Press release
19 October 2011

Sumitomo (SHI) Demag demonstrates effective standard injection moulding and focuses on optical applications

Systec Trio demonstrates the all-round capabilities of the hydraulic series

Sumitomo (SHI) Demag Plastics Machinery GmbH, headquartered in Schwaig near Nuremberg, offers the ideal economical solution for the broad range of standard applications in injection moulding processing with its Systec series. The fully controlled, hydraulic multifunction series was expanded just recently with the addition of a 20,000 kN version. The injection moulding sector now has an even wider range of machinery to choose from to provide efficient production processes, with 19 sizes with clamping forces from 350 to 20,000 kN being available. Three Systec exhibits at the 2011 Fakuma will be demonstrating this machine manufacturer's know-how in hydraulic injection moulding machines.

Hydraulically powered injection moulding machines continue to represent a large market. Sumitomo (SHI) Demag offers its Systec multifunction machine with 350 to 1,200 kN clamping force with a fully hydraulic clamping unit and with 1,300 up to 20,000 kN with a toggle clamping unit. "Our hydraulic machines are distinguished by a high level of production efficiency and also by a good price/performance ratio",

emphasises Bernd Tröger, Director of Marketing who goes on to say: "We have integrated numerous components from our production efficiency catalogue into the Systec series, which ensures extremely economical production for our customers." The activeCool&Clean cooling and filtering system guarantees optimum oil quality and long-term high oil levels. The sensitive activeQ+ mould protection function has been extended to cover the controlled opening of the mould and is accessible to users via the new NC5 plus controller. With built-in energy measurement, activeEcon is also available as an optional extra for use as an instrument for measuring efficiency to optimise energy consumption. Cylinder insulation sleeves reduce energy consumption and shorten cylinder warm-up periods. Last, but not least, with the 1,300 kN and greater toggle version, a fully electric dosing drive can also be used. Optional, additional injection units from the product modular system can be adapted to enable the machine to be equipped as a Systec multi for multi-component technology.

Systec 50-120 will be manufacturing light guides

A fully hydraulic Systec 50-120 (500 kN) will be manufacturing light guides made of polycarbonate (PC) at the Sumitomo (SHI) Demag exhibition stand. With the two-fold cold runner mould from Hanau-based emz GmbH & Co. KGaA, Nabburg, the light guides, which are used in the white goods sector, are produced within a cycle time of 37 s. Sumitomo (SHI) Demag's customer, emz, develops and produces electromechanical and electronic components, modules and complete devices as solutions to specific application problems.

Trend topic: Injection moulding of optical components

"Optical injection moulded components are becoming increasingly important. One main area, for example, covers ambient lighting in cars - the key words being “designed for night use”. We will be throwing some light on this group of topics in our own information area and will also be providing information specifically about fibre optic technology together with experienced partner companies, such as HBW Gubesch, in addition to our machine exhibits ", explains Bernd Tröger.

Sumitomo (SHI) Demag’s customer, HBW-Gubesch Kunststoff-Engineering GmbH, based in Emskirchen and Wilhelmsdorf, are regarded as specialists in the field of lighting engineering. The company's expertise lies in the design, development and production of plastic parts and modules for automobiles and consumer electronics, technical parts for other consumer goods, light guides, in the manufacture of stationery and plotting instruments, as well as plastics for use in medical engineering.

Sumitomo (SHI) Demag demonstrated the IMD Multi K Procedure, developed by HBW-Gubesch and consisting of a 2K implementation technology in conjunction with film decoration technology, at the K 2010 show. The combination of transparent and non-transparent materials allows for partial screening of the parts produced by means of IMD Multi K.

Systec multi 160 will be manufacturing two-component light guides

At Fakuma 2011, a Systec multi 160/520-310h/80v (1,600 kN) with a double turntable mould from HBW-Gubesch will be producing a light, 4.2 g light guide made from transparent PC, which is used for

illuminating the gearshift pattern of a selector lever used in a passenger car. The first component, a transparent PC, forms the basic structure of the light guide with a material composition of 3.8 g per part. The second material component, a green-coloured transparent PC, is moulded on at various points with a total of 0.4 g in order to give the emerging light the required colour. The cycle time is 28 s. The precision parts are removed by a robot intervening laterally. The robotic controls are built directly into the NC5 machine controls. This allows programming to be undertaken from one central location as well as the saving of data and the mould programme.

The light guide, with its three-dimensional, complex shape, contains various coupling and uncoupling places for the light. In this process, prisms built in during the construction process provide for the guiding of light within the part and the exiting of the light at defined places, as well as at a defined level of quality. High quality preparation of the melt and a high level of precision in filling the cavities are vital in this application. A CrN multilayer coating of the screw reduces PC adherence and guarantees a flawless melt homogeneity.

Systec multi on the Sepro Robotique GmbH stand (Hall A1, Stand 1203)

Another multi-component Systec multi machine will be working at the stand of our partner company, Sepro Robotique GmbH, based in Rödermark. The Systec multi 210-430h/80r (2,100 kN), with its second injection unit in a piggyback configuration, will be producing ashtray trims from a PC/ABS blend by injection moulding using a 1+1-cavitiy mould from HBW-Gubesch in a cycle time of 42 s. Overmoulding the

reverse side with a transparent ABS means additional functions can be built in as well.
The visible part sets the highest demands of surface quality. Handling of the parts is undertaken here by an S5-25 linear robot of the S5 series from Sepro.

Systec 130 with S-FIT technology at the stand of CeraCon GmbH (Hall A1, Stand 1422)

Within the framework of a complex production cell at the stand of CeraCon GmbH, based in Weikersheim, a Systec 130-600 will be manufacturing a door stopper made of PP using the S-FIT procedure. In a single cycle, the part will be manufactured and provided with a sealing lip made of 1-component PUR foam.

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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<Systec100-310>

The Systec machines, available from 350 to 1,200 kN with fully hydraulic clamping units, provide an economical solution for production, covering a broad range of standard applications. A 500 kN version will be producing light guides from polycarbonate at Fakuma.
Photo: Sumitomo (SHI) Demag

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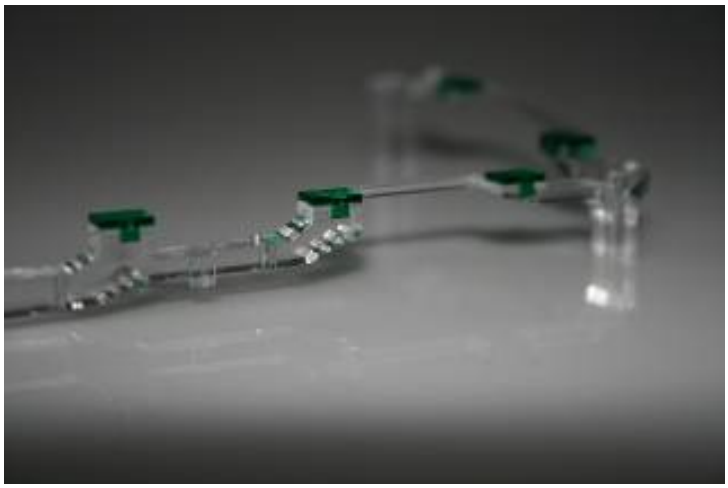
This light guide made of PC is used in the white goods sector. The stem acts as a lens, which projects a point of light.
Photo: Sumitomo (SHI) Demag

<Lichtleiter_Systec_multi160>



Prisms built in during the construction process provide light guidance in the part and the defined exit of the light at the injection positions of the green material component in this 2K light guide made of transparent PC.
Photo: Sumitomo (SHI) Demag

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Two multi-component Systec multi injection moulding machines can be seen at Fakuma 2011: a 1,600 kN version will be producing light guides at our own stand; a 2,100 kN version (as shown in the picture) will be manufacturing ashtray trims at the Sepro stand.
Photo: Sumitomo (SHI) Demag

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These ashtray trims will be produced from a PC/ABS blend using a 1+1-cavity mould from HBW-Gubesch. Overmoulding the reverse side with a transparent ABS means additional functions can be built in as well.
Photo: Sumitomo (SHI) Demag

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In the S-FIT procedure, these door stops will be manufactured on a Systec multi 130 at the CeraCon stand in one operating cycle
Photo: Sumitomo (SHI) Demag