

Core Subjects



Power Transmission Engineering is a unique magazine. Instead of focusing on a specific industry, we focus on specific subject: namely, the mechanical power transmission components that drive many different types of machinery.

So we find ourselves continuously writing about the same things: gears, bearings, motors, gear drives and so on.

But this is a good thing.

It gives us a chance to cover these components from many different angles and explore the various industries they're used in. We believe that an engineer working in the mining industry can learn from our examples in the food and beverage industry, for example. Aerospace engineers can learn from automotive articles, and automotive engineers can learn from construction industry articles. You get the idea. The point is that we're trying to bring you the best examples of articles about mechanical power transmission solutions, no matter where they come from.

This issue we have a focus on lubrication, and we have several articles that should be of interest, no matter your industry. Senior editor Matthew Jaster's article on automatic lubrication systems (p.24) explores how lubrication is advancing into the era of Industry 4.0. The article "6 Critical Grease Characteristics" (p.30) highlights the different functions of bearing grease and gives you ideas about how to determine the optimal blend for your application. And in "High-Performance Plastics," we explore how new materials are advancing the science of seals.

We're also taking a close look at gearmotors this issue (p.18). Contributing Editor Joseph Hazelton talks with several leading manufacturers of gearmotors to explore the ways increasing gearmotor efficiency can save money in your applications, whether you're replacing a whole factory's worth of conveyor gearmotors or redesigning an internal components for an end product like an automated guided vehicle (AGV).

Our motors blogger and frequent contributor, George Holling, helps us understand how advances in electric motor technology are bringing down costs, opening up new applications and freeing the supply chain from reliance on increasingly difficult to source rare-earth elements (p.41).

Finally, we have a pair of technical articles about gears and gear drives for electrified automotive powertrains. The first presents a method to model power losses in a geared transmission (p.44). The second explores the suitability of powder metal gears for high power density applications, with a special focus on how they can be adapted to the NVH and high speed requirements of e-drive applications.

It's a full issue, covering many of our core subjects, and then some. I'm proud to present it to you, and I hope you find these articles interesting and useful. I would appreciate it if you let us know how we're doing. If you have any reaction to any article in this issue, positive or negative, please send an e-mail to wrs@powertransmission.com.

A handwritten signature in black ink that reads "Randy Stott". The signature is written in a cursive, flowing style.