Press release
19 April 2012

Demag Plastics Group SP. z.o.o. present efficient standard injection moulding and Full-Cover-Labeling

Demag Plastics Group SP. z.o.o. present efficient standard injection moulding and IML innovation at the Plastpol International Fair in Kielce, Poland

With a compact production system for optical components and a Full-Cover-Labeling application for the packaging industry, Demag Plastics Group SP. z.o.o. will be present at the Plastpol International Fair from 29 May to 01 June in Kielce, Poland. On Stand 20 in Hall G the Polish subsidiary company of the German-Japanese mechanical engineering firm Sumitomo (SHI) Demag will demonstrate to a technically minded public the achievement potential of their series Systec and El-Exis SP machines.

As previously, hydraulically operated injection moulding machines are very much in evidence in the market. Sumitomo (SHI) Demag offer their multi-function machine Systec with from 350 to 1200 kN clamping force and with an all hydraulic clamping unit from 1300 to 20000 kN with a knee lever clamping unit. The hydraulic machines are characterised by a high level of production efficiency and above all by a good price-

performance relationship. The Systec series is fitted with numerous elements from the production efficient Sumitomo (SHI) Demag catalogue which cater especially for customers looking for an extremely economical production facility. The cooling and filter system activeCool&Clean guarantees optimum oil quality and a long oil service life. For the controlled advance of the mould, the expanded sensitive mould protection function activeQ+ determines the deployment via the new control system NC5 plus. With the integrated energy measurement system activeEcon, an optional efficient instrument for optimising the use of energy is available. Cylinder isolation sleeves reduce the use of energy and shorten cylinder warm-up times. And not least, for the larger than 1300 kN knee lever versions on offer, the use of an all electric dosing unit drive is possible.

With the optional Adaption function, additional injection units from the product construction kit allow the machine to be equipped as Systec multi for multi-component technology.

Systec 50-310 produces magnifying lenses

At Plastpol 2012 a Systec 50-310 with 500 kN clamping force produces magnifying lenses from PC Makrolon.

With the mould made by sauer product GmbH, Dieburg in Germany, lenses are produced in a cycle time of 115 s. Mould tempering is carried out using Alternating Temperature Technology (ATT) from SINGLE. The moulded articles are removed by an integrated linear robot SDR11.

Alternating temperature tempering increases the quality of the moulded part

Under the label Alternating Temperature Technology (ATT) the SINGLE Temperiertechnik GmbH, Hochdorf offer a system solution which gives especially effective, variotherm liquid tempering for injection moulding and press tools. The flexible, active Komplettsystem consists of an individually configured alternating temperature tempering device as well as specially designed mould applications and mould elements with cooling channels positioned close to the surface. The company SINGLE is represented in Poland by Master Colors Sp. z o.o.

Integrated robots for works based automated injection moulding plant

The model range of integrated robots SDR offers six variants covering all mechanical, electrical and pneumatic interfaces for integration with the injection moulding machine Systec produced by Sumitomo (SHI) Demag. Mechanik and Aktorik in the robot model range SDR 11 to SDR 66 are based on the range of robots produced by the French manufacturer Sepro Robotique. As the control unit for the SDR robot, "Visual 2“ is used which is integrated into the NC5 control unit giving complete system control. This integration simplifies operability and increases the efficiency of the whole system.

High performance model range El-Exis SP (Speed Performance)

The hybrid driven El-Exis SP convinced its users engaged in high speed production of thin-wall food packaging, drink container sealing devices, cartridges, plant pots and waste bins. In this machine range Sumitomo (SHI) Demag has focused its many years of experience in the packaging market and once again

successfully broken into the demanding production of food and technical packaging components market with a rapid production machine. With El-Exis SP the users themselves can enter, without affecting process stability, the range limits for their packaging production. The machine concept thus opens up completely new areas of application for injection moulding which hitherto were reserved for thermoforming as a rapid and economical process. Even thin walled disposable containers can be produced economically with El-Exis SP using the injection moulding process.

Full-Cover-Labeling achieves complete surface cover

The hybrid driven high performance El-Exis SP product range proves at Plastpol 2012 its performance capabilities with a procedural innovation. Together with Marbach moulds & automation GmbH, Bad Urach, Demag Plastics Group SP. z.o.o. have on display on their Stand the production of thin-wall shells with so-called Full-Cover-Labeling.

The special feature of this new 'Inmould-Labeling' process is that the banderol label and the base label can be overlapped around a radius and thus a complete covering of the plastic surface is achieved with the label right up to the sealing edge. In this way, necessary barrier functions can be integrated successfully in the packaging using the label. For complete labelling Marbach has developed a procedure in which a so-called "Full Cover Label Placer“, places in the banderol and the base label are in a single stroke. Previously IML solutions required a fillet on the base of the container so that full surface covering with a label in the injection moulding process was not possible.

Machine, automation and control make the process highly efficient

The new 'Inmould-Labeling' development operates on a fast cycling machine El-Exis SP 200 (2000 kN).fitted with a double IML hot runner mould from Marbach. The compact manufacturing cell produces the 250g shells from PP (shot weight 14.2 g) in a cycle time of ca. 3 s. Also, the Marbach Full Cover Label Placer ensures highly efficient placing of banderols and and base labels in a lifter. The highly precise 'Werkzeugstopp-Position' of El-Exis SP ensures the exact positioning of the labels despite the high production speed.

Also, with this new exhibit the new control unit version NC5 plus brings its advantages to bear: In the context of the function activeEcon, for each individual shot for all machine movements a detailed energy usage analysis and optimisation step in carried out. By means of activeAdjust the machine dynamic across individual adjustable controller characteristics is fully maximised. With the extended active application Werkzeugschutz activeQ+ s, the valuable production mould is not only controlled and monitored on closing but also on opening.

Demag Plastics Group SP. z.o.o.
Plastpol, 29.05. – 01.06.2012
Targi Kielce S.A. – ul. Zakładowa 1 – Hall G – Stand 20

Master Colors Sp. z o.o.
Targi Kielce S.A. – ul. Zakładowa 1 – Hall C – Stand 25

Demag Plastics Group SP. z.o.o.

Through its subsidiary company Demag Plastics Group SP. z.o.o. Sumitomo (SHI) Demag Plastics Machinery has been represented in the Polish injection moulding machine market since 2004. Dipl.-Ing. Tomasz Tybura, General Manager of the Demag Plastics Group SP. z.o.o., as founder and joint owner of Dematech, the former Demag agency, looked after (SHI) Demag machine customers for many years.

The company is located 230 km southwest of Warsaw in Czestochowa, where Demag Plastics Group SP. z.o.o. where it has has facilities for customer training and instruction as well as for machine presentations, tool certification and customer trials.

As well as Tomasz Tybura, a further thirteen Demag Plastics Group staff are employed in Poland. Sales engineers and service staff are situated mainly in the three largest centres of the Polish plastic manufacture in Schlesia, Warsaw/Lodz and Bydgoszcz/Posen.

www.sumitomo-demag.pl

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<Systec100-310>

Machines in the range 350 to 1200 kN with all hydraulic closure on offer by Systec, exbibit for the wide range of standard applications an economical production solution. At Plastpol a 500kN version produces magnifying lenses from PC Makrolon
Photo: Sumitomo (SHI) Demag

<Magnifying lens_Systec50>

This PC Makrolon magnifying lens is produced on a Systec 50-310.
Photo: Sumitomo (SHI) Demag

<El-Exis_SP_200_Marbach>

Hybrid high performance cells around a El-Exis SP 200 with IML automation and IML mould from Marbach for Full-Cover-Labeling
Photo: Sumitomo (SHI) Demag

<3D-Cup_Marbach>

The special feature of this new 'Inmould-Labeling' process is that the banderol label and the base label can be overlapped around a radius and thus a complete covering of the plastic surface is achieved with the label right up to the sealing edge.
Photo: Marbach moulds & automation

<El_Exis_SP_200_Marbach2>

The compact production cell for Full-Cover-Labeling consists of a hybrid high performance machine El-Exis SP 200 (left) as well as a Full Cover Label Placer from Marbach (right)
Photo: Sumitomo (SHI) Demag