

Moulding the Future

Edition **10**

The Latest News and Information



Maintaining polymer supply continuity

Already, 2021 has seen operating conditions never experienced before. Although all businesses were expecting some turbulence at the end of the Brexit transition period, the added complexity of materials shortages has resulted in an industry hiatus.

Factors affecting supply are varied. Polymer producers usually streamline inventories at the end of the calendar year. However, this year with no surplus material, prices increased rather than savings being made available. The demand for polymer materials remains strong – it's an unknown whether this will be long term. However, it does currently impact material availability for the foreseeable future. Weather events in the U.S. have had an impact, along with production issues in Europe, ongoing transportation issues and shortages in additive ingredients.

For materials pricing, this has created the perfect storm. Broanmain customers can be assured that we will continue to minimise the impact. We have not failed on deliveries as a result of shortages. Only the most material heavy components have required a short-term pricing surcharge, agreed up front with customers that this applies to. Internally, as part of our ongoing sustainability efforts, our production teams are playing their part and doing everything to eliminate waste and moulding defects. Industry voices have cautioned that this instability may well stretch out until at least Q3 2021, possibly even further.

We will continue to keep you updated with pricing developments and remain engaged with all stakeholders to ensure continuity of supply.



Broanmain has strong working relationships with its suppliers. This has enabled us to stay proactive and reactive, maintaining an uninterrupted supply chain. Coronavirus has naturally impacted the global supply of materials. It is not just Western Europe that is affected on this occasion and polymer pricing has been hit hard.

Revolutionising Liquid Lab Testing



Creating a unique puck and slide concept that prevents cross contamination of food & drink, microbiological, chemical and forensic liquid laboratory samples, Broanmain Plastics once again assisted Specac Ltd. This time with the development and launch of a revolutionary new ATR (Attenuated Total Reflection) concept.

Specac's original idea was to create a disposable puck for high volume hazardous applications. However, through collaborations with Broanmain the idea progressed to the development of an aluminum holding puck and disposable recyclable silicon ATR slides. The use of less material makes the product less wasteful.

From the start Broanmain's tooling and production professionals - Kamil Stec and Thomas Catinat - inputted into the full development of the consumable puck and slide innovation. The unique Arrow™ concept comprises a puck and silicon wafer ATR consumable polypropylene slides featuring overmoulded lids, allowing lab scientists to batch test, save and cross-compare chemical changes in samples over a period of time.

Major scientific breakthrough

Removing the need to clean the spectrometry puck between each individual lab sample has been hailed by Specac and industry experts as a major scientific breakthrough, as it safeguards against sample cross contamination as well as speeding up lab analysis.

From the first meeting, Broanmain experts presented suggestions for tooling and material mouldability were. Within a week Broanmain had commissioned a specialist to build the prototype Arrow™ aluminium tooling for the slide with a built-in silicon wafer ATR crystal. Design precision was critical as the slide required a liquid tight seal between the well and ATR element whilst also aligning the optical components accurately.

The Broanmain team also pooled their expertise in overmoulding and material selection for the development of the innovative disposable Arrow™ slide, opting for an acid resistant 100% recyclable polypropylene combined with elastomer.

The result was a single component, cleverly constructed to reduce part count and manufacturing complexity.

Specac's Strategic Buyer Anthony Gomme comments: *"It's always our experience that collaboration with a production partner like Broanmain at the earliest stage results in the best product development and speeds up time to market."*

Launched in 2020, Broanmain has now scaled up into full production of the Arrow™ puck and slides at its Dorking facility. Operations Manager Thomas Catinat comments: *"It's always exciting to be involved in such a revolutionary market development that has the potential to reshape how scientific communities will perform sample analysis in the future. As these processes become increasingly automated, innovations like the Arrow ATR will yield more accurate and reproducible results."*



In 2019, Specac named Broanmain their New Supplier of the Year.

Broanmain developed the tooling and supported Specac in trialling the concept, right through to full development and production of the Arrow ATR puck and consumable slides

IN THE NEWS...

JANUARY

COMPRESSION V INJECTION MOULDING

Delighted to be featured in BP&R magazine, explaining why these longstanding moulding techniques each offer unique advantages.



<https://bit.ly/3ddJmK7>

FEBRUARY

TOOL LIFE EXTENSION TIPS

Want to know how your tool can live its best life? Check out Process and Control Magazine who share our Operation Manager's advice on how to extend the life of precision mould tools.



<https://bit.ly/3tiZj7A>

Investing More In Tooling Capabilities



In an effort to enhance the quality of components manufactured on-site and meet customers' budget and real-time delivery requirements, the Broanmain tool shop continues to invest in precision machinery to support new projects, test customer prototypes and take on high quality, repeat technical mouldings. New technology recently added include a precision CMM machine, a profile projector for advanced quality control and a lathe to turn components.

Rather than using hand measuring instruments, adding a new coordinate measuring machine (CMM) advances the accuracy and speed by which the team can evaluate critical dimensional data, including the geometry and tolerances of parts. Kamil explains: *"We are now able to measure features previously impossible or too time consuming, for example profile tolerances, arc lengths and true positions. The quality control team also uses this machine regularly when preparing First Article Inspection Reports. Once set up, the CMM measures multiple parts in quick succession."*

Also speeding up the quality control process at Broanmain is a new Baty bench mounted R14 profile projector. Used most days, the projector verifies that there are no faults or weak spots in the output, and that the quality of the mouldings is constant in any run size. An optical measurement tool, with a large 175mm x 100mm measuring range, software quickly gathers data from the profile of the part and undertakes thorough inspection. This process can reveal the most minuscule of faults. Tool room manager Kamil Stec comments: *"For some, quality is safety-critical, for others its requirement*



Quality checking a new batch of moulded components using the Baty Profile Projector

may be more aesthetic. Yet, most moulded components require consistency which our profile projector accurately checks."

The addition of a new CNC Lathe to create complex profiles and contours on tools and other workpieces completes the toolroom's suite of equipment.

"These latest pieces of equipment enable us to perform pretty much any tooling or engineering project on site. This is much more convenient for customers, keeps projects on track and enhances quality control from start to finish," adds Kamil.

See our full toolroom profile and a video tour of the workshop at



www.gtma.co.uk/suppliers/broanmain-plastics

IN THE NEWS...

MARCH

FLYING THE FLAG FOR BRITISH ENGINEERING

Check out how our team collaborated on tool design and delivery to manufacture a single cavity slide action tool with a hot tip as part of a utility filter component in house for a leading UK OEM.



<https://bit.ly/2QffIR7>



APRIL

TAKE ADVANTAGE OF TOOLING TAX BREAKS

Thanks to Budget 2021, Broanmain customers

investing in new tooling projects will be able to deduct up to 130% - previously set at 18% - from your overall taxable income. New investments must be made between 1 April 2021 and 31 March 2023. Check out the gov website for more details.



Exciting Times Ahead

Broanmain continues to expand, taking on new customers, moulding and tooling projects. To help support us, we've been on a bit of a recruitment drive and have some new highly skilled people within our teams. Meet our newest appointments and what they bring to the Broanmain table.



Sanka Ranasinghe is our new Quality Engineer. Supported with a MSc in Polymer Technology, a BSc in Materials Science & Engineering along with an MBA, Sanka is a qualified and experienced Quality professional. A certified Lead Auditor Sanka is competent working with a range of quality standards including ISO 9001, ISO 14001 & ISO 134585, and is also qualified to a Green Belt Six Sigma level. Having studied an MSc in Polymer Technology, Sanka has knowledge of injection moulding and extrusion processes and therefore is a valuable addition to the team.



Nick Ellis came on board as Broanmain's Faygate Shop Floor Manager. With an extensive experience of shop floor management, all gained within plastic injection moulding, Nick has a plethora of knowledge and expertise. He has experience efficiently managing 36 injection moulding machines ranging from 60 tons to 1400 tons, along with robotics and managing over 125 staff.



Aftermoulding, Stock and Despatch Supervisor, **Alan Duffin** has a wealth of plastic manufacturing experience where he excelled in operations, people and quality management. With proven experience of increasing production efficiency, managing the purchase of raw materials, monitoring stock levels and working to a KANBAN system, Alan has strong skills to support Manager of the department Monika Siakala.

SOUTHERN MANUFACTURING UPDATE

The 2021 show will now be a pared down event in October 2021. However, Broanmain will be back at the main event next year, 8 – 10 February 2022. Need to see us before then? Feel free to book a visit to check out our great facilities and technologies in Dorking and Faygate.



MAKE SPACE FOR SPRUCE

Broanmain recently planted 500 Christmas Trees in the field adjacent to our Dorking HQ. Although tiddlers right now, in several years we will share a fully grown spruce with our workforce, customers and suppliers. Watch them grow. Follow Jo Davis on LinkedIn for regular updates.

Directing your enquires to the right expert

In order to ensure your enquiries to Broanmain are answered most efficiently, please can you update your contact records:



Despatch and delivery enquiries should be directed to **monikasiakala@broanmain.co.uk**



Tina will help with all accounts questions **accounts@broanmain.co.uk**



Operations Manager Thomas deals with new Enquiries, Production and Engineering matters **thomascatinat@broanmain.co.uk**



Please communicate quality concerns to **sankaranasinghe@broanmain.co.uk**



Ben coordinates purchase orders and Kanban call offs via the orders team **orders@broanmain.co.uk**



Eve handles all staff matters and co-ordinates the Health and Safety committee **eveclennell@broanmain.co.uk**



Kamil Stec manages tooling work and precision manufacturing **kamilstec@broanmain.co.uk**



Managing Director Jo Davis has responsibility for the day to day running of the business **jodavis@broanmain.co.uk**



Wilf Davis is Chairman **wilfdavis@broanmain.co.uk**