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Press Release

Sumitomo Introduces All-Electric Disc Molding Subsystem

(REPLITECH North America, San Francisco, CA) Sumitomo Plastics-Machinery opened its exhibit today with the introduction and demonstration of the SD35E all-electric disc molding subsystem in Booth #2010.

The SD35E subsystem, which includes the machine, mold and take-out robot, is designed for molding DVD, CD, CD-ROM, CD-R and MO discs. "It combines the high-level of precision molding the disc market demands with the energy and cost efficiency advantages of Sumitomo's all-electric machine technology," said Mr. Koichi Kasamatsu, Manager, Disc System Sales. "With the SD35E, disc molders can now choose between the highly successful, accumulator-driven SD30 with high-speed capabilities (on display in the Steag First Light Booth #1702) and the new SD35E with environmentally-friendly and energy-efficient high-speed operation."

Demonstrating actual values virtually indistinguishable from set points, SD35E performance results for shot weight accuracy and repeatability can yield a typical deviation-to-mean ratio of less than 0.02%. The SD35E provides the precision, power and velocity required for high-speed disc molding. Running round-the-clock at high speeds, the long-term reliability of the SD35E is ensured by Sumitomo's double-toggle clamp design which has been field-proven worldwide on over 9000 SG/SGM Series ultra-high-speed machines and nearly 1000 of the company's new SES Series all-electric machines.

The SD35E's environmentally-friendly and cost-efficient operation is due to several factors.

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The machine's five, highly energy-efficient servo motors draw power only as it is needed for significant, quantifiable energy savings. Unlike belt-driven electric machines, Sumitomo's direct drive technology avoids the problems associated with belt dust, machine vibration and noise, and belt wear and tension which affect precision and overall efficiency. Additional advantages of the all-electric technology result from lower demand on cooling systems, reduced expenditures related to hydraulic oil and filters, a cleaner molding environment with reduced oil clean-up and disposal costs, and precision repeatability that ensures less scrap.

For injection, two direct-drive, Sumitomo-built AC servo motors with full closed-loop control and digital sensors provide the SD35E's outstanding speed, precision and energy efficiency. The motor for injection uses a load cell to provide feedback that dictates the speed and torque required for precision injection pressure; the screw drive motor works together with a position transducer.

The SD35E (38 US ton) clamp unit uses two, direct-drive, digitally controlled AC servo motors for clamping and ejection. With full closed-loop control and monitoring by optical encoders, the SD35E ensures precision control of mold open/close with maximum mold protection even at high speeds. Mold open stop position accuracy of 20 microns protects the subsystem's robot.

Sumitomo's custom-designed CD/DVD mold provides: 4 independent cooling circuits for faster cycle times; a high-precision interlocking structure and specialized coatings to ensure long life of the mold and mirror block; easy stamper change at high mold temperatures; plus ease of maintenance, interchangeability of key parts and easy adaptation to either CD or DVD molding.

The Yushin Precision Equipment take-out robot features a less than 0.1 second takeout time, precision positioning (kick axis: +/-0.1mm; swing axis: +/-0.01 degree), timer setting to 0.001 second, and a custom-designed carbon fiber arm.

Specialized disc molding features of the SD35E include: a temperature-controlled platen; a

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disc-oriented screw assembly; a gate cut mechanism in the moving platen; and a 2-zone, temperature-controlled nozzle. These features help ensure uniform replication over the entire data area, extremely low birefringence, and excellent dimensional characteristics with low tilt angles.

In addition to the SD35E and SD30 disc molding subsystems, Sumitomo Plastics-Machinery provides a complete line of general purpose and ultra-high speed and precision molding machines ranging from 20 to 716 (US) tons clamping force.

For more information on the SD35E all-electric subsystem or Sumitomo's full line of disc molding machines, please contact Mr. Koichi Kasamatsu at: (770) 447-5430.

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EDITORS:

Sumitomo Plastics-Machinery is introducing a new, **all-electric** disc molding subsystem at REPLITECH North America. To see a demonstration of the SD35E and receive a complete press kit, please visit the Sumitomo exhibit in **BOOTH #2010**.

Mr. Koichi Kasamatsu, Manager, Disc System Sales, will be pleased to provide you with a press kit and will be available for interview.