

# A New Phase in Motor Technology

If you haven't been paying attention lately, you might think that electric motors are an old, stodgy technology. After all, most of the real inventions occurred way back in the nineteenth century, with contributions from historical geniuses like Faraday and Tesla. We've been using DC motors and AC induction motors since the late 19th century. In many cases the basic design has remained unchanged.

But the world of electric motors is changing drastically, driven by global goals of energy efficiency and electrification, coupled with a continued desire to reduce reliance on rare earth metals and other limited-supply commodities. Throw in an explosion in the field of robotics and the proliferation of drones, and you have a recipe for continued, impressive innovation.

"In the past two years more truly innovative new technology development has occurred than in the previous two decades," says John Morehead in his column on electric motor trends (p. 34). Morehead is a longtime veteran of the motor industry, having served in executive and senior management roles with Bodine Electric, Bison Gear & Engineering, Dunkermotoren and Crouzet Motors. Today he runs a strategic consulting business, and he's also our newest *PTE* contributor. You can look forward to reading more of his wisdom in the coming issues.

And he's definitely not alone in this observation. We've seen it first-hand at a number of recent trade shows, including IMTS, Pack Expo, CES and MINExpo. Senior Editor Matt Jaster's article on aerospace motor trends

(p.16) gives some of the highlights, including unique approaches to motor design for vertical takeoff and landing (VTOL) aircraft.

We'll definitely be paying attention to the motors space over the coming years.

This issue also includes an emphasis on mining applications, with an article from Regal Rexnord on mining safety and large industrial braking systems (p. 20), a detailed look at CMD Gears' inching drives for grinding mills (p. 26), and a piece on slewing drives and other components from Liebherr (p. 28).

We are always on the lookout for innovations in the power transmission industry. Please let us know if you know of any new technologies, interesting applications or changing trends in the way gears, bearings, motors, gear drives and other power transmission components are being used. Please reach out to me at [stott@agma.org](mailto:stott@agma.org) with any feedback or insight regarding our coverage.

**PTE**

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