

## Press Release 25/2008

### BOY - Progress and continuity at the Fakuma Focus on sprueless injection moulding

Precise control - economical production - this is BOY's slogan for this year's Fakuma exhibition (October 14 to 18) in Friedrichshafen, Germany.

BOY will present the latest state-of-the-art control technology with its new, patented Procan ALPHA<sup>®</sup> control in Hall A1.

It did not take much time from its market introduction before this control set standards with regard to ease of operation, speed, and amount of information available. The functional security of the software and the reliability of the hardware components are exemplary.

During the Fakuma, the control will impressively demonstrate several ways in which data can be transferred to CPUs or mobile phones.

Another focal point of the BOY presentation, besides the Procan ALPHA<sup>®</sup> control, will be the topic of economic production.

From the beginning, the compact BOY injection moulding machines featured very low machine hour rates, largely attributed to extremely favourable energy consumption values.

"During the company's forty year history, very low energy consumption has always been one of our main objectives, so the recent, drastic increase in energy costs was not what made us declare this topic one of our biggest concerns", says Carl Schiffer, Managing Partner at BOY.

In the year of their anniversary, BOY once more put special emphasis on sprueless injection moulding. Since the company was founded, this concept was of great significance. All four machines in the exhibition booth will be equipped with interesting solutions related to this technology.

Sprueless injection moulding eliminates extensive processes like the refinishing of moulded parts, and the regrinding and recycling of a sprue. One aspect of sprueless injection moulding that is often ignored or underrated is energy savings.

Sometimes sprues have a higher weight than the moulded parts, which means that the energy required for a cycle has to be prorated accordingly. In a sprueless process, the energy consumed is reduced correspondingly. Furthermore, energy is required to handle and grind the sprues.

The most energy-saving sprueless solution is the hydraulically actuated needle shut-off nozzle, a technology, which BOY introduced in 1968. "It is quite surprising that to this day, sprues are still so widely used. The potential for sprueless applications is by no means exhausted", says Bernd Fischer, Director Process Engineering and Service at BOY.

BOY offers special nozzles including sprueless injection into the mould parting line.

Regarding energy savings, using expensive hot runner technology is the second best economic solution. As a rule, the electricity needed for the hot runners is only a fraction of what is required to melt and inject sprues.

At the Fakuma, the sprueless production of baby bottle nipples made from LSR will be demonstrated on a BOY 22 A. The six nipples will be produced in a cycle time of approx. 20 seconds and will not require any retouching. A cold runner, sprueless nozzle from Emde will be used. The BOY 22 A has a clamping force of 220 kN and a maximum shot volume of 64 cm<sup>3</sup>. With a footprint of only 1.85 m<sup>2</sup>, it is the most compact machine in its tonnage range.

On the BOY 22 A-VV insert moulding machine, a soft edge made of TPE will be over-moulded spruelessly on an ABS ice scraper base. For this, an open hot runner nozzle will be used. A Scara robot will insert the bases into the mould cavities. The total cycle time will be 20 seconds.

The BOY insert moulding machines are ideally suited for automation systems and continuous production, as the clamping units are easily accessible.

A BOY 55 A (550 kN clamping force) with a hot runner mould will give an impressive demonstration of the sprueless production of six measuring cups with internal threads.

Frisbees will be manufactured without sprues on a BOY 90 M. The process includes a hydraulically actuated, sprueless nozzle (BC) especially developed by BOY.

The frisbee, with a wall thickness of 0.9 mm and a projected surface of close to 400 cm<sup>2</sup>, will be produced in 18 seconds. The largest in BOY's range of machines, the BOY 90 features 900 kN clamping force and a maximum shot volume of 280.5 cm<sup>3</sup>. As with all BOY injection moulding machines, it is extremely compact.

Another four BOY injection moulding machines with interesting applications will be presented in the booths of associated companies. "Given the impressive demonstration of eight machines, we are optimistic about this year's Fakuma", says Klaus Geimer, Director of Sales and Marketing.



Photos:> Plasticizing cylinder with BC nozzle