

Moulding the Future

Edition **14**

The Latest News and Information



MAGNETIC ATTRACTION

We have another new customer, this time from the fire-safety market. For the last six months Fireco – part of the Lagercranz Group – has been collaborating with our team on a new fire-compliant magnetic door device for healthcare, residential, education, leisure hospitality and industrial facilities.

DorMag Pro is designed to hold fire doors open to improve access and building ventilation, yet close automatically when a fire or intruder alarm is activated. It is located behind the door rather than in front. The concept has



moved from 3D printed prototypes to a milled CNC tool, to the design and manufacturing of seven component tools. Driven forward with the assistance of our engineering and processing experts Kamil Stec and Thomas Catinat.

Fireco's Supply Chain & Production Manager Mark Challacombe initiated the introduction, confident that we shared the right ethos, responsiveness and expertise. *"Knowing that the unit needed to be plastically moulded, we commenced a comprehensive supplier review. Broanmain came out on top of our supplier matrix. They ticked every box,"* affirms Mark.

"The team proved themselves straight away, refining the design and sharing their processing knowledge. Broanmain is a good fit, in that they provide all this tool making expertise, deliver a personalised service, yet also have the manufacturing capacity to scale up production to meet our market demands," expands Fireco Engineer Matt Ball.

Part of the premium design is a metallic-looking silver band wrapping around the device's wall-mounted housing. However, as a radio-activated device, this strip needed to be in a non-metallic material. To meet these design aspirations we pulled in the expertise of decorative partner, Applied Coating Technologies.

All of the unit's seven components are moulded on two-cavity mould tools using a standard ABS material. The lid and base is the only component modified to ABS PC to withstand the BS EN 1155 durability test cycles and the impact of the fire door being smacked back into the unit.

As well as mass-moulding the seven components, Broanmain is undertaking some of the specialist finishing tasks, including heat staking a metal clip onto the battery carrier and overseeing the paint finish. Fireco will assemble all the internal components, including fitting magnets and the PCBs in-house. Every element is moulded with absolute precision to meet the tight tolerances.

MATT FORD'S APPRENTICESHIP JOURNEY

Recent research by the NMITE and the EPC reveals that two-thirds (63%) of respondents feel that engineering should be made more visible in schools. Broanmain continues to share its long-held passion for raising the profile of opportunities to school leavers.



Matt Ford, junior tool maker at Broanmain, is testament to this. Matt has spent nearly four years under the supervision of Engineering Manager Kamil Stec. He is now flying solo on projects, having completed his BTEC Level 3 Apprenticeship in Engineering & Manufacturing. Matt shares his youthful life lessons on each phase of his journey:

Finding the right apprenticeship: After A levels I was working part time in a local restaurant while I explored my options. I wanted a practical training programme. Initially I was looking for an electrician apprenticeship. Then this opening for a tooling apprentice popped up. In hindsight, this was the better option. Especially given the Covid disruptions. As an essential business, my practical training continued uninterrupted.

Practical versus classroom learning: An apprenticeship provides both. For three years I worked four days a week at Broanmain and attended day release at East Surrey College. The program was perfect. It allowed me to gain lots of hands on experience outside of a traditional classroom setting.

Growth and confidence: Reflecting on the person I have become since joining Broanmain, I have definitely become more independent and confident in my skills. Much of this is down to Kamil, his mentoring and taking on more responsibilities. Having been through the apprenticeship route himself, Kamil has been an excellent role model. The fast-paced environment has enabled me to support on a variety of exciting tooling projects, most recently Cucumber Lighting Sensors and Avery Burkell, as well as long-standing customers like Specac and Trend Control Systems.

Unlocking opportunities: I might never have connected the pathways that manufacturing offers without this experience. I would absolutely recommend people

explore opportunities in this sector. The variety of projects, customers and markets we support is so wide-ranging, so you aren't really confined to one industry. I have gained a much more expansive understanding of engineering and the machinery, compared to working in just one sector. This accumulative knowledge is also useful for understanding the design process.

Accepting responsibilities: As a junior tool maker, my duties are extremely varied. And not just confined to the toolroom workshop. I do a lot of the inspections on the moulding machine fleet, greasing and inspecting tools, preventative cleaning and performing minor tooling repairs. I also get very involved in checking tools in and out of storage and inspecting new tools when they arrive from shipping. Problem solving is the aspect I enjoy most. Especially troubleshooting issues with tools and fixing things swiftly so production can resume.

Future goals: I want to continue to nurture my skills and build my practical tool making knowledge. Although there are many modern engineering techniques and machines – we have a workshop full of them – there are also a number of things that AI and automation just cannot replicate to the same standard. Even when using machinery, you still need mechanical engineering knowledge to select the right settings.

ROUNDTABLE READY



Managing Director **Jo Davis** has been elected as the new Chair of the British Plastics Federation (BPF) Education & Skills Committee.



All too familiar with the skills shortages that are being experienced across the manufacturing industry, Jo hopes to be able to examine and guide the future skills strategy. The BPF's ultimate ambition is to stimulate economic growth and attract a new contingent of talent for UK polymer processors of all sizes.

The first BPF roundtable discussion took place in September. Do follow Jo on LinkedIn for any updates. If you would like to input into future conversations to help address the widening skills gap, message Jo direct. See contact details on the back page.

IN THE NEWS

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WIRED FOR PRECISION

To achieve the most precise corner and interlocking profiles in hardened materials, we recently invested in a valuable Wire Erosion Machine.

Designed to achieve the finest finish and precision in complex metal geometries, the Sodick A325 is regularly being used by our engineering team to support customers with precision parts. Including tooling prototype projects and customisations.

In one of the most recent projects, the machine was used to create a mechanical flexure device to hold a batch of sleeve pins (pictured) with high degree of concentricity.

Broanmain's tool room is now equipped with more than 15 tooling machines, including CNC mills, a ZNC spark eroder, lathes and a profile projector.

"CNC milling gives us speed, while the EDM process excels at making fine cuts, very narrow grooves, precision bores, and complex shapes with tight tolerances. It's especially good for achieving very sharp corners. We can now create tool design features such as lifters, side actions and inserts more promptly and at a lower cost to our customers," explains Engineering Manager Kamil Stec.

MEET OUR MATERIALS GIRL

In May, Production Manager **Monika Siakala** attended the **Sumitomo (SHI) Demag IOM3 (Institute of Materials, Minerals & Mining)** accredited Training Academy. As part of her professional development, she completed the 2-day Polymer Materials Appreciation (PMapp) course – one of the 'new specials' being offered at the Daventry facility.



"This course has really elevated my confidence and understanding of the mechanical properties of materials and how different polymers behave when they are melted," comments Monika.

27 TOOLS LATER...

Commercial weighing scales specialist Avery Berkel has entrusted Broanmain with a mammoth project. After modifying 27 tools for their retail scales, we have been busy all summer moulding and assembling all of the components in batches of 500+ for delivery to supermarkets nationwide. Naturally there were a few learning curves. And another machinery investment to weld the display acrylic window into place.

Managing Director Jo Davis comments: "As always, our team and a production line of assembly and finishing specialists pulled out all the stops. We may be small, but this makes us very adaptable and driven. Another benefit of working with a domestic SME manufacturer."



OUR PROFESSIONALS

In order to ensure your Broanmain enquires are answered efficiently, please update your contact records:



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Broanmain now operates from one site. We have moved our 500 and 250 ton machines to Dorking and invested in a new storage facility to hold stock. Giving us more space to increase our production capacity and meet your manufacturing and Kanban needs.



Chairman
Wilf Davis

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