Press release
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Sumitomo (SHI) Demag presents Full-Cover-Labelling in its new high performance series

# Hybrid El-Exis SP puts IML innovation in the spotlight

**Sumitomo (SHI) Demag Plastics Machinery GmbH, headquartered in Schwaig near Nuremberg, will be presenting their El-Exis SP (Speed Performance) series, with even more increased high performance than the El-Exis S in terms of dynamics and efficiency, at Fakuma 2011, and with an innovative feature in process technology. Both the considerably improved machine design as well as the new Full-Cover-Labelling feature open up new opportunities for the packaging industry. Fakuma also sees the launch in sales of the new 1,500 kN model, which now rounds off the El-Exis SP series.**

One year after it was launched at the 2010 K show, the new El-Exis SP series is continuing to conquer quick run applications in the packaging sector. The El-Exis SP with hybrid drive impresses all those who use it in the high speed production of thin-walled food packaging, closures for beverages, cartridges, plant pots and buckets. In the new series, Sumitomo (SHI) Demag has brought together its long years of experience in the packaging market and has once again successfully launched a machine which will set the pace for the demanding production of parts for food and technical packaging. The El-Exis SP enables the user to move ahead using stable processes, even in

areas which are at the edge of packaging production. The machine design thus opens up completely new application areas for injection moulding, which were reserved for thermoforming in the past as a quicker and cheaper procedure. Even thin-walled disposable cups can now be manufactured economically using the injection moulding procedure with the El-Exis SP.

**Positional regulation of injection ensures high precision processing**

In addition to optimising the mould movement, increases in performance were also achieved on the injection side with the new Speed Performance model. The injection speed was thus increased by about 30 % to a maximum of 1,000 mm/s. In addition, the supplier has significantly improved the dynamism during the acceleration and deceleration of the injection process: in just 25 ms, the screw of the El-Exis SP accelerates from 0 to an injection speed of 800 mm/s. A positionally regulated servo valve in combination with a high-resolution path measuring system on the injection side ensures precise process execution during this process. "The advantage of positionally regulated injection is that deceleration can be achieved very rapidly despite high processing speeds and thus the change-over point can be reached in a highly precise manner", says Director of Marketing, Bernd Tröger, to emphasise the high precision of the system.

**Series now complete with nine sizes**

Since it was first launched at the 2010 K show, Sumitomo (SHI) Demag has consistently expanded the series. At Fakuma 2011, a 1,500 kN model will complete the series, which now covers the range of clamping forces from 1,500 to 7,500 with nine sizes. A

point which needs to be especially emphasised is that the models from 3,000 kN upwards are all equipped with an expanded opening stroke of the toggle clamping unit as standard. By providing more generous mould installation space, the supplier is especially providing manufacturers of larger containers, such as buckets or cartridges, with greater freedom in choosing a model.

**Full Cover Labelling provides all-over coverage**

The high-performance El-Exis SP series with hybrid drive will be demonstrating its performance at Fakuma 2011 with an innovative feature in process technology. Together with Marbach moulds & automation GmbH based in Bad Urach, Sumitomo (SHI) Demag will be demonstrating the manufacture of thin-walled bowls on its stand, with the feature of full-cover labelling.

A special feature of this new in-mould labelling process is that the banner label and the base label are inserted overlapping around a radius, thereby providing complete coverage of the plastic surface with the label up to a high level on the sealing edge. In this way, barrier functions which may be required can be integrated into the packaging by means of labels. For full labelling, Sumitomo (SHI) Demag's partner organisation, Marbach, has developed a procedure, in which a "Full Cover Label Placer" inserts the banner and base label in one stroke. Previous IML solutions required a partition on the container base, meaning all-over coverage with the label in the injection mould was not possible.

**Machine, automation and controls render the process highly efficient**

The new development in in-mould labelling runs on a high-speed El-Exis SP 200 machine (2,000 kN)

equipped with a double IML hot runner mould from Marbach. The compact production cell manufactures the 250 g bowls from PP (final weight 14.2 g) in a cycle time of approx. 3 s. In this process, the Full Cover Label Placer from Marbach provides highly efficient insertion of the banner and base labels in one stroke. The highly precise mould stop position of the El-Exis SP ensures the exact positioning of the labels despite the high production speed.

The new NC5 plus control version also demonstrate its advantages with this exhibit as well: as part of the activeEcon function, it is possible to produce a detailed energy consumption analysis of all machine movements for each individual shot and for this to be optimised. Through activeAdjust, the machine dynamics are utilised to the fullest over the range of controls, which can be adjusted individually. The extended activeQ+ active mould protection means that the valuable means of production of the mould is monitored, moved and supervised not just when being closed but also opened.

**Sumitomo (SHI) Demag Plastics Machinery GmbH**

Sumitomo (SHI) Demag Plastics Machinery GmbH, Schwaig/Germany, is one of the world's largest manufacturers of injection moulding machines for the processing of plastics. The Japanese-German company was formed in the spring of 2008 by merging the injection moulding activities of Sumitomo Heavy Industries (SHI) and those of Demag Plastics Group.

The global development and production network of Sumitomo Heavy Industries and Sumitomo (SHI) Demag consists of four plants in Japan, Germany and China with more than 3,000 employees. The product

portfolio encompasses all-electric, hydraulic and hybrid injection moulding machines with clamping forces of between 180 and 20,000 kN. With almost 100,000 machines installed, Sumitomo (SHI) Demag is present in all important markets throughout the world.

With more than 4,200 machines sold each year, Sumitomo Heavy Industries counts as Japan's largest manufacturer of injection moulding machines. The main Sumitomo plant in Chiba produces machines with low and medium clamping forces. Around 95 % of all machines supplied by Sumitomo Heavy Industries have an all-electric drive.

The main Demag facility in Schwaig/Germany focuses on the hydraulic Systec and the hybrid high performance, high-speed El-Exis machines. Recognising the increasing importance of electric drive technology for injection moulding machines, Sumitomo (SHI) Demag has expanded the former Demag factory in Wiehe/Germany into an international centre of competence for electric machines. Thanks to the new production capacities, Wiehe now supplies all electric injection moulding machines for the European and American market with its IntElect and SE series and also the hydraulic Systec series with clamping forces of up to 1,200 kN.

Sumitomo (SHI) Demag continues to operate the former Demag plant in Ningbo/China which has been active since 1999. Since 2007 the subsidiary located there, Demag Plastics Machinery (Ningbo) Co., Ltd, had its own, newly built plant and after reaching full capacity, moved to a larger factory with a production area of 11,000 sqm. Injection moulding machines from

the Dragon and Systec C product lines with clamping forces of between 500 and 8,000 kN are produced here for Asian markets.

In addition to injection moulding machines, Sumitomo (SHI) Demag offers customised and standardised systems for the automated handling of moulded parts, technical solutions for special applications in process engineering, tailor-made service concepts and various forms of financing for investments in injection moulding machines.

With its seamless sales and service network of subsidiaries and representations, Sumitomo (SHI) Demag is present in all major industrial markets.

www.sumitomo-shi-demag.eu

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*<El-Exis_SP_200_Marbach>*

*Hybrid high-performance cell built around an El-Exis SP 200 with IML automation and IML mould from Marbach for full-cover labelling.*
*Photo: Sumitomo (SHI) Demag*

*<3D-Becher_Marbach>*


*Full-cover labelling is the name if the new in-mould labelling process from Marbach. For this process, the banner label and the base label are inserted overlapping around a radius, thereby providing complete coverage of the plastic surface with the label up to a high level on the sealing edge.*
*Photo: Marbach moulds & automation*

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