

CONTROL

FOR THE PROCESS INDUSTRIES

Seeing Deeply

If I pay attention, almost every day I'll see something that I've never seen before. One winter day, for example, I saw a walled snow fort covering the top of a red minivan. Another time, while flying in a 12-seat airplane up California's coast, I noticed that my empty soda pop can was revolving in its shallow, tray-table holder *without anyone touching it!* I thought the plane was haunted until I realized its vibrations were caus-

ing the can to rebound imperceptibly within the slightly larger circle, which created torque and motion, like a slow-moving rotary engine. In one long-ago police blotter, I wrote about a routine search for some stolen tools, which led to an inventive young boy, who had boosted the

sideboards from an entire outdoor ice rink, and reassembled them into a ramp for jumping his bicycle!

Truth isn't just stranger than fiction, it's often incomprehensible until it occurs in reality. That's why I enjoy covering process control—more and better surprises.

Still, the drumbeat of routine can make it hard to find what's new and interesting as the weeks and years pile up. Maybe it's one of the occupational hazards of experience—mistakenly thinking you've seen everything—like the 19th Century U.S. patent official who famously said everything that could be invented had been invented. Naturally, the same fatigue can overtake control engineers, technical professionals, and journalistic hangers-on like me, especially after writing about my 2,000th terminal block or its 20th version, whose only "innovation" seems to be that its jacket now comes in sea foam green. Ho freakin' hum. Many improvements—like bottled water, energy-wasting SUVs, and water-logged hams—aren't really improvements.

So, I must confess that I wasn't expecting much when I recently traveled to Boulder, Colo., to visit Emerson Process Management and its Micro Motion division for their Perspectives 2006 event. Of course, I was wrong, as I usually am when I anticipate the future. I was wrong because Emerson and Micro Motion unveiled multivariable digital (MVD), sensor-transmitter, and self-diagnostic improvements that make their Coriolis flowmeters more accurate, stable, and widely applicable, especially in entrained-gas measurement. However, beyond these technological advances, I was wrong to anticipate for an even more important reason. I forgot that just getting out and

old method of sprinkling baby power inside flowmeter housings, so any clumping will indicate where there's a moisture leak.

Rock Tanner, supplier quality director, reported that Micro Motion is updating its X-ray weld-inspection equipment from film to digital, but added this conversion was held up until he could find a way to calibrate the new devices. The old X-ray used strips of metal, but the digital camera's multi-dimensional capabilities meant that Tanner had to investigate and eventually use special ball bearing as calibration guides.

Similarly, principal design engineer Mark Bell demonstrated how Micro Motion developed and fine tunes its multi-phase fluid stand, which separates and measures water and oil levels. And metallurgists Gerri Berry and David Murdock showed how Micro Motion updates its corrosion guides, and uses forensics to conduct failure analyses.

Finally, Joel Weinsten, an intern from the University of Colorado, showed demonstrated how another Micro Motion test stand uses two-phase flow to test for entrained air in fluid samples supplied from end users' own applications.

All of these professionals showed how they use technological expertise, traditional common sense, and inspired thinking to create, test, and support Micro Motion's solutions. While product launches usually get most of the corporate glory, it's the people behind them and their intangible contributions that make them shine brightest.

So, the next time you get flooded with new and improved non-improvements, get out and talk to some engineers directly. They reminded me that, even if there's nothing new under sun, what's truly new may be a deeper understanding and appreciation of what we thought was so familiar. **G**



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