Welcome to our Product News page. Here we feature new products of interest to the gear and gear products markets. To get more information on these items, please circle the Reader Service Number shown.

The Next Dimension in Gear Metrology

Process Equipment Company has announced the release of the ND430 Next Dimension™ Gear Measurement System, which can perform both generative and coordinate measurements including index, tooth alignment, involute profile, root radius, diameters, planes, true position, tooth thickness and dimension over pins. "Our goal was to develop a machine where the accuracy could be known throughout the measuring zone so that related part features could be measured in relation to traditional gear features," says Brian Slone, Business Unit Manager for Process Equipment Co. Since both generative and coordinate measurements are made on the same machine, operating expenses are reduced. Data collection and analysis can be done using AGMA, DIN, ISO or user-defined standards.

"With customer specific software, the ND430 can inspect any type of gear once the geometry is defined," says Slone. "If the gear geometry is undefined, the ND430 can scan the component and give numerical information that can be loaded into a special analysis package for review. Customers can also write their own software modules so that customer proprietary part designs can be protected in house."

The ND430 can handle parts up to 430 mm (16.9") in diameter, 762 mm (30.0") in length, and 400 lbs. The machine is designed for an accuracy of 1.73 microns anywhere in the measuring envelope with repeatability to NIST-traceable masters in the sub-micron range. For information contact Process Equipment Company at (937) 667-7105.

Circle 300

Two New Machines From Kinefac

The **MC-300 Kine-Roller**, with a radial die load capability in excess of 600,000 lbs., is an ultra-high capacity, two-cylinder die rolling machine that uses the Kinefac enclosed force concept to achieve high rolling force with high-precision and minimal asymmetrical deflection. Consequently, the MC-300 is ideally suited to performing high precision, infeed and single-revolution, thread rolling, worm rolling and roll sizing.

This compact machine handles dies up to 15 inches in diameter with a 10-inch operating face. Ultra-precision, rotary match is achieved by a continuously variable rotary coupling between the two gearboxes, allowing angular die match within increments of 1/2 minute. Radial die penetration is achieved by a direct-acting cylinder. This accurately controls final penetration by direct contact at the end of its stroke, against a stop surface in the high stiffness, symmetrical stress frame. Penetration rate is controlled through an electro-hydraulic, proportional, directional-flow control valve. A linear position transducer monitors the position of the die head, allowing variable penetration rates depending on die head position.

Originally developed primarily for hollow shaft spline rolling, the **MC-6-FTF Kine-Roller** is cost effective for the production of splines on virtually any type of solid and hollow shafts up to 3 inches in diameter. The three cylindrical dies automatically center the part and are directly synchronized by a phasing plug, assuring precise angular location of the die teeth as they contact the blank. The dies are driven through a unique new torque sharing system that eliminates any rotational die error that may come from the individual die drivelines. The dies are held in the rolling position by a massive hydraulic actuation ring. The effects of spring or backlash in the spindle and actuation system are minimized by a preload ring, which operates directly on a cylindrical area on the dies. With this system, maximum spacing errors of .001" are achievable with a typical MOW tolerance range of .002".

This compact, rugged Kine-Roller occupies only about half the floor space of a typical horizontal rack-type spline roller. Because of the simple setup, high-productivity, low-cost and small machine footprint, it is well suited to the production of automotive, steering and transmission shafts, washing machine shafts and similar torque transmitting machine elements. For information on either of these machines, contact Kinefac Corporation at (508) 754-6891 or by email at *sales@kinefac.com*.

Circle 301

Diaform Dressing System

The CNC Diaform grinding wheel profiling system by Engis Corporation brings sub-micron precision, consistent performance and flexibility to form-wheel dressing and grinding operations. The system features a full 3-axis dressing capability, which brings highly accurate and repeatable precision to the production of deep and complex forms. Designed specifically for grinding by

grinding specialists, the Diaform can be fitted to most types of surface, cylindrical and centerless grinding machines, as well as special purpose grinders and wheel-forming machines. By converting grinders into multi-axis form grinders with full CNC control, the system enables production engineers to change forms fast and efficiently, run dressing and grinding operations and create stand-alone wheel dressing systems to feed multiple grinding stations.

Controlled by a powerful processing unit, the Diaform automatically converts conversational-type data entries into internationally accepted ISO machine code. Input data can be in either metric or English measurements. The system accepts remote programming as well, via both diskette and RS-232 network links. For further information contact Engis Corporation at (800) 99-ENGIS or visit *www.engis.com.*

Circle 302

New Parallel Shaft Gearmotors from Bodine

Bodine Electric Company's new Pacesetter™ fractional horsepower, parallel shaft AC gearmotors are designed for extended life in inverter-driven applications. They offer adjustable speed to increase adaptability and the productivity of industrial machinery without the limitations normally associated with adjustable speed brush-type DC gearmotors.

The Pacesetter™ line of inverter duty gearmotors is comprised of nine models in two frame sizes (34 and 42), from 1/6 to 3/8 HP, with up to 341 lb-in of output torque. These gearmotors are designed for 230 V, 3-phase input and rated for constant torque output with drive frequencies varying from 10 to 90 Hz. For cool operation, they feature fan cooling and finned aluminum center rings for high thermal efficiency. For information, contact Bodine Electric Company at (800) 7BODINE (800-726-3463) or visit *www.bodine-electric.com.*

Circle 303

Hommel America Adds New Line

Hommel America, a manufacturer of surface roughness, form and gear testing measurement equipment has recently added the Steinheil-Kontur by Jenoptik to its product line. The Steinheil-Kontur is a dimensional/form-measuring machine for round components. The machine measures dimensional characteristics including diameter, length, reference rotation position, angular displacement, tapers, grooves, radii and chamfers. In addition, the machine can also measure form deviations such as run-out and roundness. It operates using live centers to hold the workpiece vertically, scanning the profile using an opto-electric sealed CCD array camera. The profile is then loaded into a Windows NT-based editing program, which then measures the features in seconds without contacting the measured part. For more information contact Hommel America, Inc., at (860) 827-8500 or visit their website at *www.hommelamerica.com.*

Circle 304

New Microhardness Test System

The Wilson division of the Instron Corporation has introduced the Series 2100 Modular Computerized Test System, a Micro/Vickers hardness test system that includes a high-resolution video camera and a choice of three operating modules. Users can configure a system for PC-based manual testing, add a Windows® X-Y auto-traversing stage system for semi-automatic operation, or perform fully automatic image analysis measurements under complete software control.

Providing microscopic images on a computer monitor in all operational modes, the Series 2100 eliminates operator fatigue caused by microscope viewing. Users can manipulate the specimen manually with a joystick or by on-screen commands, and 756x576 pixel resolution assures the ability to detect and measure indents as specified by ASTM E-384. For more information contact Instron at (800) 695-4273 or log onto *www.instron.com.*

Circle 305

New Toolholder Designed for "Power Shrinking"

The concept of "Power Shrinking" is expanded with the use of the Tribos toolholding system from Schunk, Inc. Unlike other systems that require a labor and time intensive heating or cooling process

to achieve maximum clamping force, the unique geometric clamping technology of Tribos distributes uniform clamping force to three areas on the toolholder I.D. using the elastic deformation of steel (no wear).

The precise, tri-lobe symmetrical profile makes the Tribos system ideal for high speed machining applications such as tool and die, gear housings and mold making. The slim design enables maximum clearance of the cutting tool and extreme accuracy and concentricity (within 3 microns) resulting in extended tool life and improved surface finishes. For more information contact Schunk, Inc. at 919-572-2705 or send e-mail to info@schunk.de.

Circle 306

New Directory of Casting Sources

The American Foundry Society (AFS) has completed its new Casting Source Directory and Reference Issue 2001 (10th Edition). Available free to purchasing and engineering officials involved with the design and/or specification of metal components, the 370-page directory is the industry's only casting reference book. In addition to 75-plus pages of process and property data, it contains capability information on 3,000 foundries, die casters and investment casting suppliers in the United States, Canada and Mexico. For a copy of the book, or more information, contact AFS at (847) 824-0181.

Circle 307

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