## The Long Road to Recovery



I've been reading, watching and listening to a lot of pundits lately—economic experts, industry experts, stock market experts, you name it—trying to get some idea of what to expect next.

Heh. My crystal ball is clouded by an upcoming Presidential election unlike any we've ever seen, by a pandemic virus that's changed everyone's way of life and by protesting in the streets on a level not seen in decades.

I've come to the conclusion that anybody who claims to know what the next six months are going to look like probably can't be trusted.

But it's clear that economic recovery is going to take some time. What I'm hearing is that you're going to start seeing some growth. Maybe you're already seeing it as the economies of the world slowly reopen. Unfortunately, so much damage has been done that it will likely be at least another year before sales and production reach previous levels. Depending on the industry, it might be two years or more. We're in for a long haul.

So what are you supposed to do in the meantime?

Well, one thing's for sure. Doing nothing is not the answer. More than ever, your company's focus on technology and education should be at the forefront. Those are the tools that will allow you to get the most out of those employees. By maximizing productivity you'll not only better weather the storm, but you'll have enormous advantages as business picks up.

Ordinarily at this time of year, I'd be encouraging you to participate in upcoming trade shows. Unfortunately, actual live events have been few and far between since the COVID-19 crisis began. IMTS is canceled, along with Hannover Fair USA. The Turbomachinery and Pump Symposium is canceled.

Most of these industry events are offering some kind of remote digital alternative. Classes are still being offered. Technical information is still being shared. For example, the American Gear Manufacturers Association offers a great many educational events throughout the year. Although live, in-person events are on hold because of the coronavirus, their digital offerings can keep you up to date on the technology of gearing. Visit www.agma.org for more information.

In addition, I believe very strongly that this magazine can help. Our focus has always been on high-quality technical information. Every issue, we try to bring you the stateof-the-art when it comes to mechanical power transmission equipment. And this issue is no exception. We have a number of great articles focusing on how the Industrial Internet of Things (IIoT) is transforming all types of factory and production environments. Dr. Ulf Lehmann of Bosch Rexroth describes how Industry 4.0 is transforming the manufacture of linear motion components (p. 8). In "A Little Peace of Mind," Senior Editor Matt Jaster explores how various sensor technologies are being used for condition monitoring of gear drives, gearmotors and more (p. 22). And he follows that up with a close look at Bosch Rexroth's "Factory of the Future" (p. 32).

But it's not all computers and sensors. Experts from Nidec and Motion Industries explain the intricacies of upgrading cooling towers to improve reliability and efficiency (p. 28).

Finally, don't forget our technical articles this issue. We've got "Dynamic Behavior of Planetary Gears," from Renk AG (p. 43); "Combining Gear Design with Manufacturing Process Decisions," from KISSsoft and Gleason; and "Transverse Magnet Flux AKA Hybrid Step Motor Driver Techniques," from Motors expert Don Labriola.

Spend some time investing in yourself, your employees and your company. I promise, some of the articles in this issue apply to you, and there are ideas here that could not only help you get through the economic recovery, but also help your company come out the other end stronger than ever.

