

POWDERS AND CASTINGS

WALL COLMONOY

delivering the very best
in quality, value and service



Wall Colmonoy Limited (UK) and Franklin Bronze Precision Components (FBPC) working together to provide the very best in quality, value, and service

With Glasstec being a regular focus for Wall Colmonoy Limited (UK) and Franklin Bronze Precision Components – Glass Machinery Plants & Accessories spoke to two of their key people, Steph Curtis, Managing Director of Wall Colmonoy Limited (UK), and John Nichols, General Manager of FBPC, to get their views on the show, as well as to gain first-hand information on how they are working with the market and making their businesses stand out.

Glass Machinery Plants & Accessories (GMP&A):
Tell us about your background.

John Nichols – FBPC: I worked for over 30 years in industrial castings, from leadership roles in general management, sales, operations and technical engineering. My focus is to develop and grow the FBPC business with a strong emphasis on continuous improvement, quality, innovation and customer service.

Franklin Bronze is heavily involved in the glass container industry and has been for over 30 years. We make precision investment castings. I am excited to be here at Glasstec to meet our customers. This is the glass event you must attend and where in one place I am able meet with customers and discuss current business and future opportunities. Even now, and it's just the second day, I can say that the show has been extremely beneficial for Franklin Bronze and I'm glad I came. There's a lot of learning involved here – you get



Colmonoy® Powders for Glass Container Industry



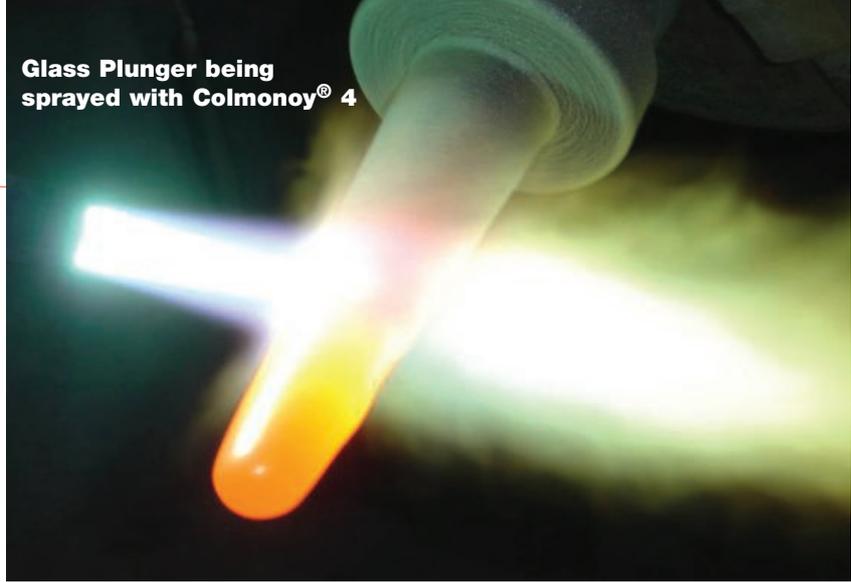
John Nichols, General Manager, Franklin Bronze Precision Components and Steph Curtis, Managing Director, Wall Colmonoy Limited

a lot of information over a three-day period, all in one place.

Steph Curtis – Wall Colmonoy: I joined Wall Colmonoy in 2014. Before that I worked for 30 years in several different industry sectors for major international PLC's and SME's. My experience taught me a lot about strategic business improvement, which we are applying at Wall Colmonoy. At Wall Colmonoy, we are focused on continuous improvement and profitable growth - health, safety and welfare of our employees; quality, cost and delivery of first class products; technical support and customer service.

Our products are aimed at maximising performance and extending the working life of components. This means having metallurgical and physical properties to solve engineering problems such as wear, corrosion, erosion and abrasion in sectors such as glass container of course, but also for oil and gas, rubber and plastics, power generation, and steel. Our glass industry products range from alloy powders to investment castings.

Being here at Glasstec is very important for us as we have been serving the glass container industry for over 65 years.



Glass Plunger being sprayed with Colmonoy® 4



Glass parts provided as castings by Wall Colmonoy Limited

Glass Machinery Plants & Accessories (GMP&A): *What can you tell us about the global market? Are things starting to move at last?*

Steph Curtis – Wall Colmonoy: I've been with Wall Colmonoy two and a half years so this is my first time at Glasstec. I'm meeting some of our customers for the second and third time, having visited them at their plants, but I'm also meeting some customers for the first time. The opportunity to meet so many people in such a short period of time is fantastic! Glasstec always has been, and will continue to be an important trade-show for our company.

We are focused on improving our business and listening to our customers in order to meet their requirements with quality products, technical and service provi-

sion that are aimed at helping them reduce their operational costs. For the glass container industry, our products are designed to help extend the service life of neck rings, guide plates, plugs, plungers and moulds – all important parts in the manufacture of glass container.

Economic challenges are always going to be part of our work so it's about being the best in your industrial sector. We are always looking for ways to add value for our customers.

John Nichols – FBPC: Franklin Bronze operates globally and is a world leader in the supply of nickel, bronze, and stainless steel castings for the Glass Mould Industry. We have witnessed the consolidation of the glass container supply chain. Not surprising

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as we operate in a global business environment. We see the consolidation as an opportunity to get closer to our customers.

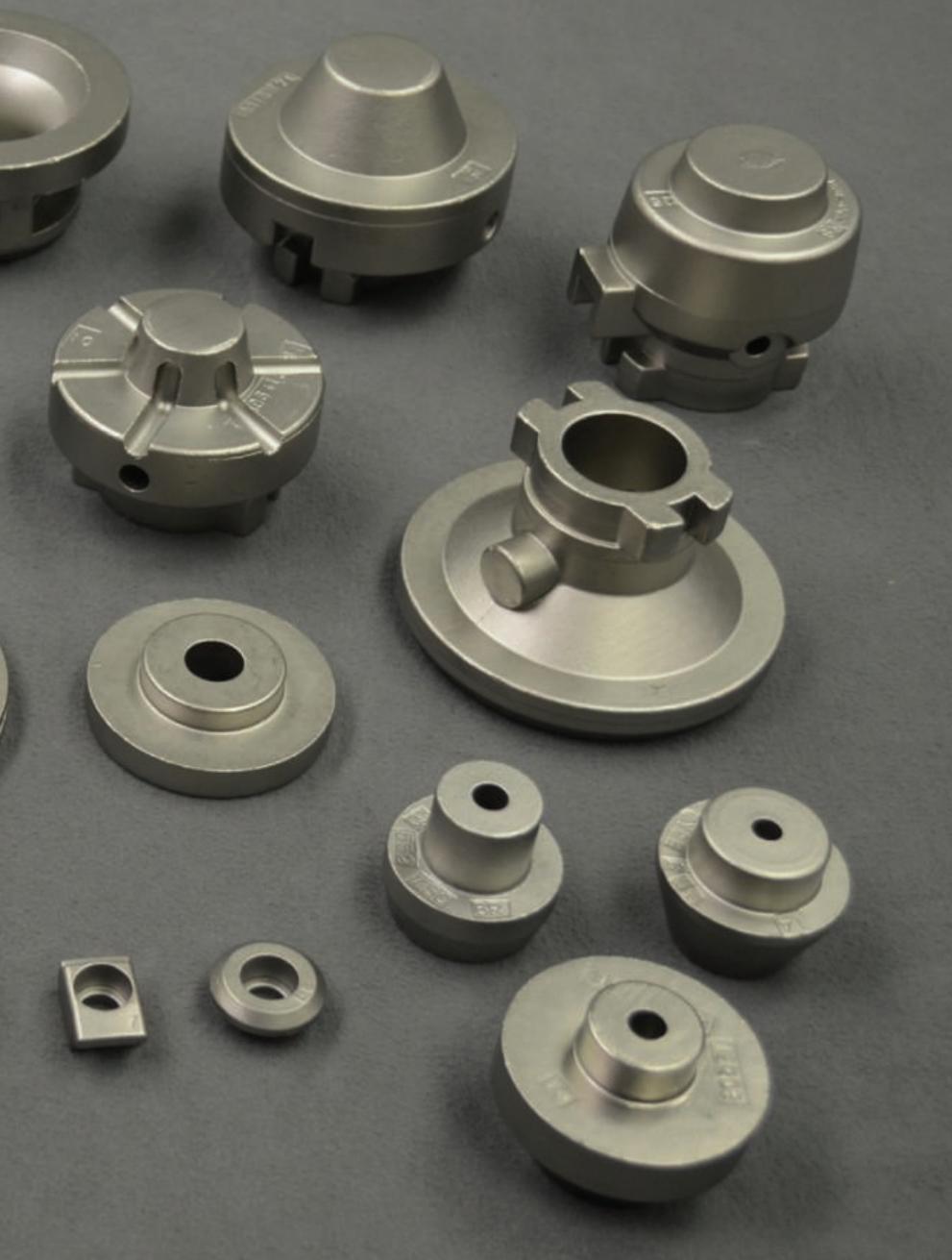
GMP&A - *So how do you add value for your customers?*

Steph Curtis – Wall Colmonoy: How? Well, we focus enormously

on quality and cost management. In our sector it would be a big issue if you cannot manage costs correctly. Just like at FBPC, we've applied Lean Management and Manufacturing principles to our operations and in the last two and a half years we've made big steps forward in manufacturing thinking and quality.

We have recruited a new management team these last two years. Now we have a very clear direction of where we are going, but the key to all this is quality, cost and delivery. We are, in fact, working closely on this at our premises in Pontardawe, South Wales, UK.

FBPC provides nickel, bronze and stainless investment castings to the glass industry. Some examples of cast parts are shown below.



Also very important for us is Customer Service - responsiveness to customer and market demand. The glass industry is very demanding and therefore the urgency that you need to respond and supply the industry is at the highest level, because of the speed at which the industry works.

John Nichols – FBPC: Franklin Bronze has a very experienced team with regards to the glass industry. It's a real lean way of working as all our products are made to order – nothing in stock.

And this means that we need the ability to turn orders very quickly, usually within a six-week lead-time but that's not leaving us but leaving our customers' bases. And for Franklin Bronze that also includes the transport time to ship the products across the Atlantic over to Europe. Once we receive an order – and remember, we have no previous knowledge about it – we need to get the order out in three weeks. The same orders may also include tooling.

This sector is extremely aggressive in terms of timing and respect of this timing is a requisite that you must have to stay in the market.

Steph Curtis – Wall Colmonoy: And in order to fulfill and respect that requisite you have to have the right attitude inside your com-



Wall Colmonoy Limited Apprentices and Mentors from September 2015 Rotation

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Lean Champions

September 2016



nw IRC
Driving Impact for Manufacturers

FBPC team members who participated in NWIRC 4-part Lean Champion Certification Course in September 2016

pany and organization because planning, logistics and quality all have a common goal which is customer satisfaction. You must have the right attitude to operate in this kind of environment, where time to market is so vital. At Wall Colmonoy – we do.

Recently we have been undergoing an important cultural and organisational change. And we have created a work environment where employees can flourish – we have set up a training programme – apprenticeship scheme – which is tailor-made to our needs, because our needs are quite unique, especially at our location in South Wales. This means that everything we are doing is geared towards the future, starting with really solid foundations and we are now building on those foundations.

GMP&A – *When you say you are training people, how do you train a person to do what you do at Wall Colmonoy?*

Steph Curtis – Wall Colmonoy: At Wall Colmonoy we are focusing on developing our ‘Home Grown Talent’ with our Bespoke Apprenticeship Programme. This means hiring apprentices who

take part in a specific learning and development programme that involves rotating through the different divisions of the company for three-month periods, along with college study. It involves young people of 16 and 17 years old who work and study at the same time. They go one day a week to college to study engineering aspects and learn the job first hand through a structured work programme.

This is structured to meet the unique needs of the business and to ensure the development of specialist skills and technical knowledge needed for its growth.

What we have created at Wall Colmonoy is a traditional apprenticeship programme which we actually started up almost five years ago. This is what we have created and we are, in fact, attracting important interest from the South Wales area, where Wall Colmonoy has been chosen over bigger companies because of our specific apprenticeship programme.

This is what we call ‘Home Grown Talent’! In fact, our apprentices learn not only about the company, its products and processes, and the quality that we have, but it also means that

we can ‘develop’ their minds, to align them with company culture and our corporate vision of where we want to be.

It doesn’t just stop there because we have people – such as young engineers – who are going on MBA (Master’s in Business Administration) and other Master’s programmes, and I also have a young engineer who is going to do a PhD project next year on the specifics of what we do.

So our apprenticeship programme is just a part of our training development programme and there are a number of other ones as well. We are doing a lot of this collaborating with the Welsh government.

GMP&A – *Do you have the same situation over there at Franklin Bronze?*

John Nichols – FBPC: Yes, we are also developing our own training model to support and develop young engineers. We have an example of an engineer who was hired after graduating from Penn State University. For over a year, this engineer has had the opportunity to train with Bob Barber, the former owner of Franklin Bronze. He has acquired practical skills in casting process engineering to complement the formal education he received at university. He also participated in the Investment Casting Institute’s Industry Certification Course this past summer. Combining formal, classroom-based technical education with practical hands-on training will ensure developing engineers are successful at

ABOUT Wall Colmonoy

Wall Colmonoy is an advanced materials company that manufactures surfacing and brazing alloys, castings, and precision machined components and provides advanced metal coatings, brazing and heat treatment services to the Glass Container, Aerospace, Automotive, Oil & Gas, Mining, Energy, Defense, and other industrial sectors.

For over 65 years, Wall Colmonoy has been protecting and restoring baffles, neck rings, guide plates, plugs, plungers and moulds for glass container industry. Wall Colmonoy provides wear-resistant Colmonoy® and Wallex® Surfacing Alloys and application equipment – Spraywelder™ System and Fusewelder™ Torch - specially developed to extend the service life of glass mould components. Wall Colmonoy also produces engineered cast or fully machined glass mould components designed to optimise wear, corrosion, abrasion and heat resistant properties.

Known for our unique proven way of creating superior performing alloys that enhance engineered components, we pride ourselves on long-term strategic customer collaboration that produces value-added ideas and creative solutions.

Combining over 75 years of engineering technology with a progressive, visionary outlook, Wall Colmonoy offers customers trusted, customized expertise that results in smart innovation and shared growth.

More information about Wall Colmonoy is available at:
www.wallcolmonoy.co.uk

WALL COLMONOY. Progressive Collaboration for Superior Performance. Worldwide.

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FBPC. As we grow, this training model will ensure strong technical resources are in place to support that growth.

We are also actively working on a broad range of workforce development initiatives including a vigorous cross-training program. We are proud to have received funding from WEDNet, which serves Pennsylvania's manufacturers. The funding has been used to train operators and staff in Lean, Supervisory skills and other modern manufacturing techniques.

GMP&A – Products – are there any recent developments or in the pipeline?

Steph Curtis – Wall Colmonoy: We are a very diverse business; we manufacture powder using the atomisation process, with various methods of deposition in application. We also have a foundry, manufacturing Nickel and Cobalt-based alloys for powders and castings. We have a

precision machine shop as well as a specialist Aerobrazing unit, where we provide a service to the industry.

This means that we are constantly developing products and applications in response to the requests and changes in demands that we receive from our customers.

For the glass container industry, we have our widely recognized range of Colmonoy® 200-series, which were specially developed for the repair and protection of castings and mould parts. Those products are applied by our Spraywelder™ System and Fusewelder™ Torch. We see a good share of the industry still using this method – however, we have also seen more demand for Plasma Transferred Arc or PTA and Laser deposition methods. So we have developed products to support these new methods. Some examples are Colmonoy® 211, 215 and 315 for hardfacing grey cast iron or aluminium bronze moulds.

GMP&A – And John, anything new at FBPC?

Yes. We have developed neck rings to be investment cast. Typically, they are sand cast. By moving from traditional sand cast to investment cast, the near-net-shape neck ring saves about 20-30% in material requirements. Using investment cast rings further reduces machine time costs due to the weight reductions, and there are tooling-cost savings too.

The bi-metal casting — an investment cast nickel-based alloy insert is investment-cast into the bronze neck ring — improves wear and life in that it is the only area of the neck ring that contacts the molten glass in the bottle making process.

The investment cast rings hold a more precise location for the insert, which results in extremely even insert wall sections after final machining. This is important for maintaining consistent and even solidification and heat transfer from the glass bottle surface, as the insert material and bronze have significantly different thermal conductivity.

The investment cast inserted neck rings also offer superior and more consistent metal fusion at the interface of the bronze and the insert. This is due to the controlled pre-heat of the insert in the ceramic mold prior to the pouring of the bronze. Not only does the superior fusion of the investment cast ring provide for a more secure hold of the insert in the casting, but it allows for superior, and more consistent, thermal transfer. For this bi-metal casting, we won the Investment Casting Institute Commercial Award in 2015.

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GMP&A – *So Steph, that means that when your customers need something new ...*

Steph Curtis – Wall Colmonoy: They actually come to us, we research what we have, and if one of our products matches their requirements we can supply the technical advice. Moreover, if they have something that is slightly out of the norm we work together to find a solution.

GMP&A – *We have here two different but complementary companies working together ...*

John Nichols – FBPC: Yes, we call ourselves sister companies working together. Here at Franklin Bronze we are dedicated 100 percent to investment castings.

GMP&A – *This means that if you've got a specific request from a customer that involves products and processes from both companies, how would you go about the development of this kind of supply?*

Steph Curtis – Wall Colmonoy: Franklin Bronze was acquired by Wall Colmonoy back in 2014, and is therefore relatively new to the Group. We both work independently in the marketplace, but, at the same time, we are working constantly on developing Best Practice across the Group. This means that we have Best Practice exchanges on a regular basis, which is about process improvement and maybe design improvement and if appropriate, enquiries in each direction too – all part of our philosophy.

This means exchange of important technologies and experience which are, in any case, in slightly different sectors of the glass industry, but are, as you said, complementary. There is some overlapping but it's definitely not a bad thing. And this is where Best Practice sharing comes in, giving us the best of both companies.

We still work independently commercially speaking in the market, which means that we technically compete in the market, which is also an interesting dimension.

What helps us a lot is not considering this overlapping as a bad thing – but looking at it from the geographical position that we both have and, of course, the areas that we work with.

Franklin Bronze, for example, predominantly covers North and South America and Europe.

We also work with Europe, along with South Africa, India, and Scandinavia. So with an overlap, our two businesses and our unique offerings give us the global coverage that we need as a business.

GMP&A – *Is there anywhere in the world where you are not present?*

Steph Curtis – Wall Colmonoy: Not in terms of markets. For example, in the US, Wall Colmonoy has a foundry for powder atomisation in Albuquerque, New Mexico, a castings foundry in Franklin, Pennsylvania, there are also two Aerobrazo companies – one in Cincinnati, Ohio and one in Oklahoma City, Oklahoma. What we have in South Wales is all of those facilities and capabilities on one site. All this together gives us our global market coverage.

We at Wall Colmonoy, and I know, at FBPC, are proud to serve the glass container industry. We look forward to further developing and continuing to partner with the industry. ■

ABOUT Franklin Bronze Precision Components

Franklin Bronze Precision Components is a world leader in the manufacture of investment castings for the glass container industry. Parts manufactured include guide rings, neck rings, baffles, plungers, inserts, thimbles, blowheads, and top-plates.

Franklin Bronze provides high-quality, consistent products supported by technical expertise, in-house tooling & machining, and automated processing.

More information about Franklin Bronze is available at:
www.franklinbronze.com

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Effective August 29, 2014 Franklin Bronze & Alloy Company, Inc was acquired by Wall Colmonoy Corporation. Franklin Bronze was renamed Franklin Bronze Precision Components, LLC and became a wholly owned subsidiary of Wall Colmonoy. Wall Colmonoy, together with Franklin Bronze, is a global materials engineering organization with offices and manufacturing facilities located in the US and UK with close to 400 employees.

By joining with Wall Colmonoy, Franklin Bronze integrates expertise, sales & marketing teams, and business goals. Wall Colmonoy and Franklin Bronze share the vision of delivering world-class technical expertise and support to customers.



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