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NEWS RELEASE

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TO THE EDITOR

FOR IMMEDIATE RELEASE

SELF-LUBRICATING GEAR SYSTEM REPLACES COMPLEX PULLEY DRIVE-TRAIN TO HANDLE DEMANDING PRECISION TIMING

Closter, NJ: When Dexter Magnetic Technologies introduced a dual axis robotic manipulator to control sputtering in the manufacturing of computer hard drives, it was an instant success that relied upon a sophisticated drive and pulley system that all too quickly developed a troublesome, excessive wear problem that was resolved with a solution presented by Intech Corporation.

Chris Ras, Product Development Manager at Dexter Magnetic Technologies, describes the drive system as "consisting of two single sided timing pulleys configured into two independent drive sections, each of which utilizes two single-sided timing belts." During tests at a customer's plant, the faster of the two compact belt drives required frequent and precise tensioning to eliminate belt stretching and excessive wear.

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Ras, in exploring a gear design as an alternative to the belt drive, contacted Tody Mihov, Engineering Manager at Intech Corporation, to discuss how self-lubricating plastic Intech gears might work into his design. The application offered limited space, featured both high torque and reversing torque, and the gears needed to be retrofitted into existing equipment on location at the customer's facility.

Upon reviewing load data using a proprietary gear calculation developed by Intech in conjunction with a leading university, Mihov determined that the Intech gear would work. He then decided to maximize the load carrying capacity of the Power-Core™ gears by applying an innovative Intech developed plus/plus gear mesh modification to the gear train. With the addition of two stainless steel drive gears, an Intech Power-Core™ idler gear that has an integral stainless steel core and a proprietary backlash-free plastic gear design, the desired smooth manipulator motion was assured.

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In addition, a special idler gear shaft was designed to provide an easy, field-ready retrofit.

An in-house test was constructed to determine how the Intech solution performed relative to visible wear patterns and drive efficiency. As per his expectation, Ras determined that drive efficiency increased by a full 15%! He reasoned that this was achieved in part by eliminating the radial stresses that belt tensioning transferred to the bearing. With the Intech Power-Core™ gears running stress-free, the only force transmitting onto the mating gear teeth was the torque, which traveled on a precision-machined pitch line.

With the retrofit Intech gear replacement system in place to manage reliability of the rotary axis, Dexter Magnetic Technologies has gained even greater industry attention.

For more information, please contact Mr. Georg Bartosch: Intech Corporation; 250 Herbert Avenue; Closter, NJ 07624; Tel: (201) 767-7797; www.IntechPower.com .

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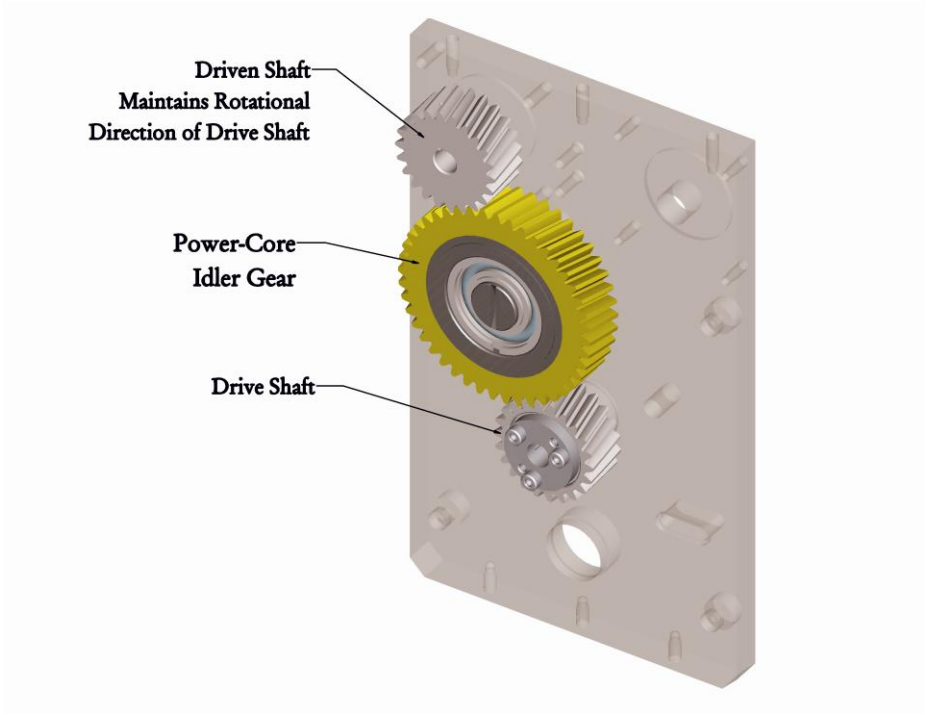

Photo Caption:

A self-lubricating, anti-backlash gear solution from Intech Corporation replaced the complex pulley drive-train originally used by Dexter Magnetic Technologies to increase wear and reliability of the dual axis robotic manipulator that regulates the sputtering of computer hard drives in the HDDR industry.

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