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Left: The top of the lauter tun at the SABMiller Research Brewery at Nottingham University, with the novel design of the rake drive coming in from the top of the vessel.

Serving brewers and distillers since 1740

A look at Briggs of Burton over the last 272 years

Readers will have spotted a new advert from Briggs of Burton celebrating its involvement in the brewing and distilling sector since 1740. Such longevity is to be applauded, so rather than punishing himself on a long trip to meet with a German brewery supplier, the Editor drove just three miles down the road to see what has made Briggs tick for the past 272 years.

by ***Roger Putman***

Let's get the history out of the way first. The claim of 1740 or even earlier comes from the enterprise of Thornewill and Warham which went bankrupt in 1929 and was taken over by S.Briggs & Co which then consolidated operations into the extensive manufacturing facilities in New Street in Burton. By the early eighteenth century, the River Trent had been made navigable from Hull all the way up to Burton and soon timber and iron started to arrive from Russia and Sweden. Entrepreneurs would arrange distribution across the Midlands.

Thomas Thornewill had an ironmongers shop in Burton and very soon an interest in a mill on the River Dove just north of the town. The water provided power to the bellows and slitting machinery and 'edge tools' like knives and spades were finished off in town. The same entrepreneurs could not let the barges return empty so tonnes of cheese and some of the timber returned as casks containing Burton ale. The beer of course was famed for its keeping qualities due to the local gypseous waters giving a lower pH mash (although they did not know that at the time). The beer went down the river to Hull and on to London and the Baltic, some 638 barrels passing that way in 1712. There is a record of hoop iron being supplied by Thornewill to the Burton breweries in 1778, the earliest record of a connection with the brewing industry beginning to grow in the town.

The mill site is now a chicken farm but Thornewill's brick-built Georgian house nearby is now a hotel and you can stay in Mrs Bass' bedroom – for Harriet Georgina married into the famous Bass family in 1869.

Above: The new lauter tun base for Yuengling in Florida taking shape. Keen observers will note it is upside down.

Above right: Part of the rake assembly.

Above: The lauter tun arms awaiting the rakes.

Mr Warham joined the firm in the 1840s and the pair majored on steam engine manufacture mainly for the mining industry though they also built a couple of bridges over the Trent in the town which are still ornate and extant. Some 16 saddle tank locomotives were supplied to Bass alone in the late 1800s.

In 1865 Samuel Briggs was apprenticed to ironmonger and coppersmith Thomas Bindley in Burton. He had the foresight to marry the boss' daughter and the firm was soon Bindley and Briggs supplying the burgeoning brewing business from a plant where the Retro night spot now stands. He fell out with his father in law in 1884 and founded his own manufactory on Moor Street just a couple of hundred yards from Thornewill's plant. Briggs was one of the founding members of the Allied Brewery Traders Association now the BFBi in 1907.

With a diverse list of customers in many sectors, which is still true of Briggs today, the much enlarged firm even built five aeroplanes in the late 1920s! With mining and exporting less prominent, Briggs was taken over by Braby Leslie in 1977 and young John Andrews aged 31 was put in as Managing Director in 1979, he joined salesman Fred Emery who was recruited from Adlams in Bristol back in 1963. John remains today as non exec Chairman and Fred is his non-exec deputy, both give valued counsel to the current management team.

Braby made agricultural silos and drums, this latter division still survives at Briggs in Burton producing stainless containers mainly for the beverage industry for the carriage of extracts and flavourings. Braby Leslie joined international conglomerate Anglo Nordic in 1982 with interests in gas fires, diesel engines and instrumentation specialists Negretti and Zambra. A year later Schock Gusmer and its valley bottomed lauter tun technology was bought from Pflauder along with its Rochester office in New York State which remains today as Briggs North American HQ while the Balfour office in Leven in Scotland moved to Burton.

The first MBO

By the end of the decade Briggs had received an offer to buy the New Street site for a shopping centre and was planning to build a new factory in town. An MBO bought half of the company back from Anglo Nordic which continued to hold a quarter and General Accident insurance the other 25%. This was the time that UK conglomerates were starting to unravel. The Hanson Trust wanted to

offload Briggs' rival brewery fabricator Robert Morton DG with its plant on Derby Street in Burton. After a bit of toing and froing when it was thought that Briggs might be taken by RMDG, the former managed to secure the Derby site and finance the deal by selling the town centre site to build the Octagon Centre.

The 90s saw further acquisitions; PCA Associates became Briggs Automation with a base at Congleton, Guisti, specialists in mixing joined in 1993, cereal handlers Richard Sizer in 1995 and finally APV sold its Rochester UK-based keg-racking line business Burnett and Rolfe in 1998. Today, apart from 18 automation staff still in Cheshire and five based in the States, all operations are based in Burton. Total establishment is 135 with some ten contractors mainly dealing with software and designing. Ghost offices exist in Australia and South Africa for local tax purposes.

By 2008, John Andrews had acquired 95% of Briggs' capital and wanted to hand over the reins. An internally funded transfer was arranged and now early in 2012 he has a 8% holding with the remainder passing to MD Gareth Cure who joined in 1999 with expertise in food, pharma and automotive sectors, Keith Poynton (Engineering) who was a 16-year old Briggs apprentice back in 1982, Ian McFarlane (Sales) came from Robert Morton in 1982 and David Hibbert (Finance) is a chartered accountant who joined the firm in 2002. The new directors committed to a redevelopment of the Derby Street site and repay the preference shares over four years, which they have now done.

Meet the team

Mission accomplished, I popped down the road to meet the team, see what they had achieved and see what the future holds for this long established supplier. The brewing business, although it has supplied high-profile brewhouses at Yatala for Fosters (2005), Shenandoah for Coors (2007) and two breweries for the new SABMiller process demonstration facility at the University of Nottingham, represents an average third of current activity, the rest is evenly spread between distilling and 'others' comprising food, bioenergy, health and beauty and pharmaceuticals. The company turns from £20-25 million but that depends on how projects are funded as at any one time it might be handling a £60million turnkey job. Large-scale fabrication has given way to smaller metal working jobs (although I would not say a 10m valley lauter tun bottom replacement for Yuengling at Tampa in the shop during my visit was exactly small) and what might loosely be called 'professional services' – designing, procuring, building, commissioning and generally managing projects for worldwide clients.

A huge job completed in 2010 involved one of the world's largest yeast manufacturing plants on a 10ha greenfield site at Harbin in China. Labelled Project Dragon, the plant produces over 160,000 tonnes of yeast (at 30% solids) a year. There were 124 vessels, over 200 pumps, 5300 valves and 1834 instruments, a fair challenge for the Briggs drawing office staff.

Briggs believes that 'second generation' biofuels, yeast and brewing technology are inextricably

Briggs people

Top: The Briggs management team; MD Gareth Cure, Engineering Director Keith Poynton, Sales Director Ian McFarlane and Finance Director David Hibbert.

Above left: Steve Vickers with a lauter tun blade destined for Tampa.

Above centre: Recently time-served apprentices Calum Spencer and Robert Goodhead.

Left: Alan Parker, his father and grandfather both worked at Briggs – spanning almost one hundred years of service.

Left: Entrance to Briggs house on Burton on Trent's Derby Street.

Below left: A changeover panel for East Africa.

Above: Work in progress in a clean and tidy shop.

linked. These disciplines are rapidly coming together with the biofuels boys anxious to reduce energy input and clean their plants properly as they can no longer rely on the use of antibiotics to make sure it is only yeast doing the fermenting. Yeast will give way to bacteria and possibly bacteria to algae as the next generation of substrates emerges. It is likely that many classic solutions will be used in parallel. Briggs has already produced a pilot plant for TMO Renewables producing ethanol from lignocellulose – straw, grass, municipal waste and distillers grains using a GM thermophilic bacteria. Temperatures in the feedstock preparation vessels reach 180°C, just another challenge for the Derby Street engineers.

These examples indicate Briggs can handle the large, the modern, the international and the innovative. Its expertise in mechanical, electrical and process engineering will connect everything together from the all important design stage. It pays to put in effort at the beginning says MD Gareth Cure, it will reduce time and risks later on and lead to a less stressed installation. Insurers are happy to pass plant on the basis of Briggs calculations at the drawing stage. Understanding of ergonomics is essential – pipe runs for the installers can also show a client what the plant will physically look like from any viewing position at the touch of a few buttons helping him to decide where to place his work stations and even decide on his own colour scheme etc. Instrumentation will control and report performance in great detail, a fact not lost on the senior production management at SABMiller now they have a direct interest in Briggs' breweries in Virginia and Queensland.

Briggs is happy with clients who want something different and not something off the shelf; it does not do the same job many times like some of its continental competitors. Cases in point would be a job in plastic for Phillips Semiconductors to handle hydrofluoric and 98% sulphuric acids and a pair of antifreeze tanks for deicing US warplanes at RAF Mildenhall – the home of the US Air Force's only permanent air refuelling unit in Europe. An essential duty but how did Briggs get that job? Someone on the civils design team had worked on an earlier job where Briggs was involved. People move around explained Cure, you only need one botched job and people remember that for a long time! Luckily they remember the good ones as well he added hastily! Old relationships are important, people have long memories, he summed up.

Big job for Diageo

In the distilling sector, Briggs has been involved at Diageo's Cameronbridge grain distillery, now Europe's largest at over 100m litres of spirit annually, since 2007. Briggs managed the scope from incoming malted and un-malted raw materials handling and cereal processing, together with fermentation and

The machine which precisely cuts the slots in the lauter tun plates.

product transfer to distillation to ensure a minimum carbon footprint. This fully automated pre-distillation facility was fitted with modern CIP as well as ensuring that the existing site continued 24/7 activities. There were 89 vessels, over 130 process pumps, 1384 instruments and precisely 4133 process and service valves. The job continues less than half a mile away with the Leven spirit handling operation involving whisky and grain neutral spirit reception, storage, blending, filtration and a flagons-to-miniatures packaging facility. Central services are being redeveloped including chemical CIP, demineralised water generation, storage and distribution. The job has multiple tank farms totalling 130 vessels, 36km of pipelines including a kilometre of overhead bridges and over 10,000 valves! The plant is expanding from 3.5 to 20mla and of course is a top tier COMAH (Control of major accident hazards regulations) site with particular emphasis on the storage of flammable ethanol in line with HSG176. Then there is the EU's ATEX and closer to home DSEAR – our own Dangerous Substances and Explosive Atmospheres Regulations to consider. All this highlights just how much regulatory framework there is out there and Briggs needs to keep design and commissioning staff totally *au fait* with the ever-changing rules throughout the world.

Over the last decade, the policy has been to recruit and grow its own resources with academic, graduate and vocational staff and continue this policy each year in association with local colleges and universities. On a personal development level there is an ongoing programme to support the development of staff to achieve Chartered Engineer (CEng) status; there are eight at present but the target is 20. Health and Safety training is a major activity in the business overall and at all levels of operation. When I visited in November, they had clocked some 1,041,000 hours without a lost time accident which equates to around three years of operations.

Briggs simply does not recognise the oft-quoted predictions that people joining the work place will have over a dozen employers during their working lives and be unlikely to remain with one for much more than two years. There are 42 Briggs apprentices still on the payroll including Director Keith Poynton, General Manager on the Production side Steve Vickers and his Manufacturing Supervisor Pete Rogers. 30 to 40 years experience is not unusual and the average age of the 135 employees is 43; recently Spares Specialist (Storeman) Cecil Lunn was recruited aged 66! There is currently just one apprentice, the other five from an earlier scheme having just completed their time, two of them with degrees from Coventry and one at first-class honours level – Craig Wightman. Another two will start next autumn and all will be local lads – Briggs is sponsoring the PhD work of another local lad, Scott Davis, at Nottingham. The idea is to get your hands on people early and then make sure that the next project is more stretching than the last using the experienced mentors, get them qualified and then you can put them anywhere in the world. That probably makes it sound a lot more simple than it actually is!

Smaller than it was

Physically Briggs is a lot smaller than it was. The 6.5 acre site is now just three, there are cars awaiting distribution in one area and Kegwatch operates behind a high razor-wire fence to keep out intruders. Some of the old erecting shops have been demolished in a £1million investment to face the twenty-first century. The largest diameter tank it can make these days is 3.8m, there is new machinery, new benches, heating and lighting. Everything is in its place so it can be accessed easily.

The workforce no longer rattles around in large shops, it is getting through work more rapidly and what they have made moves off site much more quickly. The force is flexible and the managers are no longer chasing work to keep the shops full. There is genuine engagement with the shop floor work force who were busy with the update for the Tampa brewhouse and a large project to increase capacity at EABL's plant in Uganda.

Then we could discuss jobs at Tamar Foods, the home of the Ginster Cornish pasty and the plant which makes Covent Garden soups but I think we have illustrated the broad portfolio emanating from Derby Street in Burton on Trent interspersed with some of the modern philosophies which is driving the new Briggs forward. "Now we own the business," concluded Gareth Cure, "you will see we are in it for the long haul." He summed up the team's strategy as: "Be safe, be open, be honest and deliver what you promised." So here's to the next 272 years!

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