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Pearlo Underwater pelletizer

PIOVAN NEW PRODUCTS TOWARDS INDUSTRY 4.0

In the near future, the manufacturing processes will be increasingly integrated and the industry will embrace a smart factory approach. Aiming to deliver innovative solutions that will help the plastics processors to achieve progress on this challenging path, Piovan shows relevant new products at this year Fakuma.

At the booth (hall A7, booth 7201), the first keynote exhibit is Easytherm, the new line of temperature controllers for digital factories of Industry 4.0. A new internal and external layout, the redesigned ergonomic control, coupled with the use of high-end components, characterise a versatile machine that guarantees reliability, accuracy and an intelligent management of consumption. It is already set up for use in "Industry 4.0" environments with open standards, such as the integrated OPC-UA protocol.

Another important innovation on display is Winenergy, the system for monitoring and analysing energy consumption consisting of proprietary software, connected to a series of measuring instruments capable of detecting data related to different physical quantities, such as power, electricity, thermal energy, temperature. Winenergy can be installed individually or together with Winfactory 4.0 in order to maximize the system control and efficiency.

Quantum dosing gravimetric blender in a special configuration, Modula drying system and Easylink automatic coupling station offers visitors a comprehensive overview of modern and advanced machinery to process plastics in ever more efficient fashion, with no material waste.

NEW UNDERWATER PELLETIZING SYSTEM

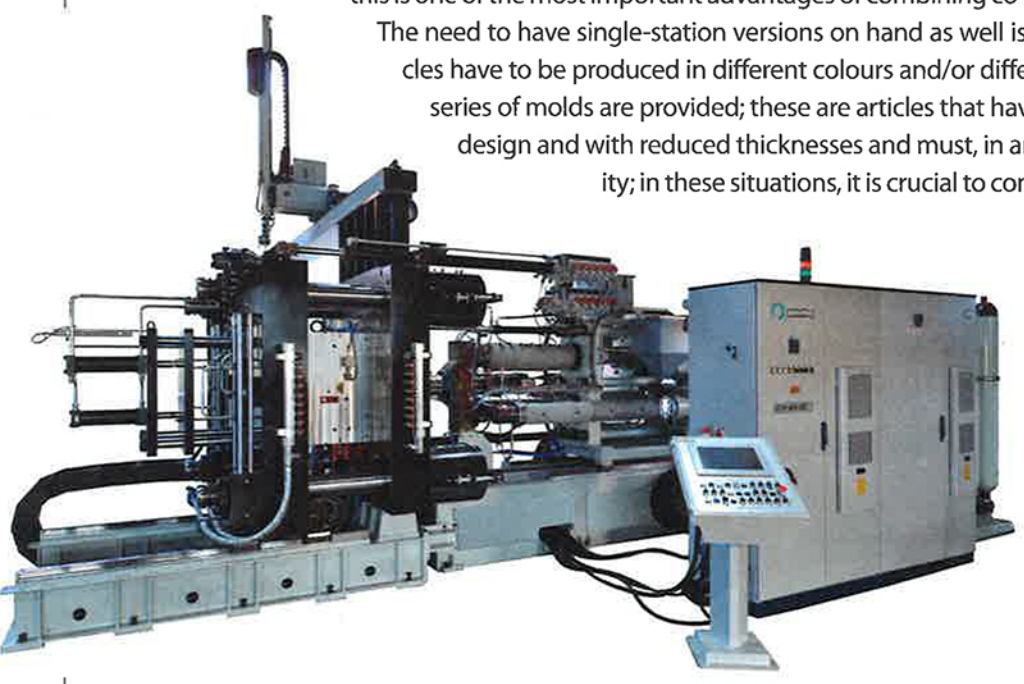
At the Fakuma, the highlight of the Maag booth is the new Pearlo® Underwater Pelletizer. Designed to process spherical pellets for raw materials, compounds, masterbatches, engineering plastics, wood and nature filler-filled polymer composites, thermoplastics elastomers, hot-melt adhesives and gum bases at capacities that can reach 36,000 kg an hour.

Other Maag products on display at the exhibition are:

- the new x6 class Gear Pump offers improved volumetric efficiency and pressure capabilities that allow it to be operated at reduced rpms, shear rates and temperatures, resulting in reduced residence time and energy consumption with improved production rates, polymer quality and pump life cycle.
- CSC Series Screen Changers feature a double-piston design that allows tailor-made adjustment of the filtration unit per the user's specific process requirements while allowing the use of five different filter-cavity shapes within the same screen-changer housing: circular, oval, arched, leaf-disc and candle.
- successfully applied by hundreds of customers, the proven WSG dry-cut strand pelletizing system with Primo E pelletizers produces the highest quality of cylindrical pellets or microgranular compounds particularly suitable for further processing. Variable system configurations allow for optimal matching with your specific production requirements and also provide the utmost flexibility in terms of product changeover.
- the mill stand of a REX basicPLUS pulverizer, consisting of a mill chamber with patented disposable disc, drive, feeder and control, demonstrates the advantages of Maags pulverizing systems that are available for multiple materials and throughput ranges.

CO-INJECTION FOR THICK ITEMS

Presma recently delivered an injection molding machine with a clamping force of 1,600 tons, capable of co-injecting a total shot weight of 20 kg (sandwich structure). Destined for the Italian market, this machine is equipped with an automatic molding cell and can optimize the production of large items in bi-component (solid/foam) material that is already carried out using Presma machines, but of the "rotary, multi-station" type. This is the first example of a medium-sized single-station machine equipped with the special "BIC" injection unit that, ever since it was patented in 1981, has been offered by this Varese-based company for the molding of articles with high thicknesses. In the first week of September a second single-station machine, also for co-injection molding, was delivered to the same customer. This is a 400-ton machine with an injection capacity of 7,800 cm3 and it will be used for molding items with low thicknesses that do not need long cooling times. Co-injection, or two-component, molding is the technology that allows the simultaneous injection, through the same nozzle, of two materials: a solid one and one also containing chemical foaming agents. This technique makes it possible to obtain high-thickness articles that have a "skin" in solid material and an interior in expanded material, thereby eliminating the problem of deformations, cracks, areas of shrinkage, and many of the problems typical of high-density articles molded in the conventional way. Co-injection is a justified choice for articles thicker than 5 mm that need a smooth and shiny surface. Considering that the exterior demands a high-quality material, while an inferior quality or recycled material can suffice as a filler, it is clear that there are considerable savings to be made. Further savings can be made from the colorant, which is needed only for the external material. The costs generated by the long molding cycles needed for products of a certain thickness can be broken down intelligently if one exploits the possibility of working on multiple molds and varying the model of the product; this is one of the most important advantages of combining co-injection with a multistation system. The need to have single-station versions on hand as well is dictated by the fact that some articles have to be produced in different colours and/or different materials, and in such cases no series of molds are provided; these are articles that have to be made according to a special design and with reduced thicknesses and must, in any case, guarantee structural elasticity; in these situations, it is crucial to combine a solid material for the surface of the article with a foam one for the core, and in this way you also retain excellent aesthetics and advantages in terms of the appeal of the product and its costs.



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MOLDS FOR CAPS AND CLOSURES TO MEET EVERY NEED

Established at the start of the 1980s, Giurgola Stampi is active in the design and manufacture of injection molds for the large-scale production of caps, covers, dispensers and threaded closures. For over 20 years it has been prominent in the field of unscrewing molds and molds for flip-top caps, in which it has become highly specialised. Sensitive to the demands of an ever-changing market, the company offers maximum technical and production flexibility, its aim being to develop competitive solutions that can guarantee rapid and cost-optimised production cycles. It provides all-round technical support, from analysis of the item to be produced through to the production optimisation stage. Reliability and quality are two other important objectives, which it pursues through its involvement of all those with a role in the production process, but also through detailed production planning, staff training and the use of state-of-the art equipment. Testing is a fundamental part of the production process, therefore Giurgola Stampi has set up its own laboratory equipped with last-generation injection molding machines and efficient auxiliary equipment where it can test molds at maximum productivity levels.

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