

ASME Presents Patent Award to Litvin



Faydor L. Litvin

Faydor L. Litvin, professor of mechanical engineering and director of the Gear Research Center at the University of Illinois at Chicago, was 2004's recipient of the American Society of Manufacturing Engineers' Thomas A. Edison Patent Award.

Litvin's patent, called the "Apparatus and Method for Precision Grinding Face Gears," has provided a means of reducing the weight of helicopter transmissions by 40%, thereby promoting fuel savings and reduced emissions.

Litvin invented a process that grinds hardened face gears that can be manufactured with the same safety features as spiral bevel gears.

Mel Torres, media manager at ASME, says the Thomas Edison award is the most prestigious granted by the association in Litvin's field.

"In the area of patents, this is the highest ASME accomplishment," he says. "Faydor Litvin was nominated by his peers because of the creativity in developing a process that enhances the field of mechanical engineering."

The Boeing Co. is currently working with Litvin's patent. Face gears for an upgrade of the drive system for the Apache attack helicopter utilized by the U.S. Army were created with Litvin's principles in mind.

Terrell Hansen, Boeing's department manager for drive system design, says they make gears with the ideas outlined in Litvin's patent on a daily basis.

"Because of Professor Litvin's innovation in grinding face gears, we now have a higher reduction ratio in a gear set. This means we can get rid of hardware and some of the weight, which results in lower costs for designers, builders and operators of the system," he says.

This is the third patent that Litvin holds, and his research is credited with 25 inventions. Mostly, his research focuses on mechanisms, manipulators, theory of gearing, computerized design and the simulation of meshing of gear drives.

Litvin has been at the University of Illinois at Chicago since 1979, when he arrived in the United States.

Much of his time was divided between teaching and writing, and he is credited with 300 publications, including 10 monographs.

The ASME was established in 1880 for the engineering and technology community. The association's honors and awards program is funded by the ASME Foundation.

Wind Farms that Don't Need Government Subsidies?

In America, manufacturers of utility-scale wind turbines—and manufacturers of their gears—know the U.S. wind energy industry depends a lot on the federal government's wind energy tax credit. Wind energy developers may even suspend their projects if they don't have the credit.

In Norway, though, ScanWind Group AS is erecting 14 three-megawatt wind turbines to answer a question: If the company produced these turbines, could wind farms using them compete with other energy sources, without government subsidies?

The answer, whatever it is, will come from the company's Hundhammerfjellet wind farm, located along Norway's west coast, where the turbines are exposed to the winds of the Norwegian Sea, north of the Atlantic Ocean.

The key to a "Yes" answer is ScanWind's ability to build wind turbines that last 20 years. According to Torolf Pettersen, the company's managing director, turbines around the world operate at full load for an average of 2,300 hours each year. In Norway, the average is 3,900 hours. Given the country's situation, ScanWind figured if it could build turbines that lasted 20 years—and Pettersen maintains it can—then: "We can build wind power in Norway cheaper than any other type of new electricity—including gas power," he says.

ScanWind is creating the Hundhammerfjellet wind farm with both geared and gearless wind turbines. The project consists of three phases: 1.) installing a 3000 DL demonstration turbine, completed during winter 2003, 2.) installing a 3000 GL demonstration turbine, completed during fall 2004, and 3.) installing 12 more three-megawatt turbines, creating a wind farm with a 42 megawatt capacity.

ScanWind's 3000 DL is a three-megawatt turbine made for onshore use and equipped with a direct-drive generator. The 3000 GL is also a three-megawatt turbine for onshore use, but it's built with a special gear assembly that lets the turbine use an asynchronous generator.

Pettersen says the project's original two turbines have been performing very well and producing little noise. ScanWind expected to start producing the remaining 12 turbines this spring and start installing them in spring 2006, with all 14 turbines operational in fall 2006.

Star SU Hires New Personnel

Star SU recently hired four new employees for its sales and technical efforts. Kit Pridmore has joined the company as a technical service manager. He has worked at Gleason in the same position for the past eight years and at American Pfauter for nine years prior to that. Pridmore will be based out of Detroit and will be responsible for technical support to customers in Detroit and parts of northern Ohio.



Kit Pridmore



Rick Ruffin

Rick Ruffin was hired as a regional sales manager for the southeastern United States. He will operate out of Charlotte, NC. According to the company's press release, Ruffin has held similar positions at Gleason Cutting Tools and Perrin Precision Tools.

Mark W. Raby will manage the cutting tool sales operations in southeastern and south central Michigan. He has worked in powertrain manufacturing technical service sales for nine years at Mapal in Port Huron, MI. In addition, he has extensive experience in prototype R&D and as a journeyman apprentice.



Mark W. Raby

Rick Mattingly joined Star SU as manager of tool services. He held similar positions at Pfauter Maag Cutting Tools, Barber Colman and Gleason since 1969. Mattingly will be based in the company's Hoffman Estates, IL, facility.



Rick Mattingly



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St. Denis Promoted at HD Systems



Brian St. Denis

Brian St. Denis was promoted to vice president of HD Systems from his previous position as engineering manager.

According to the company's press release, he has been with HD Systems for 12 years.

HD Systems of Hauppauge, NY, is a manufacturer of harmonic drive gearing and motion control products.

Ikona Gear Signs Agreement

Ikona Gear has entered into a development agreement with StarRotor Corp. to provide patented Ikona Gear technology for the third generation of StarRotor's proprietary design engine.

According to Ikona's press release, both companies will develop and test the patented Ikona Gear tooth form and later negotiate a licensing agreement with royalties based on StarRotor's net engine sales. Both companies will file separate patents to protect their intellectual properties.

Ikona has also entered into an unrelated non-disclosure agreement with Paccar-Winch Division of Paccar Inc., in which both companies will collaborate to assess the adequacy of Ikona's slew ring and D-drive differential technologies in Paccar's new winches and hoist drives.

If the results prove successful, Paccar will gain exclusive distribution rights within the winch industry.

Höfler GmbH Celebrates Significant Anniversaries With Hofmann

On February 1, Hagen Hofmann observed his 40th anniversary with Höfler GmbH and his 65th birthday.

According to the company's press release, Hofmann started as a design engineer in 1965 and convinced the company's founder, Dr. Ing. Höfler, to develop gear manufacturing equipment of all sizes and types. That same year, the first Höfler gear grinder was introduced. Hagen Hofmann was appointed president of Höfler Maschinenbau GmbH in 1990.

New Board Member at American Axle

American Axle & Manufacturing Holdings Inc. appointed Larry K. Switzer to its board of directors.

According to the company's press release, Switzer has held numerous positions in finance. Before his retirement in 2000, he was CEO of Danka PLC and led the company into a successful restructuring and turnaround.

American Axle & Manufacturing designs, engineers, manufactures and validates driveline systems and related components for various automotive applications.

Estudio Piña Certified to ISO 9001: 2000

Estudio Piña received its ISO 9001: 2000 certification for the scope of technical assistance services in mechanical gear drives and applications.

According to the company's press release, the certification covers any service offered to customers in Argentina and Latin America.

Marposso President Receives Japanese Marketing Award

Stefano Possati, president of Marposso S.p.A., received the News Digest Marketing Award for 2004.

The award was presented to Possati at News Digest Publishing's annual meeting in Nagoya, Japan. It was the second time in the award's 22-year history that a non-Japanese company has been so highly recognized.



Stefano Possati (left) receives News Digest Marketing Award for 2004.

Fifty Japanese operators representing the manufacturing community selected Possati on the basis of four criteria. According to the company's press release, Marposso possesses the largest share of in-process measuring equipment, applies quality metrology technology to a variety of products, offers worldwide support for specific market integrations and solves in- and post-process measurement applications in workshops.

RoMaDyn Opens Rotating Machinery Consultancy

RoMaDyn of Minden, NV, will offer global consultancy on rotating machinery dynamics.

According to a press release, the new company will offer machinery



diagnostics, product services, and technical seminars on rotating machinery assets and other topics. Machinery diagnostic services include finding the root cause of malfunctions in turbines, compressors, motors, generators and pumps. Product services include installation, verification, repair and maintenance of vibration instrumentation. Seminars will cover balancing, alignment, vibration monitoring system operations and maintenance and externally pressurized bearings. G. Richard Thomas will lead the operation as global services manager. Thomas authored a comprehensive textbook titled *Fundamentals of Rotating Machinery Diagnostics* and has extensive industry experience.

INDUSTRY NEWS

In Memoriam

Gear Manufacturer Bennie L. Boxx: 1935–2005

Bennie L. Boxx, founder of B&R Machine and Gear Corp. of Sharon, TN, died Jan. 2 of blood cancer. He was 69 years old.

Mr. Boxx worked in the gear industry for more than 50 years, starting as a 15-year-old employee of Industrial Gear of Chicago.

Mr. Boxx was born March 28, 1935, in the small farming community of Sidonia, TN. Eight years later, his family moved to Chicago. Mr. Boxx attended high school in Chicago but dropped out to earn money. His first job in the gear business was at Industrial Gear.

He later left Industrial Gear to work at Arrow Gear Co. of Downers Grove, IL, where he learned about spiral bevel gears. Over the years, Mr. Boxx worked for a number of other gear-related companies, including Balfre Gear, Brad Foote Gear Works, and Cadillac Machinery.



Bennie L. Boxx,
Founder of B&R Machine
and Gear Corp.

“He was an honest and honorable individual,” says Michael Goldstein, president of Cadillac Machinery, “and he was extremely talented in his bevel gear ability.” Mr. Boxx, however, was with the company only briefly, Goldstein explains. “He enjoyed making gears much more than selling gear machines.”

In the early '70s, Mr. Boxx and two friends started their own gear company, Astron Gear in Hodgkins, IL. Within a few years, he sold his share of the company and started B&R Bevel Gears and Machine, located in Addison, IL. The company had three employees during its first year; B&R has 30 today.

By late 1980, B&R Bevel Gears moved from Illinois to Tennessee. In '77, Mr. Boxx was visiting his hometown of Sidonia when he noticed an empty building once used by Central Southern Trucking in Sharon, a nearby town. He decided to open a branch of B&R Bevel Gears in the building. In '78, his eldest son, Bennie R. Jr., moved to Sharon and opened B&R Machine and Gear Corp. Within three years, Mr. Boxx merged the two operations.

The merged company started in a 7,000-square-foot building. Owned and operated by the Boxx family, B&R now consists of five buildings, more than 135,000 square feet, on 22 acres.

Mr. Boxx is survived by his wife, Doretta; two sons, Bennie R. and Terry; two daughters, Brenda Sudzum and Suzette Kelly; a brother, Danny; two sisters, Joan Rollins and Carolyn Burnett; 13 grandchildren and three great-grandchildren. He was preceded in death by a daughter, Doretta Denise Boxx.

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