of apprenticeships and training for newer generations,

plus companies continuing to look at maintenance as a necessary evil, it all happened over the course of the last 25 years. We’re not going to get out of it overnight.”

But there are solutions, he says.

While a small portion of manufacturers have or soon will outsource their maintenance needs, the vast majority will try to improve their maintenance operations in-house. When that happens, management will formulate an action plan after evaluating how their current set of operations is faring.

At Fuss & O’Neill, Kravontka says, this is done by comparing and contrasting clients’ methods, techniques, and procedures with

others maintenance departments categorized as “world class maintenance” organizations.

“That’s when we find out what the client is doing well, what they’re not doing well, and why they’re not doing well,” he explains. “From there we start piecing together a strategy.”

Placing interim maintenance managers is also growing in popularity, he adds.

“It’s becoming a bigger part of our business because we know and we’re seeing that the manufacturer just cannot get a maintenance manager out there who can evaluate where they are, put a vision and a strategy in place, and begin getting them out of that breakdown mode,” Kravontka says.

But these methods serve more as temporary fixes than long-term solutions. So is, in a way, buying and installing automated equipment, Kravontka says. True, you need fewer operators to run these types of machines, he explains, but you need more maintenance personnel to keep them running smoothly.

That means, ultimately, there is only one way to solve this crisis of sorts, Kravontka says: Fix the ongoing sector’s skills gap.

After all, he explains, if there aren’t enough qualified personnel to run modern day’s advanced and automated machinery,



there certainly are not enough to maintain or fix these complicated pieces of equipment when they break, malfunction, and underperform.

Manufacturers nationwide have already taken drastic steps to ease the burden, Kravontka says. Most notably, they’re reaching out to their local community colleges, technical schools, and high schools to craft quasi-apprenticeships, push for new training programs, and assemble new-look curriculum that centers on science, technology, maintenance, and mathematics – all subject matters that manufacturing employs daily.

“They’re looking for ways to get students

calls that retired baby boomer and says, ‘Hey, can you help train or teach some of our new maintenance students,’ they end up going to those technical and community schools,” Kravontka says. “That’s a good thing because you want the experienced tutoring the inexperienced.”

What is most important, Kravontka says, is that this issue is brought to the attention of American manufacturers, who have ignored the ongoing dilemma for far too long.

“What we’re trying to show, and we’ve shown it, is that if we do the right things, if we can get out of that breakdown mode – and remember, a breakdown is much more costly than doing something preventive – it is going to have a huge impact on maintenance costs and manufacturing productivity,” he says, adding that his organization has seen up to a 20 percent reduction in maintenance costs while upping overall OEE levels and uptime.

“If you do the right things in regards to maintenance, you can get a double hit,” Kravontka says. “You can get more reliability, more productivity from your equipment, and you can lower your maintenance costs, all while educating and developing a new workforce who will work to make sure your equipment continues to work effectively and up to speed.” ●

to work inside a plant, on an apprenticeship or internship basis, that can begin training them,” Kravontka says. “They’re reaching out. They’re trying. But it’s difficult, and it’s going to take time.”

An alarming amount of time, he adds.

“Everyone in manufacturing is dealing with this. They’re all looking for skilled programmers, mechanics, welders, managers,” he says. “And while manufacturers are trying to turn things around, the condition is only getting worse. More and more Baby Boomers and skilled personnel are retiring.”

But there’s a sliver of silver lining in that: “When a community or technical college